

**2018 Update:
Academic, Federal, and Private
Research Centers in Maryland**



Larry Hogan, Governor | Boyd Rutherford, Lt. Governor

ABOUT THIS REPORT

This listing of scientific research centers and institutes in Maryland was compiled by the Maryland Department of Commerce (COMMERCE). Originally created in 2002 and updated periodically through 2004, a substantial update was performed in 2006 and 2007. The most recent version was published in 2012. An update was completed in 2018, but the results had not been released publicly.

The listing of research centers is organized as follows:

- **Affiliation**—All centers housed within a university are listed first (note the word “academic” in the center of the page header). They are followed by federal centers, and then a small number of private centers.
- **Parent organization**—Within each of the three affiliation groups (academic, federal, private), centers are grouped by the parent organization, such as “Johns Hopkins University” or “National Institutes of Health.” An abbreviation of the first parent organization of every page can be found in the right corner of the page header (“JHU”).
- **Centers that are administered jointly** by more than one organization are listed with a separate parent organization. An example is the Joint Center for Astrophysics, administered jointly by UMBC and NASA. It can be found at the end of the UMBC research centers since the parent organization is considered to be UMBC-NASA, not UMBC. Centers that are administered jointly by a university and a federal agency are usually listed with a parent organization that lists the university name first.
- **Name of the center**—Within each parent organization, centers are listed

alphabetically. A limited number of private research centers are included. COMMERCE recognizes that the list of private research centers is incomplete due to the proprietary nature of private research, but we welcome additional private research centers for inclusion in future versions of this list.

While this is believed to be the most comprehensive such listing available at the time of publication, COMMERCE acknowledges the likelihood of omitting research centers that may be appropriate for inclusion. The ever-changing nature of scientific research also results in the creation of many new centers each year. Additions, changes, and corrections to this list are welcomed by COMMERCE and will be incorporated into future versions.

The scope of this project is to focus on research centers and institutes of a scientific nature. Centers and institutes that do not have a primary focus on scientific research will not be considered for inclusion at the discretion of COMMERCE.

RESEARCH AND DEVELOPMENT IN MARYLAND

The State of Maryland plays a leading role in science and technology research and development in the United States. The resulting explosion of knowledge has made the state a center of genomics, proteomics, computer science, aerospace engineering, bioinformatics, and physical science.

Federal and academic institutes and research centers in Maryland receive billions annually from the federal government in the form of research grants. This massive, on-going research effort takes place at over 350 federal and academic research centers in Maryland. This report of academic, federal and private R&D centers provide basic information about centers and institutes, including the name, the parent agency and any sub-agencies, a brief description of activities, an address and contact information, and keywords that help to identify the research thrust of the center.

Four major academic institutions—the University of Maryland College Park; the University of Maryland, Baltimore; the University of Maryland, Baltimore County; and the Johns Hopkins institutions—have created more than 200 research centers in science and technology. Some of these centers are operated in conjunction with federal agencies, state government, major universities around the U.S. and non-profit R&D foundations. More than a dozen federal agencies conduct R&D work in some 70 research centers in Maryland. These centers not only conduct research, they also award grants and contracts to Maryland businesses for research work and related services. An important engine of R&D in Maryland and the U.S., the National Institutes of Health in Bethesda employs approximately 18,000 scientists, doctors, technicians and administrators. These individuals conduct research primarily in medical fields, but also in bioscience,

computer science, and engineering. The federal government employs over 27,000 scientists and engineers in Maryland, more than in any other state.

Other major federal research facilities in Maryland include the National Institute of Standards and Technology, the Army Research Laboratory and the Food and Drug Administration. Many new research centers have been created in recent years in response to changing technology and needs, such as the National Biodefense Analysis and Countermeasures Center, part of the Department of Homeland Security, and the Institute for Cell Engineering at John Hopkins University, which is doing research into the biology of stem cells as well as other important research.

Maryland's universities, and most federal research centers, have business offices that coordinate with private industry to develop, evaluate or transfer technology. Maryland businesses benefit from development and evaluation services that are easy to access and save program development time and expenses. These unique assets are distributed around the state in suburban, urban, and rural locations.

COMMON ABBREVIATIONS

<i>Full name of agency or university</i>	<i>Abbreviation</i>
Bowie State University	BSU
Department of Homeland Security	DHS
Department of Defense	DoD
Environmental Protection Agency	EPA
Food and Drug Administration	FDA
Department of Health and Human Services	HHS
Johns Hopkins Medical Institutions	JHMI
Johns Hopkins Bloomberg School of Public Health	JHSPH
Johns Hopkins University	JHU
Morgan State University	MSU
National Aeronautics and Space Administration	NASA
National Institutes of Health	NIH
National Institute of Mental Health	NIMH
National Institute of Standards and Technology	NIST
National Oceanic and Atmospheric Administration	NOAA
National Security Agency	NSA
University of Maryland, Baltimore	UMB
University of Maryland, Baltimore County	UMBC
University of Maryland Biotechnology Institute	UMBI
University of Maryland, College Park	UMCP
University of Maryland	UMD
United States Department of Agriculture	USDA
United States Geological Survey	USGS
University System of Maryland	USM
United States Naval Academy	USNA
Department of Veterans' Affairs	VA

KEYWORDS

The following is a list of keywords that describe the activities of the research centers. Please note that this list is not exhaustive, but rather is meant to guide readers.

Keywords:

Aerospace/astronomy	Infectious disease
Agriculture/food	Language
Bioscience	Mathematics/statistics
Chemistry	Medical-basic research
Chronic disease	Medical-clinical research
Computer science	Medical-patient care
Defense	Metrology
Dental	Neuroscience
Emergency response	Pharmacy
Engineering	Physics
Entrepreneurship	Public health
Entrepreneurship/tech transfer	Quantum
Environmental science/sustainability	Resource/facility/instrument
Equity	Sensation/perception
Food/agriculture	Technology
Global health	Underserved populations
Hearing	Veterinary
Human health	

Bayview Medical Center

Johns Hopkins Medical Institutions (JHMI)

https://www.hopkinsmedicine.org/johns_hopkins_bayview/index.html

Richard G. Bennett, M.D.
President

Bayview Medical Center
4940 Eastern Avenue

Baltimore, MD 21224

Telephone: (410) 550-0100

Email:

Keywords: Medical-clinical research, Medical-patient care

A teaching hospital that conducts clinical studies. Home to a comprehensive neonatal intensive care unit, a sleep disorders center, an area-wide trauma center, the state's only regional burn center, and a geriatrics center that enjoys a national reputation. Current clinical studies range from contraceptive to recreational drugs to sleep studies.

Johns Hopkins Comprehensive Diabetes Center

Johns Hopkins Medical Institutions (JHMI)

<https://www.hopkinsmedicine.org/diabetes/index.html>

Sherita Hill Golden, M.D., M.H.S., Director
Johns Hopkins Comprehensive Diabetes Center
Suite 2008
601 North Caroline Street
Baltimore, MD 21287

Telephone: (410) 955-9500

Email:

Keywords: Medical-clinical research, Medical-patient care, Chronic disease

The field of diabetes research continues to grow at a rapid and exciting pace. The diabetes team at Johns Hopkins is committed to finding and developing methods to help people live a full and healthy life with diabetes. Over the past 20 years, we have conducted research in a number of important areas, including glucose monitoring, hemoglobin A1c, and diabetes technologies such as continuous glucose monitoring and implantable insulin pump therapy. All of these efforts are made possible with the help of volunteers, who by participating in these studies help us answer important questions about diabetes.

Johns Hopkins Comprehensive Transplant Center

Johns Hopkins Medical Institutions (JHMI)

<https://www.hopkinsmedicine.org/transplant/index.html>

Johns Hopkins Comprehensive Transplant Center
Ross 771
720 Rutland Avenue
Baltimore, MD 21250

Telephone: (410) 614-5700

Email:

Keywords: Medical-patient care, Medical-clinical research

Conducts research on organ transplant issues including renal, hepatology, pulmonary, cardiology and pathology studies. The Center is a leading US transplant center.

Johns Hopkins Microarray Core Facility

Johns Hopkins Medical Institutions (JHMI)

<http://www.microarray.jhmi.edu/>

Jef Boeke, Director

JHU School of Medicine, McKusick-Nathans Institute of Genetic Medicine

733 North Broadway

Miller Research Building Room 351

Baltimore, MD 21205

Telephone: (443) 287-9056

Email: w3w@microarray.jhmi.edu

Keywords: Technology, Medical-basic research

Aim is to provide cost-effective and time-efficient access to microarray technology, as well as an environment that facilitates effective analysis and sharing of microarray data. Data and information supplied by the Core are intended for research use only. This facility is not certified to supply data to be used in clinical care. It consists of two functionally separate units: Hybridization Unit and Analysis Unit. The Hybridization Unit currently provides labeled target production, hybridization, and data collection services for Affymetrix arrays. The Analysis Unit offers support for array analyses, provides access to commercially available software through shared seat licensing, and maintains a shared-access microarray database. Although open access data transfer is encouraged, confidential storage is also supported.

Kennedy Krieger Institute

Johns Hopkins Medical Institutions (JHMI)

<http://www.kennedykrieger.org>

Bradley L. Schlaggar, M.D., Ph.D., President and CEO

Kennedy Krieger Institute

707 North Broadway

Baltimore, MD 21205

Telephone: (443) 923-9200

Email: info@kennedykrieger.org

Keywords: Neuroscience, Medical-clinical research, Medical-patient care

Research is directed towards child health and includes a large amount of clinical studies. Major topics of research include Advanced Brain Imaging Research, Autism Spectrum Disorders Research, Behavior and Feeding Disorders Research, Bioinformatics Research, Brain Tumor Research, CDC RISE (Research Initiatives for Student Enhancement), Center for Genetic Disorders of Cognition and Behavior, Cerebral Palsy and Other Movement Disorders Research, Educational Research, Genetic, Metabolic and Degenerative Brain Disorders Research, Learning and Other Cognitive Disorders Research, Mental Retardation/Developmental Disabilities Research Center (MRDDRC), Molecular Neuroscience Research, Neuro-Psychiatric Disorders Research, Neurobehavioral Research Unit (NBRU), Osteogenesis Imperfecta Registry, Rehabilitation Research, Research Training in Brain Injury Rehabilitation, Spinal Cord Injury and Paralysis Research, Traumatic and Environmental Brain Disorders

Autoimmune Disease Research Center

Johns Hopkins Medical Institutions (JHMI)

Bloomberg School of Public Health

<http://autoimmune.pathology.jhmi.edu/>

Dr. Patrizio Caturegli, M.D., M.P.H., Director

The Čiháková Laboratory

Johns Hopkins School of Medicine

Department of Pathology

720 Rutland Avenue

Ross 659

Baltimore, MD 21205

Telephone: (410) 614-4173

Email: pcat@jhmi.edu

Keywords: Medical-basic research, Medical-clinical research

The Center offers leadership in the study and development of improved diagnosis, treatment and prevention of autoimmune diseases. Physicians and scientists are located in nearly every department of the Schools of Medicine and Public Health. Basic scientists are engaged in fundamental research on the immune response study the causes of its dysregulation and the reasons why they lead to disease. Clinicians are searching for methods to improve the diagnosis and treatment of one or more of the autoimmune diseases. The Center promotes individual and collaborative research on the initiation and development of autoimmunity and the pathogenesis of the autoimmune diseases. It fosters the sharing of specialized instruments and technologies, as well as precious samples from autoimmune disease patients. Epidemiologists and geneticists are seeking out the environmental factors or the genetic traits that increase the risk of developing an autoimmune disease.

Arthritis Center, Johns Hopkins

Johns Hopkins Medical Institutions (JHMI)
Division of Rheumatology, Department of Medicine
<https://www.hopkinsarthritis.org/>

Clifton Bingham, III, M.D., Director
Johns Hopkins Arthritis Center
Mason F. Lord Center Tower
Suite 4100
5200 Eastern Ave
Baltimore, MD 21224

Conducts research and clinical trials on various forms of arthritis and their therapies. The trials include studying how rheumatoid arthritis (RA) contributes to heart disease, whether people with RA would benefit from yoga, how to prevent and treat knee osteoarthritis, and the genetics of autoimmune diseases.

Telephone:

Email: arthritis@jhmi.edu

Keywords: Medical-basic research, Medical-clinical research

Greenberg Center for Skeletal Dysplasia

Johns Hopkins Medical Institutions (JHMI)
Institute for Genetic Medicine
<https://www.hopkinsmedicine.org/institute-genetic-medicine/patient-care/genetics-clinic/about/greenberg-center-skeletal->

Colleen Gioffreda
Clinical Operations Program Administrator
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Keywords: Medical-patient care, Medical-clinical research

The Kathryn and Alan C. Greenberg Center for Skeletal Dysplasias is dedicated to the medical care and education of persons with skeletal dysplasias, and to the clinical and laboratory investigation into these conditions. Toward this end, the Center brings together a multidisciplinary team of doctors and investigators dedicated to improving the quality of life for persons of short stature, and furthering basic scientific knowledge about the many causes of dwarfism. Clinical studies have included topics of achondroplasia, hypochondroplasia, psuedoachondroplasia, cartilage hair hypoplasia, chondroectodermal dysplasia, and diastrophic dysplasia.

Johns Hopkins Epilepsy Center

Johns Hopkins Medical Institutions (JHMI)
JHM Department of Neurology and Neurosurgery
https://www.hopkinsmedicine.org/neurology_neurosurgery/centers_clinics/epilepsy/index.html

Mackenzie Cervenka, M.D. and Sarah Kelley, M.D., co-directors
The Johns Hopkins Hospital

1800 Orleans St
Baltimore, MD 21287

Telephone: (410) 955-9441

Email:

Keywords: Medical-clinical research, Medical-patient care

The Johns Hopkins Epilepsy Center conducts a number of investigational antiepileptic drug trials. There are active programs studying the efficacy of, and mechanisms underlying, the ketogenic diet. Currently developing and improving surgical methods for the treatment of seizures intractable to medication. These include studies on the use of both non-invasive and invasive evaluation techniques prior to surgery. They also include studies of hemispherectomy and multiple subpial transection procedures. Finally, The center is studying new forms of surgery. It is undertaking a number of studies related to the mechanisms underlying cortical functioning, especially as they relate to language and memory. Also developing computer based methods for detection and analysis of seizure related activity on the EEG. Also have particularly been utilizing neural networks and are exploring other techniques as well.

Johns Hopkins Multiple Sclerosis Center

Johns Hopkins Medical Institutions (JHMI)

JHM Department of Neurology and Neurosurgery

http://www.hopkinsmedicine.org/neurology_neurosurgery/specialty_areas/multiple_sclerosis/

Peter Arthur Calabresi, M.D., Director
The Johns Hopkins Hospital, Department of Neurology
600 North Wolfe Street
Johns Hopkins Multiple Sclerosis Center
Baltimore, MD 21287

Primary research thrust is micro-biological and intra as well as inter-cellular specifically studying how the immune system and the nervous system interact, especially concerning white blood cell's interaction with the brain as well as studying to understand how nerve cells are injured through MS lesions and how to prevent or reverse the injury. Also conducts clinical trials to test new therapies including drug trials.

Telephone: (410) 614-1522

Email:

Keywords: Medical-basic research, Medical-clinical research, Medical-patient care

Parkinson's Disease and Movement Disorder Center

Johns Hopkins Medical Institutions (JHMI)

JHM Department of Neurology and Neurosurgery

http://www.hopkinsmedicine.org/neurology_neurosurgery/specialty_areas/movement_disorders/

Liana Isa Rosenthal, M.D., Director
The Johns Hopkins Parkinson's Disease and Movement Disorder Center
5064
601 N Caroline St
Baltimore, MD 21287

Conducts laboratory and clinical research into the cause and treatment of Parkinson's Disease. Research includes development of new drugs, study of the mechanisms of neuroprotection, regeneration and repair, including stem cell research. The center uses animal and cellular models of Parkinson's Disease (PD) to develop therapies. Specific topics of research are identification of genes for PD and other Parkinsonian syndromes, development of genetically engineered mouse models of PD and other syndromes, studies of the basic cell processes underlying PD-triggered death of dopamine neurons, studies on the sequential steps on the path to cell death in PD, as well as clinical trials to treat psychiatric and cognitive aspects of PD.

Telephone: (410) 955-8795

Email:

Keywords: Medical-basic research, Medical-clinical research, Medical-patient care

Johns Hopkins Voice Center

Johns Hopkins Medical Institutions (JHMI)

JHM Department of Otolaryngology-Head and Neck Surgery

https://www.hopkinsmedicine.org/otolaryngology/specialty_areas/voice_center/index.html

Lee M. Akst, PhD, Director
Center for Laryngeal and Voice Disorders, Johns Hopkins Outpatient Center
601 North Caroline Street

Baltimore, MD 21287

Conducts basic science and clinical research with an emphasis on the development and evaluation of diagnostic and therapeutic protocols. Also provides clinical treatment. Current research includes new surgical strategies for the treatment of laryngeal paralysis to deal with the problem of muscle atrophy associated with denervation, research into hIGF-I gene therapy, electroportation and tissue specific gene transfer.

Telephone: (410) 955-1654

Email:

Keywords: Sensation/perception, Medical-basic research, Medical-clinical research, Medical-patient care

Baltimore Huntington's Disease Center

Johns Hopkins Medical Institutions (JHMI)

JHM Department of Psychiatry and Behavioral Sciences

https://www.hopkinsmedicine.org/psychiatry/specialty_areas/huntingtons_disease/index.html

Kia Ultz
Research Program Coordinator
Huntington's Disease Center at Johns Hopkins
The Johns Hopkins Hospital
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Meyer 2-181
Baltimore, MD 21287

Laboratory research programs include basic studies of the biochemistry and cell biology of HD, and therapeutic studies in cell models and mouse models. Also offers a number of clinical services relating to the routine care and follow-up of individuals suffering from Huntington's disease. These services include but are not limited to social work, medication management of symptoms, placement assistance, and support groups.

Telephone: (410) 955-1349
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Keywords: Medical-basic research, Medical-patient care

Dana Center for Preventive Ophthalmology

Johns Hopkins Medical Institutions (JHMI)

JHM Wilmer Eye Institute

<https://www.hopkinsmedicine.org/wilmer/research/dana-center/>

David S. Friedman, M.D., M.P.H., Ph.D., Director
The Dana Center for Preventative Ophthalmology, Johns
Hopkins Hospital
600 North Wolfe Street
Woods 155
The Johns Hopkins Wilmer Eye Institute
Baltimore, MD 21287

Part of the Wilmer Eye Institute. It is a WHO collaborating institution. In general, research in the Dana Center focuses on improving knowledge of risk factors for ocular disease and public health approaches to the prevention of these diseases and their ensuing visual impairment and blindness worldwide. Some specific examples include: estimation of the extent of clustering of ocular diseases such as trachoma and xerophthalmia within households and communities and the identification of risk factors associated with such clustering; development of statistical methods for assessing progression of visual field loss in glaucoma using automated perimetry; evaluation of the impact of vitamin A supplementation during pregnancy and infancy on birth weight and infant mortality in countries with endemic xerophthalmia and vitamin A deficiency; identification of nutritional risk factors for the development and progression of age-related eye disease such as cataract and age-related macular degeneration; community-

Telephone: (410) 955-3954
Email: DanaCenterWilmer@jhu.edu
Keywords: Public health, Global health, Medical-clinical research

Asthma and Allergy Center

Johns Hopkins Medical Institutions (JHMI)

JHU Department of Medicine

<https://www.hopkinsmedicine.org/allergy/AAC.html>

Donald W. MacGlashan, Jr., M.D., Ph.D.
Director
Asthma and Allergy Center
5501 Hopkins Bayview Circle
Division of Allergy & Clinical Immunology
Johns Hopkins Asthma & Allergy Center
Baltimore, MD 21224

Conducts basic as well as clinical and translational research into the mechanisms of and therapies for allergies, asthma, and related problems. Specific research interests of the faculty include drug hypersensitivity, immunotherapy, childhood asthma, genetics and epidemiology of asthma, inflammatory cell recruitment and survival in allergic diseases, innervation of the airways, molecular mechanisms of gene regulation in the immune system, mast cell signaling, molecular genetics of asthma, and IgE receptor signal transduction.

Telephone: (410) 550-2101
Email: jhuallergy@jhmi.edu
Keywords: Medical-basic research, Medical-clinical research

Breast Center at Johns Hopkins

Johns Hopkins Medical Institutions (JHMI)

Johns Hopkins Medicine (JHM)

https://www.hopkinsmedicine.org/breast_center/

David Euhus, M.D., Chief
The Breast Center at Johns Hopkins
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The Johns Hopkins Hospital
Baltimore, MD 21287

Telephone: (410) 977-8282

Email: Medical-basic research, Medical-clinical
research, Medical-patient care

Keywords: Medical-patient care, Medical-clinical research

The top ranked breast cancer treatment and research center in the United States. Research areas include hormone receptors, methylation, vaccine development, genetics, and causes of mets. Clinical research is also conducted. Recent studies include a study assessing the feasibility and safety of intraductal administration of pegylated liposomal doxorubicin (Doxil) in women with breast cancer and a Phase I/II Partial Breast Irradiation with Concurrent Chemotherapy study.

Kelly G. Ripken Thyroid Tumor Center

Johns Hopkins Medical Institutions (JHMI)

Johns Hopkins Medicine (JHM)

<http://thyroid-ripken.med.jhu.edu/>

The Kelly G. Ripken Program
Johns Hopkins Medicine
1830 East Monument Street, Suite 333

Baltimore, MD 21287

Telephone: (410) 614-1174

Email:

Keywords: Medical-basic research, Medical-clinical
research, Medical-patient care

The center conducts basic and clinical research on thyroid cancer. It also provides care to patients and training to physicians, including free thyroid testing. A recent research study was done on the effect of hyperthyroidism on cholesterol levels.

Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins

Johns Hopkins Medical Institutions (JHMI)

Johns Hopkins Medicine (JHM)

<http://www.hopkinskimmeltcancercenter.org>

Sidney Kimmel Comprehensive Cancer Center at Johns
Hopkins
401 North Broadway
The Harry and Jeanette Weinberg Building
Baltimore, MD 21287

Telephone: (410) 955-5222

Email:

Keywords: Medical-basic research, Medical-clinical
research, Medical-patient care

Conducts basic and clinical research on cancer. Current research topics are cancer biology, cancer immunology, viral oncology, cancer prevention and control, chemical therapeutics, cancer imaging, hematologic malignancies and BMT, prostate cancer, breast cancer, gastrointestinal cancer, upper aerodigestive cancer, brain cancer, and female reproductive cancer. Clinical research is done in similar areas and many different types of cancer.

Wilmer Eye Institute

Johns Hopkins Medical Institutions (JHMI)

Johns Hopkins Medicine (JHM)

<http://www.hopkinsmedicine.org/wilmer/index.html>

The Wilmer Eye Institute, Johns Hopkins Hospital
600 N. Wolfe St.

Baltimore, MD 21287

Telephone: (410) 955-5080

Email: wilmerinfo@jhmi.edu

Keywords: Medical-basic research, Medical-clinical
research, Medical-patient care

Conducts research on prevention of eye disease, as well as therapies and development of instruments for treating eye disease. Clinical services are also provided. Current research topics include the Baltimore pediatric eye disease study, macular photocoagulation study, excimer laser research, and a collaborative ocular melanoma study.

Center for Cervical Dysplasia

Johns Hopkins Medical Institutions (JHMI)

Johns Hopkins University

https://www.hopkinsmedicine.org/kimmel_cancer_center/centers/cervical_dysplasia/index.html

Cornelia Liu Trimble, Director

Center for Cervical Dysphasia, The Johns Hopkins University

601 N. Caroline St

Baltimore, MD 21287

Telephone: (410) 502-0512

Email: ctrimbl@jhmi.edu

Keywords: Medical-clinical research, Medical-patient care

Seeks a vaccination for cervical cancer. Does mostly clinical trials and cohort studies. Currently doing a cohort study on the effects of an extended treatment window.

F.M. Kirby Research Center for Functional Brain Imaging

Johns Hopkins Medical Institutions (JHMI)

Kennedy Krieger Institute (KKI)

<http://www.mri.kennedykrieger.org/>

Peter van Zijl, Director

F.M. Kirby Research Center, Johns Hopkins Hospital

707 North Broadway

Baltimore, MD 21205

Telephone: (443) 923-9500

Email: pvanzijl@mri.jhu.edu

Keywords: Neuroscience

A research resource where imaging scientists and neuroscientists collaborate to study brain function using unique state-of-the-art techniques in a safe comfortable environment, to further develop these techniques, and to provide training and education in their use. Research conducted at the center ranges from Autism studies to Depression studies.

Center for Substance Abuse Treatment and Research

Johns Hopkins University

https://www.hopkinsmedicine.org/substance_abuse_center/index.html

Eric Strain, MD

Center for Substance Abuse Treatment and Research
Johns Hopkins Bayview Medical Center

5510 Nathan Shock Drive
Baltimore, MD 21224

Telephone: (410) 550-2774

Email: estrain1@jhmi.edu

Keywords: Public health, Bioscience, Neuroscience

The compulsive drive to take drugs – drug addiction – is a considerable public health problem. An unsolved mystery in biology is how brief exposure to certain stimuli – like drugs of abuse – can generate long-lasting, sometimes life-long changes in behaviors like learning and memory. In fact, learning, memory and addiction share similarities in that each depends on experience. Repeated experience causes nerve cells to change in ways that are not well understood. In an effort to better understand addictive behavior and ultimately combat addiction, this center will bring together clinicians who work with addiction, neuroscientists who study how nerve cells communicate with each other, and molecular biologists who study the molecules used by nerve cells to alter how the cells behave.

Environment, Energy, Sustainability and Health Institute (E²SHI)

Johns Hopkins University

<http://e2shi.jhu.edu/>

E²SHI, c/o Department of Environmental Health and Engineering

Ames Hall, Room 313
3400 North Charles Street
Baltimore, MD 21218

Telephone: (410) 516-7092

Email: e2shi@jhu.edu

Keywords: Environmental science/sustainability, Global health

The mission of the Environment, Energy, Sustainability & Health Institute (E²SHI) is to position Johns Hopkins University as a leader in integrative approaches to global environmental change, sustainability, and their related health challenges. We achieve this mission by creating a vibrant, interactive community of scholars who are committed to working across disciplines. This community undertakes research, educates future leaders, and develops policies addressing the need for an environment that supports the health of individuals, communities, and ecosystems.

The Institute for Data Intensive Engineering and Science

Johns Hopkins University

Bloomberg School of Public Health; Carey School of Business; Kreiger School of Arts and Sciences; School of Medicine; Sheridan
<http://idies.jhu.edu/>

Alex Szlay, Director

IDIES
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Johns Hopkins University
Baltimore, MD 21218

Telephone:

Email: idies-webmaster@lists.johnshopkins.edu

Keywords: Engineering, Computer science

The Institute for Data Intensive Engineering and Science will foster education and research in the development and application of data intensive technologies to problems of national interest in physical and biological sciences and engineering. The institute will provide faculty, researchers and students with the structure and resources needed to accomplish these goals.

Institute for Nanobiotechnology

Johns Hopkins University

Bloomberg School of Public Health; School of Medicine; Whiting School of Engineering; Applied Physics Lab; Krieger School of Arts and Sciences
<http://inbt.jhu.edu/>

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Johns Hopkins Institute for NanoBioTechnology
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Email: inbt@jhu.edu

Keywords: Bioscience, Engineering, Medical-basic research

The Johns Hopkins Institute for NanoBioTechnology (INBT) is an exceptionally diverse, multidisciplinary team of faculty, researchers, and student experts uncovering new knowledge and creating innovative technologies at the interface of nanoscience, engineering, and medicine. Launched in 2006, INBT aims to revolutionize research by fostering a collaborative environment among engineers, scientist, and clinicians to pioneer new ways to solve some of the most complex challenges in healthcare and the environment. It brings together experts from the Bloomberg School of Public Health, School of Medicine, Whiting School of Engineering, Applied Physics Lab, and Krieger School of Arts and Sciences.

Energetics Research Group (ERG)

Johns Hopkins University

JHU Whiting School of Engineering

<http://www.cpia.jhu.edu>

The Johns Hopkins University
Energetics Research Group
10630 Little Patuxent Parkway
Suite 202
Columbia, MD 21044

Telephone: (410) 992-7300

Email: info@erg.jhu.edu

Keywords: Technology, Engineering, Aerospace/Astronomy

The ERG's mission is to serve as the touchstone of propulsion and energetics research within the government, private sector and academia; acting as the core for knowledge and expertise, adding value with trusted research and objective analysis, and connecting people and resources-all to ensure that the community is efficient, effective, and vigorous in solving the complex problems of national interest.

Cullman Chemoprotection Center

Johns Hopkins University

School of Medicine

<https://chemoprotectioncenter.org/>

Jed Fahey, Director
Cullman Chemoprotection Center
Johns Hopkins University School of Medicine
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Keywords: Medical-basic research, Medical-clinical research, Chronic disease

An aging population combined with major recent successes in controlling cardiovascular diseases is dramatically shifting the pattern of human diseases toward dominance by cancer and chronic degenerative conditions. Recent research has shown that molecules found in many edible plants have detoxifying properties that may counteract inflammation and other cellular stress that contribute to the spread of cancer and degenerative conditions. To investigate new ways to reduce cancer risk and disabilities associated with aging, this center brings together scientists who study molecular pathways that signal, respond to and prevent toxicity, and researchers who study animal and human models of cancer and chronic degenerative diseases.

Center for Cell Dynamics

Johns Hopkins University
School of Medicine, Institute for Basic Biomedical Sciences
<https://celldynamics.johnshopkins.edu/>

Dina Youngblood,
Administrative Coordinator for the Center for
Cell Dynamics

855 N. Wolfe St, Rangos 450
Baltimore, MD 21205

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Email: dyoungb2@jhmi.edu
Keywords: Bioscience, Medical-basic science

The Center for Cell Dynamics in Development and Disease focuses on the detection of spatially and temporally regulated molecular events in living cells, tissues and organisms. Essential cellular behaviors such as cytokinesis, chemotaxis, asymmetric cell division or changes in synaptic strength depend upon spatially localized, temporally dynamic biochemical reactions. The center will investigate the fundamental cellular behaviors that underlie embryonic development, wound healing, and functions of the immune and nervous systems. These biosensors also have the potential to be developed into useful diagnostic and therapeutic tools for conditions such as cancer, nervous system disorders and auto-immune disease.

Center for Epigenetics

Johns Hopkins University
School of Medicine, Institute for Basic Biomedical Sciences
https://www.hopkinsmedicine.org/institute_basic_biomedical_sciences/research_centers/epigenetics/

Andrew Feinberg, Director
The Institute for Basic Biomedical Sciences, The Johns
Hopkins University
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Baltimore, MD 21205

Telephone: (443) 614-3489
Email: afeinberg@jhmi.edu
Keywords: Medical-basic research

The Epigenetics Center of the Institute for Basic Biomedical Sciences is bringing together an outstanding team of multidisciplinary investigators to explore the epigenetic basis of normal development and disease. One of the Center's major goals is to develop novel technology that will provide cutting edge tools to the Hopkins community allowing our scientists to make the first discoveries in this exciting frontier. The Epigenetics Center provides a nidus for a number of highly interdisciplinary approaches including faculty within many of the basic science and clinical departments at the School of Medicine, the Bloomberg School of Public Health, and industry collaborators in biotechnology hardware development.

Center for Metabolism and Obesity Research

Johns Hopkins University
School of Medicine, Institute for Basic Biomedical Sciences
https://www.hopkinsmedicine.org/institute_basic_biomedical_sciences/research_centers/metabolism_obesity_research/

Susan Aja, Ph.D.
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Email: saja1@jhmi.edu
Keywords: Bioscience, Medical-basic research

This center will focus on three themes that will lead to advances in two of the most urgent global health problems, obesity and diabetes. Researchers will study how cells use sugars and fats to build molecules required for survival, how cells regulate the conversion of food into energy and how the body regulates levels of hormones and other chemicals in response to available nutrients. The research will focus on metabolism at a cellular level, looking at factors influencing cell survival, growth and aging. At the level of the whole organism, the center will address how nutrients, hormone levels and energy usage affect reproduction, exercise capacity, cognitive function, feeding behaviors and longevity.

Center for Sensory Biology

Johns Hopkins University
School of Medicine, Institute for Basic Biomedical Sciences
<https://centerforsensorybiology.org/>

Randall Reed and Paul Fuchs, Co-Directors
The Institute for Basic Biomedical Sciences, The Johns Hopkins University

855 N. Wolfe St, Rangos Building
Baltimore, MD 21205

Telephone: (410) 955-6311
Email: pfuchs1@jhmi.edu
Keywords: Bioscience, Neuroscience

The Center for Sensory Biology is focused on understanding the fundamental processes underlying all of the primary senses – vision, touch (including pain), chemosensation (taste and smell) and hearing – essential for our ability to interact with the world around us. Research within the Center is based on the recognition that sensory systems use similar biological processes for signaling, adaptation and modulation, and for protection from injury, environmental insult, and degeneration. The Center brings together scientists working in these diverse sensory systems and will attract investigators from outside sensory biology to study the senses using new tools and experimental approaches. Key opportunities for novel research include understanding processes of neuronal regeneration and repair and strategies that modulate sensory perception in the areas of pain, hearing, taste and smell. In particular, we anticipate a new era in therapeutics for pain, vision, and hearing based on advances made in the Center.

Center for Transport Biology and Medicine

Johns Hopkins University
School of Medicine, Institute for Basic Biomedical Sciences
<http://www.hopkinsmedicine.org/ibbs/index.html>

Rajini Rao, Director
The Institute for Basic Biomedical Sciences, The Johns Hopkins University
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Rangos Building

Baltimore, MD 21205

Telephone: (410) 955-4732
Email: r Rao@jhmi.edu
Keywords: Medical-basic research

We learn in grade school that the human body is more than 60 percent water, yet how does that water stay contained and how is it transported properly within the body? The study of transport biology focuses on the movement of water and salts into and out of cells. Failure to properly regulate transport of water and salts can lead to diseases like cystic fibrosis, or other medical conditions like hypertension or diarrhea. This center will integrate genetics and clinical and basic sciences to study how molecules involved in transport affect the function of the lung, kidney and gastrointestinal tract, for example. One main focus of the center will be the discovery of new drug and gene therapies to treat conditions arising from faulty transport.

The Johns Hopkins Translational Tissue Engineering Center

Johns Hopkins University
School of Medicine, Whiting School of Engineering
<http://ttec.johnshopkins.edu/>

Hai-Quan Mao
TTEC
Smith Building, 5th Floor
400 N. Broadway
Baltimore, MD 21231

Telephone: (410) 614-6837
Email: ets@jhu.edu
Keywords: Engineering, Bioscience, Medical-basic research

The Johns Hopkins Translational Tissue Engineering Center, TTEC, was founded in 2010 as a joint venture between the Wilmer Eye Institute and the Department of Biomedical Engineering to establish a focus in research, education, and industrial development in the field of regenerative medicine. Building on the excellence of Hopkins clinical and engineering environments, the mission of TTEC is to educate and train tomorrow's leaders in regenerative medicine and accelerate delivery of regenerative medicine technologies to patients. Research programs in TTEC are studying fundamental materials science, engineering, and biology along with a spectrum of enabling technologies for advancing regenerative medicine translation in nearly every clinical field.

Center for Nursing Research

Johns Hopkins University

School of Nursing

https://nursing.jhu.edu/faculty_research/research/centers/index.html

Cheryl Dennison-Himmelfarb

Office for Science and Innovation Johns Hopkins School of Nursing

Room 332

525 N. Wolfe St.

Baltimore, MD 21205

The Center for Nursing Research and Sponsored Projects provides resources to support research at the Johns Hopkins University School of Nursing. The center provides:

- Consultation on research design, data management, and analysis
- Information on research, funding sources, and grant applications
- Advice on faculty development and continuing education in research

Telephone: (410) 614-7005

Email: son-innovation@jhu.edu

Keywords: Medical-clinical research

Center of Excellence on Intergrated Materials Modeling

Johns Hopkins University

University of Illinois at Urbana-Champaign; University of California, Santa Barbara;Metals and Composites & Hybrid Materials branches

<https://ceimm.jhu.edu/>

Khairul Bariah Abd Majid PhD
Program Coordinator for CEIMM

The Johns Hopkins University
Whiting School of Engineering

3400 North Charles Street

Latrobe Hall, Room 211

Baltimore, MD 21218

CEIMM is intended to create a collaborative, multidisciplinary research and educational program that can foster foundational advances in computational and experimental methodologies, supporting the Integrated Computational Materials Science and Engineering (ICMSE) theme. These new generations of computational tools, together with high-resolution imaging tools, give us an opportunity to look far deeper than people could do before. Engineering is being coupled with fundamental sciences through the use of high performance computing and computational science and that is causing a revolution.

Telephone: (410) 516-5033

Email: kabdmaj1@jhu.edu

Keywords: Engineering, Computer science

Center for Integrated Structure Materials Modeling and Simulation

Johns Hopkins University

Whiting School of Engineering

<https://cismms.jhu.edu/>

Khairul Bariah Abd Majid PhD

Program Coordinator for CISMMS & CEIMM

Whiting School of Engineering

The Johns Hopkins University

Latrobe Hall, Room 211

3400 North Charles Street

Baltimore, MD 21218

The Center for Integrated Structure-Material Modeling & Simulation (CISMMS) creates a collaborative, multidisciplinary research and educational program to foster foundational advances in computational modeling, simulation and design in the fields of Integrated Computational Materials Science and Engineering (ICMSE) , Multi-Scale Analysis (MSA) and Computational Structure-Material Analysis and Design (CSMAD).

CISMMS creates three dimensional and computerized models and simulations to study and improve the design of materials ranging from automobiles and air craft to biomaterials and electronics.

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Keywords: Engineering, Computer science

Institute for Complex Adaptive Matter

Johns Hopkins University
Whiting School of Engineering

http://icam-i2cam.org/index.php/branches/detail/johns_hopkins_university

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Baltimore, MD 21218

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Email: npa@jhu.edu

Keywords: Engineering

Johns Hopkins joined the Institute for Complex Adaptive Matter in 2008. CAM's integrated scientific and educational program includes exploratory workshops, symposia, fellowships, and research and educational networks. It has a well-developed communication, governance and advisory structure. Moreover, at each branch there is in turn an interdisciplinary grouping at the local level – from materials science, physics, chemistry, and biology, from theory and experiment. ICAM received early support from the Alfred P. Sloan Foundation, the David and Lucille Packard Foundation, the University of California Office of the President, Los Alamos National Laboratory, and the Richard Lounsbery Foundation. Its current activities are supported by the National Science Foundation and cost sharing contributions from its branch members.

Hopkins Extreme Materials Institute

Johns Hopkins University

Whiting School of Engineering; Krieger School of Arts and Sciences; the Applied Physics Laboratory

<https://hemi.jhu.edu/>

Kaliat T. Ramesh
Hopkins Extreme Materials Institute
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Baltimore, MD 21218

Telephone: (410) 516-7257

Email: hemi@jhu.edu

Keywords: Physics, Engineering, Defense

The Hopkins Extreme Materials Institute (HEMI) will focus, in particular, on what happens to protective materials at the moment of intense impact, when a large amount of energy enters a small space in a short period of time. Researchers will build upon knowledge from experiments such as one in which a quarter-inch Pyrex sphere blasts into a four-inch cube of basalt and glass at three times the speed of sound. "The vision of the institute is to tackle the science issues associated with extreme events and in this case to work with the Army to better protect our troops."

Comparative Neural Systems and Behavior Lab

Johns Hopkins University

Zanvyl Krieger School of Arts & Sciences

<http://batlab.johnshopkins.edu/index.html>

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Email: cynthia.moss@jhu.edu

Keywords: Neuroscience

We investigate mechanisms of spatial perception and memory, coupled with adaptive motor behaviors, which enable successful navigation in complex 3-D environments. Our empirical studies exploit an animal model that provides explicit information about the signals used to guide behavior through its active sensing system. This animal model, the echolocating bat, coordinates its sonar signals with flight maneuvers in response to dynamic echo information, and exhibits a rich display of natural sensory-guided behaviors. Using the bat model system, our research program integrates behavioral, neurobiological, and computational studies of scene analysis, space representation, decision-making, sensorimotor integration and flight control.

Andreaou Lab at Johns Hopkins

Johns Hopkins University (JHU)

<http://andreoulab.net/index.html>

Andreas Andreou, Principal Investigator

Andreou Lab @ JHU

3400 North Charles Street

400 Barton Hall

Baltimore, MD 21218

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Email: andreoujhulab@gmail.com

Keywords: Physics

Research in the Sensory Communication and Microsystems Laboratory is multidisciplinary and ranges from new technologies and devices to mixed analog/digital circuits, architectures, and algorithms for sensory microsystems with applications in sensor networks. Current projects include: silicon on sapphire CMOS, blowfly photoreceptor, MEMS in silicon on sapphire CMOS technology, and hybrid organic/inorganic microsystems.

Center for Hearing and Balance

Johns Hopkins University (JHU)

<https://www.hopkinsmedicine.org/hearing-balance/index.html>

Center for Hearing and Balance, The Johns Hopkins

University, Department of Otolaryngology

720 Rutland Avenue

505 Traylor Research Building

Baltimore, MD 21205

Telephone:

Email:

Keywords: Medical-basic research, Medical-clinical research

The Center includes researchers, teachers, clinicians, and others in the Hopkins medical community. The goal of the Center is to perform basic and clinical research, train basic and clinical investigators, and disseminate research results and relevant information to the medical community and the general public. Research is centered on auditory (hearing) and vestibular (balance) function in normal subjects and in patients with hearing and balance disorders, and on rehabilitation. Current research areas include representation and processing of complex acoustic stimuli, vestibular physiology and disorders, hair cell biophysics and synaptic transmission in the cochlea, anatomy and physiology of the auditory system, hearing impairment and tinnitus, oculomotor function and disorders, theoreptical and computational neuroscience, and calcium channel and signaling.

Center for Imaging Science

Johns Hopkins University (JHU)

<http://cis.jhu.edu/>

Center for Imaging Science, The Johns Hopkins University

3400 N. Charles Street

301 Clark Hall

Baltimore, MD 21218

Telephone: (410) 516-3826

Email: webmaster@cis.jhu.edu

Keywords: Mathematics/statistics, Computer science, Engineering, Technology

Center for Imaging Science at the Johns Hopkins University is affiliated with the Whitaker Biomedical Engineering Institute. Researches medical imaging and computational anatomy, automatic target detection and recognition, statistical pattern recognition, as well as containing the JHU Vision, Dynamics and Learning Lab.

Center for Inherited Disease Research

Johns Hopkins University (JHU)

<http://www.cidr.jhmi.edu/>

Kim Doheny, Ph.D., Lead Co-Principal Investigator & Director
Center for Inherited Disease Research

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1812 Ashland Ave

Baltimore, MD 21205

Telephone:

Email: cidr-info@jhmi.edu

Keywords: Medical-basic research

Established to provide genotyping and statistical genetics services for investigators seeking to identify genes that contribute to human disease. Since 1997, the center has genotyped over 148 subjects including at least 123 human subjects. CIDR concentrates primarily on multifactorial hereditary diseases. The CIDR is open to all investigators pending a peer review, and is supported by 13 institutes in the NIH through a federal contract to Johns Hopkins University.

Center for Tuberculosis Research

Johns Hopkins University (JHU)

<http://tbccenter.jhu.edu/>

Richard Chaisson, Director
Center for Tuberculosis Research

1550 Orleans Street 1M.10

Cancer Research Building 2

Baltimore, MD 21231

Telephone:

Email: rchaiss@jhmi.edu

Keywords: Public health, Global health, Infectious disease

The goal of the Johns Hopkins Center for Tuberculosis Research (CTR), founded in 1998, is to contribute to global tuberculosis control through a range of research initiatives in epidemiology, clinical trials, drug development, diagnostics, vaccine development, pathogenesis, and basic biology. The Center strives to be an internationally recognized center of excellence for research, training and clinical practice.

Human Language Technology Center of Excellence

Johns Hopkins University (JHU)

<http://hlcoe.jhu.edu/>

Sanjeev Khudanpur, PhD

Human Language Technology Center of Excellence, Johns Hopkins University

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Baltimore, MD 21218

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Keywords: Sensation/perception, Technology, Computer science

The Human Language Technology Center of Excellence was founded in January of 2007 at Johns Hopkins University to focus on research in all aspects of speech and language technologies. Doing research at the center is exciting; our mission is to explore highly innovative technologies that could have a significant impact on challenging real-world problems. The center's research focuses on advanced technology for automatically analyzing a wide range of speech, text, and document data in multiple languages. Our research addresses key issues in extracting information from massive sources of text and speech.

The HLTCOE is one of several groups at Johns Hopkins University that jointly work on speech and language research. Relevant departments include Computer Science, Electrical and Computer Engineering, and Applied Mathematics, as well as the Center for Language and Speech

Institute on Multi-Scale Modeling of Biological Interactions

Johns Hopkins University (JHU)

<http://www.jhu.edu/immbi>

Mario Amzel

Institute for Multi-Scale Modeling of Biological Interactions,

The Johns Hopkins University

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Keywords: Engineering, Bioscience

The University of Delaware and Los Alamos National Laboratory are partnering with Hopkins on the institute. The institute will use mathematical models and simulations to understand biological systems in a variety of ways, from the interaction of proteins at the molecular level to the ways biochemical networks behave in organisms. Current research areas include quantum mechanical calculations, structural and statistical thermodynamics, atomic level and coarse grained modeling of biomacromolecular structures, their dynamics and structural transformations, macromolecular recognition and assembly, molecular motors, bioinformatics, analysis of micarray data, biological networks, dynamics of gene regulation and signal transduction, cell signaling, metabolic engineering and structural bioinformatics.

JHPIEGO Corporation

Johns Hopkins University (JHU)

<https://www.jhpiego.org/>

Leslie D. Mancuso, President and CEO

JHPIEGO Corporation

1615 Thames Street

Baltimore, MD 21231

Telephone: (410) 537-1800

Email: info@jhpiego.net

Keywords: Underserved populations, Global health

JHPIEGO works on the front-line in low-resource settings throughout the world to help save and enhance the lives of women and their families. Through advocacy, education and performance improvement, JHPIEGO assists policymakers, educators and trainers in increasing access and reducing barriers to high-quality health services related to maternal and child care, family planning and reproductive health, HIV/AIDS prevention and care, infection prevention and cervical cancer prevention.

Sloan Digital Sky Survey

Johns Hopkins University (JHU)

<http://www.sdss.jhu.edu/>

Alex Szalay, Professor

Sloan Digital Sky Survey, The Johns Hopkins University

Bloomberg 515

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Baltimore, MD 21218

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Email: szalay@jhu.edu

Keywords: Aerospace/astronomy

The Sloan Digital Sky Survey (hereafter, SDSS) is a project to survey a 10000 square degree area on the Northern sky over a 5 year period. A dedicated 2.5m telescope is specially designed to take wide field (3 degrees in diameter) images using a 5x6 mosaic of 2048x2048 CCD's, in five wavelength bands, operating in drift scan mode. The total raw data will exceed 40 TB. A processed subset, of about 6 TB in size, will consist of 1 million spectra, positions and image parameters for over 200 million objects, plus a mini-image centered on each object in every color. The data will be made available to the public after the completion of the survey.

Space Telescope Science Institute

Johns Hopkins University (JHU)

<http://www.stsci.edu/institute/>

Dr. Kenneth Sembach, Director
STScI at the Steven Muller Building
3700 San Martin Drive

Baltimore, MD 21218

Telephone: (410) 338-4700

Email: stsciweb@stsci.edu

Keywords: Aerospace/astronomy

The Space Telescope Science Institute (STScI) is the astronomical research center responsible for operating the Hubble Space Telescope as an international observatory. It also includes the James Webb Space Telescope, and a Community Missions office. It has a number of research initiatives devoted to studying and understanding space.

Spectroscopy, High Field (14.1T)

Johns Hopkins University (JHU)

http://www.hopkinsmedicine.org/Research/Resources/hi_fieldspectroscopy.html

Dr. Ananya Majumdar, Facility Manager
Spectroscopy, High Field (14.1T), The Johns Hopkins
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High resolution NMR studies of biological macromolecules including proteins and nucleic acids

Telephone: (410) 955-1775

Email:

Keywords: Resource/facility/instrument

Whitaker Biomedical Engineering Institute

Johns Hopkins University (JHU)

<https://www.bme.jhu.edu/>

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720 Rutland Avenue
Ross720
Baltimore, MD 21205

An integrative research and education enterprise that will provide leadership in moving biomedical engineering to the forefront of biomedical science and practice. Research areas include: cell and tissue engineering, cardiovascular systems, biomedical imaging science, systems neuroscience, molecular and cellular engineering physiology, computational biology and bioinformatics, and neuroscience and neuroengineering.

Telephone: (410) 955-3132

Email:

Keywords: Bioscience, Engineering

X-ray Imaging Animal Lab

Johns Hopkins University (JHU)

<http://www.hopkinsmedicine.org/Research/Resources/animalimaging.html>

Dean Wong MD, Director
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615 North Wolfe Street
Traylor, 3rd Floor
Baltimore, MD 21205

The lab has two spacious fluoroscopy suites with fixed table c-arms, a surgery suite, dark room area, animal prep area, and a conference room. The angio suites and surgery room are equipped with physiological monitoring equipment (end tidal CO₂, invasive blood pressure, ECG), gas anesthesia machines, and defibrillators. There is also a portable x-ray machine available for radiographs.

Telephone: (410) 955-3536

Email:

Keywords: Veterinary, Resource/facility/instrument

Center for Drug Safety and Effectiveness

Johns Hopkins University (JHU)

Bloomberg School of Public Health

<https://www.jhsph.edu/research/centers-and-institutes/center-for-drug-safety-and-effectiveness/index.html>

G Caleb Alexander
Center for Drug Safety and Effectiveness
Johns Hopkins Bloomberg School of Public Health
Department of Epidemiology
W6035
615 N. Wolfe Street
Baltimore, MD 21205

Drawing on the combined expertise of the Johns Hopkins Bloomberg School of Public Health and the Johns Hopkins School of Medicine, the Center for Drug Safety and Effectiveness serves as a nexus for individuals at Johns Hopkins who are involved in research, education, clinical programs and public service to improve prescription drug use and pharmaceutical policy in the United States and around the world. The unparalleled knowledge base of the Center's core faculty reflects a diversity of fields, ranging from pharmacovigilance to regulatory policy.

Telephone: (410) 955-8168

Email: galexand@jhsph.edu

Keywords: Public health, Pharmacy

The Bill and Melinda Gates Institute for Population and Reproductive Health

Johns Hopkins University (JHU)

Bloomberg School of Public Health

<https://www.gatesinstitute.org/>

Jose G. Rimon II
Director and Senior Scientist
Bill and Melinda Gates Institute for Population and Reproductive Health
Johns Hopkins Bloomberg School of Public Health
W4041
615 N. Wolfe Street,
Baltimore, MD 21205

Successful reproductive health programs are built on a strong research foundation. The Gates Institute currently funds more than 20 major behavioral research studies addressing such questions as how youth confront sexual and reproductive risk (in Vietnam, China, Taiwan, Uganda), how couples manage unplanned pregnancies (in Ghana, Nigeria, India, Uganda, Pakistan, China and Nepal); whether and how contraceptive care should be integrated into HIV voluntary counseling and testing services (in Ethiopia, Malawi, Uganda); and how men view and respond to women's reproductive health needs (in Ghana, Nigeria and Malawi).

Telephone: (410) 955-2232

Email: gatesinstitute@jhu.edu

Keywords: Public health, Global health

By supporting collaborative research, the Institute encourages Johns Hopkins faculty to work in partnership with scientists in developing countries appointed at academic institutions, ministries, nongovernmental organizations and other agencies whose

Institute for NanoBiotechnology

Johns Hopkins University (JHU)

Bloomberg School of Public Health; School of Medicine; Whiting School of Engineering; Applied Physics Lab; Krieger School of Arts and
<http://inbt.jhu.edu/>

Ellie Heasley, Sr. Administrative Coordinator
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Keywords: Engineering, Medical-basic research

The Institute for NanoBiotechnology has been established at Hopkins to bring together expertise from the fields of nanotechnology, biotechnology, biology, medicine, and engineering to enable the creation of new knowledge and new technologies. In partnership with research facilities and universities throughout the country, the INBT will revolutionize health care and medicine by creating groundbreaking technologies based on nanotechnology. Research topics include Cellular and Molecular dynamics, health and the environment, diagnostics and therapeutics.

JHU Vision, Dynamics and Learning Lab

Johns Hopkins University (JHU)

Center for Imaging Science (CIS);Whitaker Institute of Biomedical Engineering.
<http://www.vision.jhu.edu/>

Rene Vidal, PhD, Professor
Vision Lab, The Johns Hopkins University
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Baltimore, MD 21218

Telephone: (410) 516-7306
Email: rvidal@jhu.edu
Keywords: Engineering, technology

Research spans a wide range of areas in biomedical imaging, computer vision, dynamics and controls, machine learning and robotics. In particular, the Center is interested in inference problems involving geometry, dynamics, photometry and statistics, such as (1) inferring models from images (image/video segmentation and structure from motion), static data (generalized PCA) or dynamic data (identification of hybrid systems), and (2) using such models to accomplish a complex mission (land a helicopter, pursue a team of evaders, follow a formation).

Integrated Imaging Center

Johns Hopkins University (JHU)

Department of Biology
<http://pages.jh.edu/~iic/>

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Keywords: Technology, Bioscience, Resource/facility/instrument

Provides facilities and equipment for technical and scientific imaging for biosciences applications. Has both a light (LM) and an electron microscopy (EM) component to facilitate research into cellular/subcellular structure and function.

Neuroengineering and Biomedical Instrumentation Lab

Johns Hopkins University (JHU)

Department of Biomedical Engineering, School of Medicine

<http://neuroengineering.bme.jhu.edu/>

Nitish V. Thakor, Professor

Department of Biomedical Engineering, School of Medicine,
The Johns Hopkins University

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Traylor 701, Dept. of Biomedical Engineering, Johns Hopkins
University School of Medicine

Baltimore, MD 21205

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Email: thakorlab@gmail.com

Keywords: Neuroscience, Engineering

Research is focused on five major areas. In the Neural Micro/Nano Systems area, the lab is interested in developing technologies for recording from neurons or brain and developing interfaces, at molecular/cellular and at systems level. In the Neural Signal Analysis area, the lab analyzes signals from neurons and brain using advanced mathematical/signal processing theories. The signal analysis results in interpretation of basic experiments, but also importantly clinically relevant tools of diagnosis of brain injury. The third concentration area is Neural Imaging, wherein there is being developed both optical and MRI imaging methodologies. The fourth area is Neural Prosthesis. The focus is to develop brain machine interface, signal analysis, control of multi-fingered dexterous prosthetic hand and sensory/haptic feedback. The final concentration area is Clinical Neuroengineering. The basic research projects study various models of brain injury (global ischemia/cardiac arrest, traumatic brain injury, epilepsy, coma) using

Computational Interaction and Robotics Lab

Johns Hopkins University (JHU)

Department of Computer Science, Whiting School of Engineering

<https://cirl.lcsr.jhu.edu/>

Gregory D. Hager, Lab Director

CIRL Lab (LCSR)

Johns Hopkins University

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Telephone:

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Keywords: Engineering, Computer science

Associated with the NSF Engineering Research Center for Computer-Integrated Surgical Systems and Technology (ERC-CISST). The center is interested in understanding the problems that involve dynamic, spatial interaction at the intersection of vision, robotics, and human-computer interaction. Research areas include: surgical modeling, vision-based human computer interaction, image segmentation, xvision real-time tracking system, and human machine collaborative systems, and mobile robotics.

Distributed Systems and Networks Lab

Johns Hopkins University (JHU)

Department of Computer Science, Whiting School of Engineering

<http://www.dsn.jhu.edu/>

Yair Amir, Professor

Distributed Systems and Networks Lab

Computer Science Department, Johns Hopkins University

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207 Malone Hall

Baltimore, MD 21218

Telephone: (410) 516-5562

Email:

Keywords: Computer science, Engineering

Its vision is to create a paradigm shift in the way distributed systems are designed and built. In contrast to the ad-hoc methods underlying most current systems, the lab is building a small set of general tools that are provably correct and provide high performance. These tools encapsulate the challenging aspects of asynchronous networks and enable people to build scalable distributed applications. The impact of the lab encompasses the whole range of theoretical ideas, prototype academic systems, and commercial-grade tools that are used by industry.

Computational Sensory-Motor Systems Lab

Johns Hopkins University (JHU)

Department of Electrical and Computer Engineering, Whiting School of Engineering

<https://engineering.jhu.edu/csms/>

Ralph Etienne-Cummings, PhD, Professor
Johns Hopkins University
3400 North Charles Street
105 Barton Hall
Baltimore, MD 21218

Research is based on the amalgamation of biological and computational techniques for realizing image processing and understanding using focal plane VLSI circuits and artificial neural networks and/or digital computers.

Telephone:

Email:

Keywords: Engineering, Computer science

Lighthouse Studies at Peer Point

Johns Hopkins University (JHU)

Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health (JHSPH)

<https://www.jhsph.edu/research/centers-and-institutes/self-help-through-intervention-and-prevention/index.html>

Carl Latkin, Principal Investigator
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Keywords: Public health, Underserved populations

The Lighthouse is a community-based research unit of the Health, Behavior and Society Department of the Johns Hopkins Bloomberg School of Public Health. Our mission is to conduct research that focuses on disease prevention and health promotion among urban disadvantaged populations, especially in Baltimore City, and to share our findings with those doing similar research. The Lighthouse research activities are focused on a wide variety of topics including HIV prevention, drug abuse, social networks, informal care giving, urban health, overdose prevention, peer education, chronic diseases, and neighborhood effects.

Haptics Laboratory

Johns Hopkins University (JHU)

Department of Mechanical Engineering, Whiting School of Engineering

<https://hamr.lcsr.jhu.edu/>

Jeremy D. Brown, Principal Investigator
Haptics Laboratory, Laboratory for Computational Sensing and Robotics, The Johns Hopkins University
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Baltimore, MD 21218

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Email: jdelainebrown@jhu.edu

Keywords: Neuroscience, Engineering

The Haptic Exploration Laboratory works with both robotic haptics and human-machine haptic interfaces. In the area of robotic haptics, the lab enables robots to explore the world through touch, using specialized robotic fingers and sensors and the appropriate planning and control. Also developing new finger designs and algorithms for autonomous and teleoperated haptic exploration. In the area of human-machine haptic interfaces, haptic interfaces are used to add the sense of touch to virtual and teleoperated environments. By creating physically-based mathematical models of interactions in real environments, the lab can enhance the realism of virtual environments. In addition, haptic feedback and active augmentation modes can improve the performance of robotic assistants in tele- and cooperative manipulation. This research has applications in many areas, including computer-assisted and simulated surgery, autonomous exploration of hazardous or remote environments, undersea salvage, enabling technologies, and

Center for Osteonecrosis Research and Education

Johns Hopkins University (JHU)

Department of Orthopedic Surgery, School of Medicine

<https://www.hopkinsmedicine.org/orthopaedic-surgery/research-clinical-trials/index.html>

Lynne C. Jones, Director

Center for Osteonecrosis Research and Education,
Department of Orthopedic Surgery, Johns Hopkins
University School of Medicine

5601 Loch Raven Boulevard

Suite 201, Smyth Building

Baltimore, MD 21239

Mission is to advance the knowledge of the etiology, pathogenesis, diagnosis and treatment of osteonecrosis. Current projects include a patient database, a study on alcohol intake and cigarette smoking, core depression studies and basic science studying the pathogenesis of osteonecrosis.

Telephone: (443) 444-5905

Email: lcjones@jhmi.edu

Keywords: Medical-basic research, Medical-clinical
research, Medical-patient care

Center for Advanced Metallic and Ceramic Systems

Johns Hopkins University (JHU)

Dept. of Mechanical Engineering; Dept. of Materials Science & Engineering, Whiting School of Engineering

<http://www.camcs.jhu.edu/>

Kaliat T. Ramesh, Director

Center for Advanced Metallic and Ceramic Systems, The
Johns Hopkins Univ., Whiting School of Engineering

3400 North Charles Street

Baltimore, MD 21218

The Center for Advanced Metallic and Ceramic Systems (CAMACS) investigates the fundamental mechanics and materials issues involved with advanced materials at small length scales and very short times. The Center has five thrusts: nanostructured metals, bulk metallic glasses, high-performance ceramics, metal-ceramic composites and dynamic failure and damage mechanisms. Research efforts include very large scale simulations of dynamic phenomena, novel experimental techniques for mechanical measurements at small scales and short times, and the synthesis and processing of nanostructured metals and bulk metallic glasses.

Telephone: (410) 516-7257

Email: camcs@jhu.edu

Keywords: Engineering, Chemistry

Berman Institute of Bioethics

Johns Hopkins University (JHU)

JHSPH School of Nursing; Zanvyl Krieger School of Arts and Sciences; Bloomberg School of Public Health; Paul H. Nitze School of

<http://www.bioethicsinstitute.org/>

Jeffery Kahn, Director

Berman Institute of, The Johns Hopkins University

1809 Ashland Avenue

Deering Hall

Baltimore, MD 21205

The mission of the Johns Hopkins Berman Institute of Bioethics is to conduct advanced scholarship on the ethics of clinical practice, biomedical science, and public health, both locally and globally, and to engage students, trainees, the public, and policy-makers in serious discourse about these issues. We are committed to the following: (1) conducting cutting-edge, multidisciplinary research; (2) training the next generation of leaders in bioethics; (3) helping to prepare students and trainees for the ethical challenges of professional and civic life; (4) informing the public about bioethical issues; and (5) contributing to more ethical public policies and practices.

Telephone: (410) 614-5550

Email: bioethics@jhu.edu

Keywords: Public health

Biostatistics Center

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-biostatistics-center/index.html>

Charnita James

The Biostatistics Center, Department of Biostatistics, Johns
Hopkins Bloomberg School of Public Health
615 North Wolfe Street
Baltimore, MD 21205

Its mission is to provide biostatistical and information science expertise
in support of health research.

Telephone: (410) 614-2661

Email: jhbc@jhu.edu

Keywords: Mathematics/statistics, Public health

Center for a Livable Future

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/index.html>

Martin W. Bloem, Director

Center for a Livable Future
Johns Hopkins Bloomberg School of Public Health
Street 840
111 Market Place
Baltimore, MD 21202

Its goals are: to increase the body of knowledge about the
interconnections among diet, food production, human health, and the
natural environment in order to influence public policy toward more
equitable and sustainable systems, to engage public health
professionals in the discovery of new knowledge, the communication of
findings and the formation of public policy, and to raise individual and
institutional awareness within the JHU community of our responsibility
for environmental stewardship and, through curriculum, educational
events and attention to university practices, effect behavior changes.
CLF works to achieve its goals by funding research, communicating
findings, and building partnerships.

Telephone: (410) 223-1811

Email: clf@jhsph.edu

Keywords: Food/agriculture, Environmental
science/sustainability, Public health

Center for Adolescent Health

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<https://www.jhsph.edu/research/centers-and-institutes/center-for-adolescent-health/index.html>

Philip J. Leaf, Director

Center for Adolescent Health
615 North Wolfe Street, Rm: E4616
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD 21205

The Center for Adolescent Health is committed to assisting urban youth
to become healthy and productive adults. Together with community
partners, the Center conducts research that identifies the needs and
strengths of young people and tests programs designed to promote the
health and well-being of young people. Current research includes
studies into youth development and youth mental health.

Telephone: (410) 614-3953

Email: pleaf@jhu.edu

Keywords: Equity, Public health

Center for Alternatives to Animal Testing (CAAT)

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<http://caat.jhsph.edu/>

Thomas Hartnug

The Johns Hopkins Center for Alternatives to Animal Testing (CAAT)

615 N. Wolfe St. W7032

Bloomberg School of Public Health,
Department of Environmental Health Sciences
Baltimore, MD 21205

The center promotes and support research in the development of in vitro and other alternative techniques, serves as a forum to foster discussion among diverse groups leading to creative approaches to facilitate acceptance and implementation of alternatives, provides reliable information on the science, philosophy, and public policy of alternatives to academia, government, industry and the general public and educates and trains in the application of alternatives.

Telephone: (410) 614-4990

Email: caat@jhsph.edu

Keywords: Bioscience

Center for American Indian Health

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<http://caih.jhu.edu/>

Allison Barlow, Director

The Center for American Indian Health, The Johns Hopkins University

415 N. Washington Street, 4th Floor

Administrative Headquarters

Baltimore, MD 21231

The mission of the Johns Hopkins Center for American Indian Health (CAIH) is to work in partnership with American Indian tribes to raise the health status and self sufficiency of American Indian people to the highest possible level. This mission is accomplished through three core activities: 1) research, 2) service, and 3) training. Research focuses on medical issues.

Telephone: (410) 955-6931

Email: abarlow@jhu.edu

Keywords: Human health, Public health, Equity, Underserved populations

Center for Human Nutrition

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<https://www.jhsph.edu/research/centers-and-institutes/center-for-human-nutrition/index.html>

Keith P. West, Jr., Dr.P.H., R.D., Director

Center for Human Nutrition, The Johns Hopkins University
615 North Wolfe Street

Baltimore, MD 21205

The Center for Human Nutrition was created to integrate and expand the burgeoning academic research activities in human nutrition at the Johns Hopkins schools of Public Health and Medicine. We offer a multidisciplinary educational program in laboratory, clinical and public health nutrition, and we conduct research that will increase our understanding of the role of nutrition in health and disease. We also aim to develop new ways to apply that knowledge to improve the health of specific populations and work worldwide with a variety of institutions and communities to accomplish these goals. Our current areas of emphasis include Diet, physical activity and chronic disease, Food and nutrition policy, Maternal and child nutrition, Vitamins and minerals

Telephone:

Email: kwest@jhsph.edu

Keywords: Food/agriculture, Public health

Center on Aging and Health

Johns Hopkins University (JHU)
Johns Hopkins Bloomberg School of Public Health (JHSPH)
<http://coah.jhu.edu/>

Dr. David Roth, Director
Center on Aging and Health
2024 E. Monument Street
Suite 2-700

Baltimore, MD 21205

Telephone: (410) 955-0491
Email: coah@jhu.edu
Keywords: Human health, Medical-basic research

The Center on Aging and Health (COAH) is dedicated to research that will prevent disease, disability, and improve the health and well-being of older adults. It seeks to foster interdisciplinary research and to train the next generations of research leaders essential to important discoveries for prevention and health promotion for an aging population, and translate these results so that they improve the health status of older adults.

George W. Comstock Center for Public Health Research and Prevention

Johns Hopkins University (JHU)
Johns Hopkins Bloomberg School of Public Health (JHSPH)
<https://www.jhsph.edu/research/centers-and-institutes/george-w-comstock-center-for-public-health-research-and-prevention/index.html>

Josef Coresh
The George W. Comstock Center for Public Health Research
and Prevention, The Johns Hopkins University
2024 East Monument Street

Baltimore, MD 21287

Telephone: (410) 955-0495
Email: coresh@jhu.edu
Keywords: Public health, Chronic disease

The Center is composed of two units. The primary function of both units is research into causes and means of prevention of human disease, notably heart disease, cancer, and stroke. Both can offer consultation regarding community research, a base of operations, and a wealth of data for student and faculty research. Information from results of studies is used for epidemiology laboratory problems.

Institute for Vaccine Safety

Johns Hopkins University (JHU)
Johns Hopkins Bloomberg School of Public Health (JHSPH)
<http://www.vaccinesafety.edu>

Neal A. Halsey, Director
Institute for Vaccine Safety, Johns Hopkins Bloomberg
School of Public Health
615 North Wolfe Street

Baltimore, MD 21205

Telephone:
Email: info@hopkinsvaccine.org
Keywords: Public health, Infectious disease

Obtains and disseminates objective information on the safety of recommended immunizations. The Institute investigates safety questions, conducts methodological and empirical research on post-licensure vaccine safety evaluation, and undertakes individual research projects to obtain specific information regarding vaccine safety when existing information about the safety of a vaccine is insufficient or flawed.

Johns Hopkins Malaria Research Institute

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<http://malaria.jhsph.edu/>

Peter Agre, MD, Director
Johns Hopkins Malaria Research Institute
Bloomberg School of Public Health
Room E5132
615 North Wolfe Street
Baltimore, MD 21205

The Johns Hopkins Malaria Research Institute, centered in the Department of Molecular Microbiology and Immunology, Johns Hopkins Bloomberg School of Public Health, brings together scientists from a variety of disciplines to uncover the most elemental aspects of the disease, its control, and treatment. Research focuses on clinical studies, diagnosis, drugs, cell biology, drug development, vaccine development, structural biology, and vector biology.

Telephone: (410) 502-3377

Email: jhsph.malaria@jhu.edu

Keywords: Medical-basic research, Medical-clinical research, Global health

Wendy Klag Center for Autism & Developmental Disabilities

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH)

<https://www.jhsph.edu/research/centers-and-institutes/wendy-klag-center-for-autism-and-developmental-disabilities/>

M. Danielle Fallin, PhD, Director
Wendy Klag Center for Autism & Developmental Disabilities
615 North Wolfe Street, Suite W2058
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD 21205

The Wendy Klag Center for Autism & Developmental Disabilities encompasses a broad array of research and educational goals across the fields of public health including epidemiology, health services research, developmental research, policy research, population and family dynamics and beyond.

Telephone: (877) 868-8014

Email: wkc@jhu.edu

Keywords: Public health

Center for Global Health

Johns Hopkins University (JHU)

Johns Hopkins Bloomberg School of Public Health (JHSPH); Johns Hopkins School of Nursing

<http://hopkinsglobalhealth.org/>

Thomas Quinn, Director
The Center for Global Health, The Johns Hopkins University
Rooms 333-341
415 N Washington St
Baltimore, MD 21205

The Johns Hopkins Center for Global Health bridges the international work of the University's Bloomberg School of Public Health, School of Medicine and School of Nursing in a coordinated worldwide effort to combat HIV/AIDS, malaria, tuberculosis, malnutrition, hepatitis and other threats to health—especially in developing countries. Research includes many things such as genetics research in Washington, DC and treatment trials in various countries.

Telephone: (410) 955-7635

Email: tquinn2@jhmi.edu

Keywords: Global health, Public health

Listening Center at Johns Hopkins

Johns Hopkins University (JHU)

Johns Hopkins Medicine

https://www.hopkinsmedicine.org/otolaryngology/specialty_areas/listencenter/index.html

Della Santina, Charles C, M.D., Ph.D., Director
The Listening Center at Johns Hopkins
601 North Caroline Street

Baltimore, MD 21287

Telephone: (443) 997-6467

Email: TLC@jhmi.edu

Keywords: Medical-clinical research, Medical-patient care

Provides research and care for individuals with hearing disabilities. Recent research topics include childhood development after cochlear implantation, impact of cochlear implants on the functional health status of older adults, post-meningitic deafness and its implications for cochlear implant outcome and the impact of positivity or negativity of connexin 26.

Center for Clinical Global Health Education

Johns Hopkins University (JHU)

Johns Hopkins School of Medicine and the Johns Hopkins Bloomberg School of Public Health.

<https://main.ccghe.net/>

Robert C. Bollinger, Jr., MD, MPH, Director
Center for Clinical Global Health Education
Johns Hopkins School of Medicine
600 North Wolfe Street, Phipps 521
Department of Medicine | Division of Infectious Diseases
Baltimore, MD 21287

Telephone: (410) 502-2032

Email:

Keywords: Underserved populations, Public health

The CCGHE Mission is to provide clinical care training of health care providers in resource-limited settings, to provide research training for clinicians in resource-limited settings, and to demonstrate improved health outcomes among patients of trained health care providers. The Johns Hopkins CCGHE addresses important global health challenges by providing long-term clinical education programs that will offer health care providers in resource-limited settings access to the expertise and experience of The Johns Hopkins University clinical faculty.

Air and Missile Defense at the Johns Hopkins Applied Physics Lab

Johns Hopkins University (JHU)

Johns Hopkins University, Applied Physics Laboratory (JHU-APL)

<https://www.jhuapl.edu/OurWork/AirandMissileDefense>

Air and Missile Defense, The Johns Hopkins University,
Applied Physics Laboratory
11100 Johns Hopkins Road

Laurel, MD 20723

Telephone: (240) 228-5000

Email:

Keywords: Aerospace/astronomy, Defense

The work of the Air and Missile Defense business area enhances the operational capabilities of DoD systems that defend against high-performance cruise and ballistic missiles and threat aircraft in both overseas and overland environments. Provides practical solutions to emerging AMD challenges to ensure that the U.S. Navy and other military forces can defend themselves and others. The work comprises research, development, engineering, and test and evaluation of current and future air defense and related systems and technologies. The five areas are ballistic missile defense, sensors and weapons, integrated combat systems, science and technology and command, control and communications.

Civilian Space at the Johns Hopkins Applied Physics Lab

Johns Hopkins University (JHU)

Johns Hopkins University, Applied Physics Laboratory (JHU-APL)

<http://civspace.jhuapl.edu/>

The Johns Hopkins University, Applied Physics Laboratory
11100 Johns Hopkins Road

Laurel, MD 20723

Telephone: (443) 778-5000

Email: web-civspace-EPO@jhuapl.edu

Keywords: Aerospace/astronomy, Defense

The Civilian Space Business Area makes critical contributions to the missions of its major sponsor, the National Aeronautics and Space Administration (NASA), to meet the challenges of space science. Conducts research and space exploration, and develops and applies space science, engineering, and technology, including the production of one-of-a-kind spacecraft, instruments, and subsystems. Focuses primarily on the science discipline of space physics and planetary science. Provides leadership in developing innovative, cost-effective, end-to-end space missions. APL has designed, developed and launched 60 spacecraft and over 150 space instruments. Developing new space concepts, technology, and implementation strategies while also helping to heighten interest in scientist and engineering careers through space educational programs.

Homeland Protection at the Johns Hopkins Applied Physics Lab

Johns Hopkins University (JHU)

Johns Hopkins University, Applied Physics Laboratory (JHU-APL)

<http://www.jhuapl.edu/OurWork/HomelandProtection>

Dr. Ralph Semmel, Director of APL

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Laurel, MD 20723

Telephone: (240) 228-5000

Email:

Keywords: Defense

Asymmetric or stateless warfare presents major challenges to the U.S. and its allies for developing effective defense and responses. Programs in APL's Homeland Protection Business Area represent critical contributions spanning a broad range of needed technologies and systems. Applies a strong systems engineering discipline to programs that support primarily the Departments of Defense and Homeland Security. These efforts encompass protecting and deterring terrorist-type attacks, responding to threats and hazards, reducing vulnerabilities, limiting potential damage, and enhancing response and recovery. Focus is on helping sponsors solve immediate problems, while continually looking ahead to identify the next threats and the countering technologies to foil them.

National Security Analysis at the Johns Hopkins Applied Physics Lab

Johns Hopkins University (JHU)

Johns Hopkins University, Applied Physics Laboratory (JHU-APL)

<http://www.jhuapl.edu/OurWork/NationalSecurityAnalysis>

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Laurel, MD 20723

Telephone: (240) 228-5000

Email:

Keywords: Defense

Warfare Analysis has taken on increasing importance as the Military Services and the Joint Staff continue the process of transformation. The Department of Defense faces critical decisions as it strives to develop forces capable of dealing with new asymmetric threats as well as conducting conventional warfighting. APL's Warfare Analysis Programs conduct studies and analyses for the Department of Defense at the policy-making level and at the government planning level. We assist DoD decision-makers as they address the critical challenges of defining future defense needs and capabilities.

National Security Space at the Johns Hopkins Applied Physics Lab

Johns Hopkins University (JHU)

Johns Hopkins University, Applied Physics Laboratory (JHU-APL)

<http://www.jhuapl.edu/OurWork/NationalSecuritySpace>

Patrick Binning
The Johns Hopkins University, Applied Physics Laboratory
11100 Johns Hopkins Road

Laurel, MD 20723

Telephone: (240) 228-5000

Email:

Keywords: Aerospace/astronomy, Defense

Programs in APL's National Security Space Business Area focus on space solutions to critical military problems. Develops and conducts innovative experimental missions, build space instruments, and produces new applications to meet warfighter needs. Offers innovative engineering, advanced technology development, and a deep-rooted system engineering culture. The lab is developing effective space-based applications for future missions, including surveillance, space control, missile defense and homeland security. The lab is also providing enhanced space support for combat forces in navigation, communications, surveillance, reconnaissance, and targeting. The future-oriented programs concentrate on technologies and concepts such as space radar, space situational awareness, space-based surveillance, hyperspectral applications, space-based laser communications, unique sensor technology, microsat and nanosat missions, and launch-on-demand options.

Undersea Warfare at the Johns Hopkins Applied Physics Lab

Johns Hopkins University (JHU)

Johns Hopkins University, Applied Physics Laboratory (JHU-APL)

<http://events.jhuapl.edu/events/submarine-technology-symposium-2018/event-summary-b4d9c8a6fa434dee9fc287e347b8a733.aspx>

Ms. Misty Hechinger, Program Chair
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Laurel, MD 20723

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Email: Misty.Hechinger@jhuapl.edu

Keywords: Defense

Programs in APL's Undersea Warfare Business area support U.S. Navy and Joint missions that constitute this vital defense component. This work focuses on the systems and technologies of undersea military applications, helping maintain the security of our strategic and tactical submarines. The staff represents a broad set of skills and capabilities from science to engineering. The Laboratory is nationally recognized for its expertise in submarine detection systems based on first principles of physics, as well as our ability to build and test undersea prototype systems. APL is a major test organization, conducting extensive, complex R&D operations at sea. As submarine missions have changed over time, APL has continued to be a dependable partner with extensive knowledge of sponsor requirements and the experience to meet the challenges of today's undersea warfare environment.

Research and Exploratory Development Department at the Johns Hopkins Applied Physics Lab

Johns Hopkins University (JHU)

Johns Hopkins University, Applied Physics Laboratory (JHU-APL)

<http://www.jhuapl.edu/OurWork/ResearchandExploratoryDevelopment>

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Email:

Keywords: Defense, Engineering, Bioscience, Chemistry, Computer science, Technology

Research and Exploratory Development Department (REDD), the Research and Exploratory Development Business Area (RED BA) merges science, technology, and systems engineering to provide highly innovative, affordable, and timely solutions to critical national challenges.

REDD's focus on enabling highly innovative solutions to complex operational problems is a key distinction within the defense and national security communities. By design, RED serves as a portal to technological expertise, supporting government sponsors such as the Defense Advanced Research Projects Agency (DARPA), the Intelligence Community, the Office of Naval Research (ONR), the Air Force Research Laboratory (AFRL), and the National Institutes of Health (NIH). RED also supports other APL business areas in cross-enterprise initiatives of vital importance to the nation and the

The Zanvyl Krieger Mind/Brain Institute

Johns Hopkins University (JHU)
Krieger School of Arts and Sciences
<https://krieger.jhu.edu/mbi/>

Ed Connor, Director
The Zanvyl Krieger Mind/Brain Institute
The Johns Hopkins University
338 Krieger Hall
3400 N. Charles Street
Baltimore, MD 21218

Dedicated to the study of the neural mechanisms of higher brain functions using modern neurophysiological, anatomical, and computational techniques. Research topics include shape processing in higher level visual cortex, functional organization of the primate visual system, and neurophysiology of tactile shape and texture perception.

Telephone: (410) 516-8640
Email: mbiinfo@jhu.edu
Keywords: Neuroscience

Severe Combined Immunodeficiency Disease (SCID) Mouse Facility

Johns Hopkins University (JHU)
School of Hygiene and Public Health
<http://www.hopkinsmedicine.org/Research/Resources/scid.html>

Richard Markham, Director
SCID Mouse Facility, The Johns Hopkins University
615 North Wolfe Street

Baltimore, MD 21205

Telephone: (410) 955-3372
Email:
Keywords: Medical-basic research,
Resource/facility/instrument

This facility was developed for the purpose of reconstituting immunodeficient SCID mice with human immune cells, which can then be infected with the human immunodeficiency virus. Such mice can be used for studying the pathogenesis of viral infection and to evaluate the effect of immunoprophylactic and pharmacologic intervention on the course of infection. Space has also been allocated for experiments involving non-SCID mice and other biosafety level 3 pathogens, such as Hantavirus and tuberculosis.

Alzheimer's Disease Research Center

Johns Hopkins University (JHU)
School of Medicine
<http://www.alzresearch.org/>

Elaine Delman
The Johns Hopkins University Department of Pathology
720 Rutland Avenue

Baltimore, MD 21205

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Keywords: Medical-basic research, Medical-clinical research

The Johns Hopkins Alzheimer's Disease Research Center (ADRC) was established in 1984, with funding from the National Institute on Aging. It is directed by Dr. Marilyn Albert and is located at the Johns Hopkins University School of Medicine in Baltimore. The clinical and basic researchers in the Center have made major contributions to current knowledge about the basic biology and clinical presentation of Alzheimer's Disease. The overarching goal of the Center is to conduct basic and clinical research aimed at understanding Alzheimer's disease, and to hasten the time when effective treatments for AD and related disorders become a reality.

Drug Development Unit

Johns Hopkins University (JHU)

School of Medicine

<https://www.hopkinsmedicine.org/clinical-pharmacology/drug-development-unit/index.html>

Mark Marzinke, PhD, DABCC

Drug Development Unit, The Johns Hopkins University
1800 Orleans St

Baltimore, MD 21287

Telephone:

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Keywords: Pharmacy, Chemistry, Medical-clinical
research

The Drug Development Unit has been organized to provide all the personnel resources and services necessary to design, execute, analyze, and report a clinical research protocol. While our focus and expertise is in the area of inpatient studies of drugs, we offer support for other studies requiring close clinical monitoring. Typically, funding sources are identified by the faculty investigator, but we can provide assistance in identifying industrial sponsors, or in preparation of clinical budgets and protocols to support grant submissions.

Epidemiology-Genetic Program in Psychiatry

Johns Hopkins University (JHU)

School of Medicine

https://www.hopkinsmedicine.org/psychiatry/specialty_areas/schizophrenia/research/epi-genetics.html

Ann Pulver, PhD, Director

Epidemiology-Genetic Program in Psychiatry, The Johns
Hopkins University

Room 930

550 North Broadway

Baltimore, MD 21205

Telephone:

Email:

Keywords: Medical-basic research

Mission is to characterize the genetic (biochemical), developmental, and environmental components of bipolar disorder and schizophrenia. Current family studies are on schizophrenia and bipolar disorder.

Flow Cytometry Core Facility

Johns Hopkins University (JHU)

School of Medicine

<https://www.hopkinsmedicine.org/flowcytometry/>

Raffaello Cimbri, Lab Manager

Johns Hopkins Bayview Campus

4940 Eastern Ave

Mason F. Lord Building

Center Tower

Fifth floor

Room 548

Baltimore, MD 21224

Telephone: (410) 550-8291

Email: rcimbri1@jhmi.edu

Keywords: Medical-basic research,
Resource/facility/instrument

Facility function is to perform flow cytometry analysis and cell sorting for researchers.

High Throughput Biology Center- HiT Center

Johns Hopkins University (JHU)

School of Medicine

https://www.hopkinsmedicine.org/institute_basic_biomedical_sciences/research_centers/high_throughput_biology_hit/index.html

Heng Zhu, Ph.D.

High Throughput Biology Center, The Johns Hopkins University

733 North Broadway

Edward D. Miller Research Building

Baltimore, MD 21205

Telephone: (410) 516-7417

Email:

Keywords: Bioscience

The five independent research labs that make up the HiT Center push the frontiers of research technologies and apply those techniques to fundamental questions of biology. The HiT Center's four core components offer resources to study interactions of chemical compounds, gene products, cells and organisms and the networks formed by these interactions. The Microarray Core offers hybridization and analysis services and the Sequencing Core offers synthesis and sequencing services. The Proteomics Core provides mass spectrometry services and other protein-analyzing services. ChemCore is a compound screening and robotics service with access to compound libraries, skill in assay development, and the capability to deliver gene-specific reagents such as RNAi.

Immunogenetics Laboratory

Johns Hopkins University (JHU)

School of Medicine

<https://www.hopkinsmedicine.org/immunogenetics/index.html>

The Johns Hopkins University School of Medicine

Department of Medicine

Division of Immunogenetics and Transplantation Immunology

2041 East Monument Street

Baltimore, MD 21205

Telephone: (410) 955-3600

Email: hla@jhmi.edu

Keywords: Medical-basic research

Its mission is to conduct innovative scientific research and technological development, provide quality laboratory services for the medical community and the patients it serves, and establish and maintain educational programs. Research activities are on immunogenetics of disease and alloreactivity, immunomodulation of alloreactivity, technological development, and population genetics.

Institute for Basic Biomedical Sciences

Johns Hopkins University (JHU)

School of Medicine

https://www.hopkinsmedicine.org/institute_basic_biomedical_sciences/index.html

Stephen Desiderio, Director

The Institute for Basic Biomedical Sciences, The Johns Hopkins University

733 North Broadway

619 BRB

Baltimore, MD 21205

Telephone: (443) 955-4735

Email: sdesider@jhmi.edu

Keywords: Medical-basic research

The IBBS is supporting and creating interdisciplinary research groups in key scientific areas. The first such group is the High Throughput Biology Center, or HiT Center, which includes research and service in proteomics, microarray, gene and protein synthesis and sequencing and compound screening technologies. Eight research centers in all are encompassed in this center including: HiT Center, Center for Epigenetics, Center for Sensory Biology, Center for Metabolism and Obesity Research, Center for Cell Dynamics, Center on Drug Addiction, Center for Chemoprotection, and Center for Transport Biology and Medicine.

Institute for Cell Engineering

Johns Hopkins University (JHU)

School of Medicine

https://www.hopkinsmedicine.org/institute_cell_engineering/

Ted Dawson, Director

Johns Hopkins University School of Medicine

733 North Broadway, Room 643

Edward D. Miller Research Building

Baltimore, MD 21205

Telephone:

Email: HopkinsICE@jhmi.edu

Keywords: Medical-basic research, Engineering

ICE supports and houses scientists working to understand how cells' fates are determined and to harness that information in order to select, modify and reprogram human cells. While basic research will be the hallmark of ICE science, the ultimate goal is to mold engineered human cells into therapeutic transplants for a wide range of currently devastating diseases, including Parkinson's disease, Lou Gehrig's disease or amyotrophic lateral sclerosis (ALS), diabetes and heart failure. Research programs current include: Immunobiology, Neurobiology, Stem Cell Biology, and Vascular Cell Engineering.

Institute for Genetic Medicine

Johns Hopkins University (JHU)

School of Medicine

<https://www.hopkinsmedicine.org/institute-genetic-medicine/index.html>

David Valle, MD, Director

The Institute for Genetic Medicine, The Johns Hopkins University

733 North Broadway, Research Building, 519

Baltimore, MD 21287

Telephone: (410) 955-4260

Email: dvalle@jhmi.edu

Keywords: Medical-basic research

The mission of the Institute is to further the understanding of human heredity and genetic medicine, and use that knowledge to treat and prevent disease. The Institute hosts all relevant teaching, patient care and research in human and medical genetics at Johns Hopkins and provides national and international leadership in genetic medicine. It serves as a focal point for interactions between diverse investigators to promote the application of genetic discoveries to human disease and genetics education to the public. The IGM catalyzes the spread of human genetic perspectives to other related disciplines by collaboration with other departments within Hopkins. Current research activities include: Bioinformatics and Computational Biology, Cellular Mechanisms, Complex Traits, Developmental Genetics, Genetic Disease Natural History and Treatment, Genomics, Molecular Basis of Human Disease, and Stem Cell Biology.

James Buchanan Brady Urological Institute

Johns Hopkins University (JHU)

School of Medicine

<http://urology.jhu.edu/>

James Buchanan Brady Urological Institute, The Johns Hopkins University

600 N. Wolfe Street

Baltimore, MD 21287

Telephone: (410) 955-6100

Email:

Keywords: Medical-basic research, Medical-clinical research, Medical-patient care

Research and clinical work on adult and pediatric urology. A multiple facility center including 6 different research laboratories. Recent research includes nerve sparing approaches for radical prostatectomy and cystectomy, pioneering gene therapy in urology, and discovering genes, mechanisms and causes of various Urological problems. Current clinical studies include drug trials, studies of new techniques used to discover cancer and studies of patients with specific history of disease to determine correlation.

Microscope Facility

Johns Hopkins University (JHU)

School of Medicine

<https://microscopy.jhmi.edu/index.htm>

Scot C. Kuo, Director
Johns Hopkins University,
School of Medicine,
Microscope Facility
Physiology G-04
725 N. Wolfe Street
Baltimore, MD 21205

Telephone: (410) 614-6890
Email: microscopy@jhmi.edu
Keywords: Medical-basic research,
Resource/facility/instrument

The purpose of the Microscope Facility is to assist investigators with research requiring light and electron microscopy and electronic imaging. The Facility occupies 2,000 sq. ft. of space on the ground floor of the Physiology Building in the Basic Sciences Complex and contains 5 electron microscopes, 2 confocal microscopes, 2 digital fluorescence microscopes, several computer workstations for image processing, and a comprehensive preparation laboratory. The Facility's staff members provide services for specimen preparation for electron microscopy and train users who wish to use any of the facility's microscopes on their own. The goal is to enhance the scope of research capability at Johns Hopkins, assure quality microscopy for presentations and publications, and provide state of the art biomedical imaging services. The Facility is open to researchers throughout the university.

Primary Care Consortium

Johns Hopkins University (JHU)

School of Medicine

https://www.hopkinsmedicine.org/primary_care_consortium/index.html

Judy Fields
Sr Administrative Coordinator
JHSOM Admin CPA

733 N Broadway
Baltimore, MD 21205

Telephone: (410) 955-2601
Email: jfields@jhmi.edu
Keywords: Human health, Public health

Their mission is to "Provide a broadly collaborative and multidisciplinary academic home for research, education, quality improvement and innovation designed to improve primary care and health outcomes for the benefit of patients and society. Pull together the many centers of excellence within Johns Hopkins that are committed to the advancement of primary care to effectively coordinate efforts, promote collaboration, invest in innovation and channel creativity toward improving the health of our patients."

Robert Packard Center for ALS Research

Johns Hopkins University (JHU)

School of Medicine

<http://www.alscenter.org/>

Kathryn Davis, Administrative Director
The Robert Packard Center for ALS Research at Johns Hopkins
5801 Smith Avenue
McAuley Suite 110
Baltimore, MD 21209

Telephone: (410) 735-7677
Email: ksdavis@jhmi.edu
Keywords: Medical-basic research, Medical-clinical research, Medical-patient care

Conducts research seeking a cure for Amyotrophic Lateral Sclerosis, also known as "Lou Gehrig's Disease." Their research is based on two approaches, first, finding the basic molecular or cellular cause of the disease and second, looking for new therapies or ways of attacking the disease. There are five teams at the center which are based around researching the following topics: basic mechanisms of the disease, models of human disease, experimental therapy, clinical investigations, clinical trials and the ALS clinic. The ALS clinic is part of the center, though located at Johns Hopkins Hospital, and provides support for ALS patients. Some recently completed projects include strategies to encourage grafted ES-derived motor neurons to regenerate in vivo, mapping the toxic domains of SOD1, and development of a mouse model of Amyotrophic Lateral Sclerosis 2 (ALS2).

Ross Confocal Facility

Johns Hopkins University (JHU)
School of Medicine
<http://confocal.jhu.edu/>

Prof. Bin Wu, Core Director
Ross Fluorescence Imaging Core
720 Rutland Avenue
9135 Ross Research Bldg
Johns Hopkins University
School of Medicine
Baltimore, MD 21205

Telephone: (410) 614-0134
Email: gmcnamara@jhmi.edu
Keywords: Medical-basic research,
Resource/facility/instrument

The Zeiss LSM 410 confocal microscope and accessories are installed at the Johns Hopkins University, in Ross 913. It is a multi-user facility available to both trained and untrained users. The instrument is designed for analysis of multiple dyes (e.g. multicolor immunofluorescence) and live cell confocal microscopy (e.g. intracellular regulation of pH and calcium). Current filter sets are designed for DAPI, AMCA, INDO-1, SPQ, Dansyl, FITC, Propidium Iodide, SNARF-1, Lucifer Yellow, Rhodamines, Texas Red, Cy3 and Cy5.

Spectroscopy and Imaging

Johns Hopkins University (JHU)
School of Medicine
<http://www.hopkinsmedicine.org/Research/Resources/spectro.html>

Paul A. Bottomley, Director
Spectroscopy and Imaging, The Johns Hopkins University
615 North Wolfe Street
Traylor 2nd floor and MRI 110
Baltimore, MD 21205

Telephone: (410) 955-4221
Email:
Keywords: Resource/facility/instrument

Function is to provide state of the art equipment and expertise in the field of NMR Spectroscopy and Imaging to investigators in and around the Johns Hopkins School of Medicine. Currently, the facility has the following fully operational NMR spectrometers: 1) 11.8 T/89 mm vertical bore Bruker Avance-500 NMR Spectrometer suitable for experiments on liquids as well as microimaging, 2) a 4.7 T/40 cm horizontal bore Bruker Biospec Imaging/Spectroscopy instrument equipped with three sets of actively shielded gradients (gradient strength 40G/cm, 20G/cm and 5 G/cm, respectively) and a modern console using HP computer running RedHat Linux Operating System, and 3) 9.4 T/89mm vertical bore GE Omega NMR spectrometer equipped with actively shielded gradients (up to 135G/cm) and a SUN 4 based console.

Synthesis & Sequencing Facility

Johns Hopkins University (JHU)
School of Medicine
<http://biolchem.bs.jhmi.edu/tssf/Pages/default.aspx>

Gerald Hart, Director
The Synthesis & Sequencing Facility, Johns Hopkins University
725 N. Wolfe Street
Room 418 WBSB
Baltimore, MD 21205

Telephone: (410) 955-2739
Email: syn_seq@jhmi.edu
Keywords: Medical-basic research,
Resource/facility/instrument

The Facility has four purposes: peptide synthesis and purification, protein/peptide sequencing analysis, DNA synthesis and purification, and automated DNA sequencing.

Welch Center for Prevention, Epidemiology and Clinical Research

Johns Hopkins University (JHU)

School of Medicine; Johns Hopkins Bloomberg School of Public Health (JHSPH)

<https://www.jhsph.edu/research/centers-and-institutes/welch-center-for-prevention-epidemiology-and-clinical-research/index.html>

Lawrence J. Appel, MD, MPH, Director
Welch Center for Prevention, Epidemiology, and Clinical Research

2024 East Monument Street, Suite 2-600

The John Hopkins Medical Institutions

Baltimore, MD 21205

Telephone: (410) 955-4156

Email: WelchCenter@jhmi.edu

Keywords: Public health, Medical-clinical research

The Welch Center is a multidisciplinary research center affiliated with the Johns Hopkins School of Medicine and Bloomberg School of Public Health. The Center's work promotes the health of the public by generating the knowledge required to prevent disease and its consequences. Through patient-oriented research, the Welch Center evaluates the application of laboratory discoveries as well as the adoption of best practices in clinical settings and populations. The Center's research is focused on diseases and conditions that impose a substantial burden on the health and resources of the public. Welch Center faculty employ the full range of research methodology, including observational epidemiology, randomized controlled trials, and effectiveness and outcomes research.

Johns Hopkins Center for Clinical

Johns Hopkins University (JHU)

School of Public Health

<https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-clinical-trials-and-evidence-synthesis/index.html>

Kay Dickersin, MA, PhD, Director

The Johns Hopkins Center for Clinical Trials

615 N. Wolfe Street

Baltimore, MD 21205

Telephone: (410) 502-4421

Email: kdicker3@jhu.edu

Keywords: Medical-clinical research, Public health, Mathematics/statistics

The research environment of the Center is multi-institutional, involving faculty and collaboration across multiple departments in the Johns Hopkins Bloomberg School of Public Health, the School of Medicine, and other institutions. Research activities include the design, conduct, and analysis of clinical trials; performance of systematic reviews and meta-analysis of the research evidence; methodological work, such as studies of bias in study design and dissemination of results; and examination of the language and nomenclature of trials.

The subject matter of the clinical trials and systematic reviews conducted by the Center covers a variety of health conditions including but not limited to the ocular complications of AIDS, uveitis, non-arteritic anterior ischemic optic neuropathy, Alzheimer's disease, childhood asthma, emphysema, Barrett's esophagus, non-alcoholic steatohepatitis, and dysfunctional uterine bleeding.

Lab for Computational Motor Control

Johns Hopkins University (JHU)

Whitaker Biomedical Engineering Institute

<http://www.shadmehrlab.org/>

Reza Shadmehr, Director

Lab for Computational Motor Control, The Johns Hopkins University School of Medicine

720 Rutland Avenue

410 Traylor Building

Baltimore, MD 21205

Telephone: (410) 614-2458

Email: shadmehr@jhu.edu

Keywords: Neuroscience, Engineering

Uses tools from robotics, computational neuroscience, neurophysiology, and brain imaging to discover the principles of motor control in humans.

Center for Language and Speech Processing

Johns Hopkins University (JHU)
Whiting School of Engineering
<http://www.clsp.jhu.edu/>

Center for Language and Speech Processing, The Johns Hopkins University
3400 North Charles Street
Hackerman 226
Baltimore, MD 21218

Telephone: (410) 516-4237
Email: admin@clsp.jhu.edu
Keywords: Language, Sensation/perception, Computer science

The Johns Hopkins Center for Language and Speech Processing (CLSP) is an interdisciplinary research and educational center focused on the science and technology of language and speech. Within its field, CLSP is recognized as one of the largest and most influential academic research centers in the world. The center conducts research across a broad spectrum of fundamental and applied topics including acoustic processing, automatic speech recognition, big data, cognitive modeling, computational linguistics, information extraction, machine learning, machine translation, and text analysis. It is home to over sixty researchers, including faculty, research scientists, postdocs, graduate students, and undergraduates drawn from the departments of cognitive science, computer science, electrical and computer engineering, and mathematical sciences. Linguistics is an active area of research in the Cognitive Science Department; see the overview of their linguistics focus for more details.

ERC for Computer-Integrated Surgical Systems and Technology

Johns Hopkins University (JHU)
Whiting School of Engineering
<https://www.nsf.gov/pubs/2000/nsf00137/nsf00137d.htm>

Russell Taylor, PhD
Engineering Research Center for Computer-Integrated Surgical Systems and Technology, Johns Hopkins Univ.
3400 North Charles Street
New Engineering Building
Baltimore, MD 21218

Telephone: (410) 516-6299
Email: rht@cs.jhu.edu
Keywords: Technology, Engineering

Seeks to develop novel computing methods, interfacial technologies and computer-integrated surgical systems to significantly change the way surgical procedures are carried out in the 21st century.

Johns Hopkins University Information Security Institute

Johns Hopkins University (JHU)
Whiting School of Engineering
<https://isi.jhu.edu/>

Anton Dahbura, Executive Director
Johns Hopkins University Information Security Institute

3400 North Charles St
Baltimore, MD 21218

Telephone: (410) 516-0211
Email: antondahbura@jhu.edu
Keywords: Technology, Computer science, Engineering, Defense

The Johns Hopkins University Information Security Institute (ISI) is the University's focal point for research and education in information security, assurance and privacy. Research is in networking, wireless, systems evaluation, medical privacy and electronic voting, among other areas and is widely circulated among academics and policy-makers. Moreover, ISI is instrumental in homeland security efforts across Hopkins, including emergency health preparedness, bio-terrorism and national defense.

Institute for Computational Medicine

Johns Hopkins University (JHU)

Whiting School of Engineering, School of Medicine

<https://icm.jhu.edu/>

Raimond L. Winslow, Director
Institute for Computational Medicine, The Johns Hopkins
University Homewood Campus
3400 North Charles Street
316 Hackerman Hall, Suite 208
Baltimore, MD 21218

The mission of the ICM is to develop quantitative approaches for understanding the mechanisms, diagnosis and treatment of human disease through applications of mathematics, engineering and computational science. Research will be focused in three broad areas: Biological Systems Modeling, Computational Anatomy and Bioinformatics.

Telephone: (410) 516-4116

Email: icm@jhu.edu

Keywords: Medical-basic research, Computer science,
Engineering, Mathematics/statistics

Center for Environmental and Applied Fluid Mechanics

Johns Hopkins University (JHU)

Whiting School of Engineering; the Krieger School of Arts and Science; the Applied Physics Laboratory

<http://www.jhu.edu/~ceafm>

Joseph Katz, director
Johns Hopkins University, CEAFM & Department of
Mechanical Engineering
3400 North Charles Street
Latrobe Hall 122
Baltimore, MD 21218

The Center for Environmental and Applied Fluid Mechanics (CEAFM) fosters research and teaching involving fluid mechanics by bringing together students, faculty, and researchers from the Whiting School of Engineering, the Krieger School of Arts and Sciences, and the Applied Physics Laboratory. Research areas of the CEAFM faculty and students include fluid flow phenomena in engineering and science covering a wide range of spatial and temporal scales. This includes fluid flows that occur in industrial, transportation, and manufacturing applications, in ocean and coastal engineering, in the treatment of aquatic and air-borne contaminants, in planetary atmospheres and oceans, rivers, subsurface waters, and fluids deep in the earth's interior, in biological systems, and in the microscopic environments relevant to micro-fluidic engineering applications and to aquatic and atmospheric chemistry and biology.

Telephone: (410) 516-5470

Email: katz@jhu.edu

Keywords: Physics, Engineering

Middle Atlantic Mass Spectrometry Lab

Johns Hopkins University (JHU)

Zanvyl Krieger School of Arts & Sciences

<http://sites.krieger.jhu.edu/mass-spec>

Dr Phil Mortimer
Johns Hopkins University, Zanvyl Krieger School of Arts &
Sciences
The Chemistry Department Mass Spectrometry Facility
3400 North Charles Street
Remsen Hall B13
Baltimore, MD 21218

The MAMS laboratory focuses on biological and chemical research problems that can be solved using mass spectrometry. The laboratory places special emphasis on biomedical problems in conjunction with other researchers at the Johns Hopkins School of Medicine, and on the development of novel instrumentation that fundamentally improves the science of mass spectrometry. Current research projects include: Miniature MALDI-TOF Instruments, Peptide Residue Modification for Improved Sequencing by Mass Spectrometry, Tandem Time-of-flight (TOF/TOF) Mass Spectrometry, and AP MALDI of Sugars and Complexes.

Telephone: (410) 516-5552

Email: mass.spec@jhu.edu

Keywords: Bioscience, Chemistry,
Resource/facility/instrument

Mid-Atlantic Consortium Center of Academic Excellence (MAC-CAE)

Morgan State University (MSU)

<http://www.maccacae.org/>

DR.ARLENE MACLIN,
Executive Director
Mid-Atlantic Consortium Center of Academic Excellence
(MAC-CAE)
1700 Cold Spring Lane
Morgan State University
Baltimore, MD 21251

Telephone: (443) 885-4516
Email: maccacae.morgan@gmail.com
Keywords: Bioscience, Defense, Environmental
science/sustainability

The Mid-Atlantic Consortium Center of Academic Excellence (MAC-CAE) intends to address research problems of interest to the Intelligence Community (IC) with emphasis on South Asia. The MAC will be led by Morgan State University (MSU) with Bowie State University (BSU), Elizabeth City State University (ECSU), Norfolk State University (NSU) and Virginia State University (VSU) as members. The proposed research on bio-systems will be of great interest to the countries of South Asia, where deforestation is a serious problem in rural villages and small towns. In addition, the focus of the research for the MAC-CAE will be on human terrain systems and bio-systems.

National Transportation Center(NTC)

Morgan State University (MSU)

<https://www.morgan.edu/soe/ntc>

Dr. Z. Andrew Farkas, Director and Professor
Center for Advanced Transportation and Infrastructure
Engineering Research (CATIER)
1700 East Cold Spring Lane

Baltimore, MD 21251

Telephone: (443) 885-1446
Email: manoj.jha@morgan.edu
Keywords: Equity, Technology

The National Transportation Center (NTC) at Morgan State University advances U.S. technology and expertise in transportation, research, and technology transfer on the university level. The NTC's theme is "Transportation: A Key to Human and Economic Development." The NTC's current areas of research focus are transportation and traffic modeling, safety, economics and equity, transportation funding, and infrastructure's effect on aquatic life. The center also aims to increase the number of minorities and women in transportation.

Patuxent Environmental & Aquatic Research Laboratory (PEARL)

Morgan State University (MSU)

<https://www.morgan.edu/pearl>

Dr. Scott Knoche
Patuxent Environmental & Aquatic Research Laboratory
(PEARL)

10545 Mackall Road
St. Leonard, MD 20685

Telephone: (443) 885-5926
Email: scott.knoche@morgan.edu
Keywords: Environmental science/sustainability

The Patuxent Environmental & Aquatic Research Laboratory is located near the Patuxent River (part of Chesapeake Bay watershed) in Saint Leonard, Maryland. Research conducted at the state-of-the art facility is designed to increase the understanding of coastal ecosystems so that they may be properly managed and protected. Much of the work is focused on the Chesapeake Bay and its tributaries, such as the Patuxent River.

Academic Training and Management Organization (ATMO)

Morgan State University (MSU)

Clarence M. Mitchell, Jr. School of Engineering

<https://www.atmocenter.org/>

Academic Training and Management Organization (ATMO)
Schaefer Engineering Building (SEB), Suite 335
5200 Perring Parkway
Baltimore, MD 21251

Telephone: (443) 885-4490

Email: admin@atmocenter.org

Keywords: Engineering, Underserved populations

ATMO's mission is to create and manage a diverse pipeline of students, from middle through graduate school, who excel in STEM-based academics and research. ATMO accomplishes its mission by designing and managing innovative programs/activities

Center for Advanced Energy Systems and Environmental Control Technologies

Morgan State University (MSU)

Clarence M. Mitchell, Jr. School of Engineering

http://www.eng.morgan.edu/centers_caesect.htm

Dr. S. W. Lee, Director
Center for Advanced Energy Systems and Env. Control Technologies, Morgan State Univ., School of Eng.
1700 East Cold Spring Lane

Baltimore, MD 21251

Telephone: (443) 885-3333

Email: slee@eng.morgan.edu

Keywords: Technology, Engineering

The Center for Advanced Energy Systems and Environmental Control Technologies (CAESECT) will develop fundamental technology to improve energy utilization across a wide range of industries. In education, it will impart a cross-disciplinary approach to students at all levels. In industrial collaboration, it will work to develop new methods for advanced energy systems design and environmental control technologies. Research Activities include: Laser-based LDV, PIV, and PDPA Applications on Atomization Spray, Laser-based LDV, PIV, and PDPA Application on FBC and CFB Modeling, Propulsion Combustion of the Rocket Engine, Design of Advanced Energy Systems, Advanced High Efficiency Emissions Control, Atmospheric Emission Control, Waste Management: Utilization and Disposal, Testing of Advanced Power System (FBC and CFB Testing, Hot Gas Clean Up and Gas Separation), Alternative Fuels /Renewal Energy, Advanced Material Science, Energy and Environmental Management and Assessment,

Advance Engineering Design Center (AEDC)

Morgan State University (MSU)

Engineering Department

https://www.morgan.edu/school_of_engineering/research_centers.html

Dr. Masud Salimian, Interim Director
Advance Engineering Design Center (AEDC)
1700 East Cold Spring Lane
Montebello Complex
Baltimore, MD 21251

Telephone: (443) 885-3135

Email:

Keywords: Engineering

Center of Excellence in Systems Engineering for Space Exploration Technologies (CESET)

Morgan State University (MSU)

NASA

<http://www.istemfoundation.org/>

Dr. Carl White, Director

Center of Excellence in Systems Engineering for Space
Exploration Technologies (CESET)

5200 Perring Parkway

Clarence M. Mitchell, Jr. Engineering Building, Room 200

Baltimore, MD 21251

Telephone: (443) 885-3913

Email: carl.white@morgan.edu

Keywords: Aerospace/astronomy

The Center of Excellence in Systems Engineering for Space Exploration Technologies (CESET) falls under the auspices of the NASA Dryden Minority University Research and Education Division (MURED) managed by the Office of Equal Opportunity Programs (OEOP). Through initial funding from the NASA's Minority University Research and Education Program, Morgan State University's Clarence M. Mitchell, Jr. School of Engineering has established the Center of Excellence in Systems Engineering for Space Exploration Technologies (CESET) to support NASA's Space Operations Mission Directorate role in supporting NASA's Space Mission Directorate and Earth Science Mission Directorate missions.

Joint Global Change Research Institute (JGCRI)

Pacific Northwest National Laboratory; University of Maryland

PNNL Fundamental Science Directorate; UM Division of Research

<http://www.globalchange.umd.edu/>

Ghassen Asrar, Director

The Joint Global Change Research Institute, University of
Maryland

5825 University Research Court, Suite 3500

College Park, MD 20740

Telephone: (301) 314-6714

Email: jgcri.webmaster@pnl.gov

Keywords: Environmental science/sustainability

The Joint Global Change Research Institute houses an interdisciplinary team dedicated to understanding the problems of global climate change and their potential solutions. Joint Institute staff bring decades of experience and expertise to bear in science, technology, economics, and policy. One of the strengths of the Joint Institute is a network of domestic and international collaborators that encourages the development of global and equitable solutions to the climate change problem.

Initiated in early 2001, the Joint Institute brings together the intersecting interests of Pacific Northwest National Laboratory and the University of Maryland. Staff at the Joint Institute are focused on developing new opportunities to train university students in these interdisciplinary areas.

Maryland Proton Treatment Center

Univeristy of Maryland, Baltimore (UMB)

School of Medicine

<http://www.mdproton.com/home>

William F. Regine, MD, Director

Maryland Proton Treatment Center

850 West Baltimore Street

Baltimore, MD 21201

Telephone: (410) 369-5200

Email: info@mptcproton.com

Keywords: Medical-patient care

The Maryland Proton Treatment Center (MPTC) is the first center in the region to offer proton therapy – a highly advanced and precise form of radiation – to treat cancer.

With proton therapy at the Maryland Proton Treatment Center, patients now have a new tool in the cancer-fighting toolbox. MPTC offers the most advanced form of proton therapy in the world – called pencil beam scanning. This technique is highly effective for a wide variety of solid, localized tumors in adults and children.

Since proton therapy delivers an increased dose that stops specifically at the tumor site, it protects much of the surrounding, normal tissue. It's painless, non-invasive and well tolerated which often times leads to fewer side effects now and in the future.

At MPTC, our core mission is excellence in patient care and more than

University of Maryland Center for Diabetes, Endocrinology, and Nutrition

University of Maryland

<http://www.medschool.umaryland.edu/endocrinology/>

Kristi D. Silver, Acting Director
Division of Endocrinology, Diabetes and Nutrition

660 West Redwood Street, HH-495
Baltimore, MD 21201

Telephone: (410) 706-4074
Email:
Keywords: Medical-patient care

The mission of the Division of Endocrinology, Diabetes and Nutrition at the University of Maryland is to provide excellence in clinical care of patients with diabetes and other endocrine disorders, to find cures and new treatments for these diseases through cutting edge research, and to educate and train present and future health care providers and medical researchers.

Hearing and Balance Center

University of Maryland Medical Center (UMMC)

<https://www.umms.org/ummc/health-services/hearing-balance>

David Eisenman, MD, Director
James T. Frenkil Building
Fourth Floor
16 S. Eutaw St.
Baltimore, MD 21201

Provides specialty care and research for patients with problems related to the ears, facial nerve and skull base.

Telephone: (410) 328-6866
Email:
Keywords: Medical-clinical research, Medical-patient care

Sleep Disorders Center

University of Maryland Medical Center (UMMC)

<https://www.umms.org/midtown/health-services/sleep-disorders>

Steven M. Scharf, MD PhD, Director
University of Maryland Sleep Disorders Center, University of
Maryland Medical Center
Floor 7
827 Linden Avenue
Baltimore, MD 21201

Provides comprehensive diagnosis and treatment of the more than 80 different types of sleep disorders by a multidisciplinary team of specialists and a new state-of-the-art sleep laboratory. The University of Maryland Hospital for Children has a pediatric sleep laboratory for the diagnosis of sleep disorders in children.

Telephone: (410) 706-4771
Email:
Keywords: Medical-patient care

University of Maryland Heart and Vascular Center

University of Maryland Medical Center (UMMC)

<https://www.umms.org/ummc/health-services/heart-vascular>

David A. Zimrin, M.D.
Division Head, Cardiovascular Medicine
Maryland Heart Center, University of Maryland Medical Center
7-N-100
Paca- Pratt
Baltimore, MD 21201

Telephone: (410) 328-8788
Email: dzimrin@medicine.umaryland.edu
Keywords: Medical-patient care, Medical-clinical research

The Center is a regional referral center for the most difficult cardiac cases. The University of Maryland Heart Center offers a variety of services, including the latest diagnostic, medical and surgical procedures for high-risk patients. Also places a strong emphasis on educating patients about heart-healthy lifestyles, including proper nutrition and exercise. Some current research topics include: novel ways to treat atrial fibrillation, the physiology of congestive heart failure, effects of depression and mental stress on the immune system and blood clotting factors, genetic variation and heart failure, and the role of myocardial energy metabolism in cardiac failure.

Maryland Center for Multiple Sclerosis

University of Maryland Medical Center (UMMC)

Department of Neurology

<https://www.umms.org/ummc/health-services/neurology/services/multiple-sclerosis>

Walter Royal, III, M.D., Director
Maryland Center for Multiple Sclerosis, University of Maryland Medical Center
16 S. Eutaw St., 3rd floor

Baltimore, MD 21201

Telephone: (410) 328-4323
Email:
Keywords: Medical-basic research, Medical-clinical research, Medical-patient care

The Maryland Center for Multiple Sclerosis is recognized as a world leader in innovative research programs with the goal of finding effective therapies and eventually curing or preventing MS. Current research at the center has three goals: The first is to understand the cause of MS and the mechanisms by which the immune system and viruses can cause myelin damage; the second is to test the immunologic effects of novel drugs that are relevant to the treatment of MS; and the third is to train fellows who are interested in MS research.

Pediatric Cardiology Diagnostic Center

University of Maryland Medical Center (UMMC)

Department of Pediatrics

<http://www.medschool.umaryland.edu/childheart/>

Geoffrey Rosenthal, M.D., Ph.D., Director
Children's Heart Program
110 S. Paca Street, 7th floor
Division of Pediatric Cardiology
Baltimore, MD 21201

Telephone: (410) 328-4348
Email: grosenthal@peds.umaryland.edu
Keywords: Medical-patient care, Chronic disease

The Children's Heart Program is committed to providing comprehensive cardiac care for children, from fetal life into adulthood, with congenital heart disease, and for children with acquired heart

Maryland Brain Attack Center

University of Maryland Medical Center (UMMC)
Departments of Neurology and Neurosurgery
<http://www.medschool.umaryland.edu/neurology/>

Maryland Brain Attack Center, University of Maryland
Medical Center
22 South Greene Street

Baltimore, MD 21201

Telephone: (410) 328-4323

Email:

Keywords: Neuroscience, Medical-patient care, Medical-clinical research

The Brain Attack Center is a regional center of excellence in stroke care and research. It is the first center in Maryland dedicated to comprehensive care of patients with cerebrovascular disease. Research includes studies of telemedicine for Brain Attack Consultation, technologies for rapid evaluation, diagnosis and treatment of Brain Attack, identification of new genetic and environmental risk factors for stroke, studies of stroke in young adults, mobile telemedicine for accelerated prehospital evaluation, clinical trials of investigational drugs for acute stroke, and clinical trials of strategies to prevent recurrent stroke and to improve recovery from stroke, studies of outcome after stroke, including predictors of return to work after stroke, and studies of the role of exercise in recovery after stroke, including exercise-induced brain neuroplasticity.

Maryland Epilepsy Center

University of Maryland Medical Center (UMMC)
Departments of Neurology and Neurosurgery
<https://www.umms.org/ummc/health-services/neurology/services/epilepsy>

Peter Krino, Chair
Maryland Epilepsy Center, University of Maryland Medical
Center
16 South Eutaw Street 3rd Floor

Baltimore, MD 21201

Telephone: (410) 328-4323

Email:

Keywords: Neuroscience, Medical-patient care, Medical-clinical research

Provides comprehensive care to patients with epilepsy. Current research includes clinical drug trials to control seizures, localizing the focus of epilepsy, basic mechanisms of seizures, post-traumatic epilepsy, surgery for epilepsy, status epilepticus, and nonepileptic seizures.

Institute of Genome Sciences

University of Maryland, Baltimore
School Of Medicine
<http://www.igs.umaryland.edu/>

Claire Fraser, PhD, Director
Institute of Genome Sciences, University of Maryland
School of Medicine

670 W. Baltimore Street
Baltimore, MD 21201

Telephone: (410) 706-1481

Email: igs-info@som.umaryland.edu

Keywords: Medical-basic research

The Institute for Genome Sciences (IGS), an international research center within the University of Maryland School of Medicine (UMSOM) is led by Claire M. Fraser, Ph.D. and a team of internationally recognized faculty. Comprised of an inter-disciplinary, multi-department team of investigators, the Institute uses the powerful tools of genomics and bioinformatics to understand genome function in health and disease, to study molecular and cellular networks in a variety of model systems, and to generate data and bioinformatics resources of value to the international scientific community. The scientific discoveries that are being made at IGS are helping to unravel the mysteries of biological systems and to improve healthcare for people around the world.

Marlene and Stewart Greenebaum Cancer Center

University of Maryland, Baltimore (UMB)

UM School of Medicine; UM Medical System; UM Medical Center

<http://www.umgcc.org>

Kevin J. Cullen, MD, Director

University of Maryland Marlene and Stewart Greenebaum Cancer Center

22 South Greene Street

Baltimore, MD 21201

Telephone: (800) 888-8823

Email:

Keywords: Medical-basic research, Medical-clinical research, Medical-patient care

The GCC serves as an umbrella for all cancer-related activities at UMB conducting basic and clinical research and providing patient care. The five areas of research are experimental therapeutics, gastrointestinal cancer program, hormone responsive cancers, molecular and structural biology, and viral oncology. The GCC is a strong participant in new drug development and performs research on new cancer drugs. Virtually every important drug in use in oncology today was tested at the GCC. Current translational programs include immunotherapy and biological therapy of cancer and gene therapy focused on hematologic malignancies.

Center on Persistent Pain

University of Maryland, Baltimore (UMB)

Dental School

<http://www.umaryland.edu/cacpr/>

Susan G. Dorsey, CACPR Co-Director

Organized Research Center on Persistent Pain, University of Maryland Dental School

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Baltimore, MD 21201

Telephone: (410) 706-7250

Email: sdorsey@umaryland.edu

Keywords: Dental, Medical-basic research, Medical-clinical research

The center is a national leader in the understanding of deep tissue pain and its impact on diagnosis and treatment through basic science research, translational approaches, clinical trials, and the management of pain. Research includes studies into sex differences and the neural basis of pain and analgesia; sex differences and chronic bowel disease; molecular and cell biology of nociceptors and ion channels; glutamate receptors and their role in pain and hyperalgesia; neonatal pain experience and persistent pain in the adult; inflammatory cytokines and persistent pain; CNS modulation of persistent pain; craniomandibular motor function and pain; craniofacial muscle pain; pathogenesis of signs and symptoms associated with pain; gustatory and orotacile induced analgesia in newborns; imaging the brain in pain; evaluation of tricyclic anti-depressant medications for persistent orofacial pain; psychological interventions and psychosocial patient profiles in persistent TMD pain; and effect of acupuncture on pain as

Vocal Tract Visualization Lab

University of Maryland, Baltimore (UMB)

Dental School

<http://www.dental.umaryland.edu/speech/>

Yulvonnda Brown

Administrative Coordinator

Vocal Tract Visualization Lab, Dept. of Biomedical Sciences, University of Maryland Dental School

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Baltimore, MD 21201

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Email: ybrown@umaryland.edu

Keywords: Dental, Medical-basic research, Technology

The Vocal Tract Visualization Laboratory does basic and applied, multidisciplinary research, mathematical and computer modeling, acquisition of experimental data, and technological development. The goal is to study tongue kinematics and dynamics from various perspectives including: linguistics, phonetics, speech science, dentistry, anatomy, physiology, and engineering. Research interests are modeling the tongue, tongue segmentation, and swallowing.

Maryland Psychiatric Research Center

University of Maryland, Baltimore (UMB)

Department of Psychiatry, University of Maryland School of Medicine

<http://www.mprc.umaryland.edu/>

Robert W. Buchanan, MD, Director

MPRC

PO Box 21247

Baltimore, MD 21228

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Email: rwbuchanan@som.umaryland.edu

Keywords: Medical-basic research, Medical-clinical research

Dedicated to providing treatment to patients with schizophrenia and related disorders, educating professionals and consumers about schizophrenia, and conducting basic and translational research into the manifestations, causes, and treatment of schizophrenia. Includes the biostatistics center, the functional neuroimaging laboratory, the Maryland brain collection, a program studying neuroscience, outpatient research, research into schizophrenia related disorders and a treatment research program.

Claude D. Pepper Older Americans Independence Center

University of Maryland, Baltimore (UMB)

Gerontology Programs

<http://www.medschool.umaryland.edu/peppercenter/>

Jay Magaziner, Ph.D., M.S.Hyg, Principal Investigator

University of Maryland Claude D. Pepper Older Americans Independence Center

10 North Greene St., BT/18/GR, 4th floor (Room 4B-203)

Baltimore VA Medical Center

Baltimore, MD 21201

Telephone: (410) 706-1695

Email: asullens@som.umaryland.edu

Keywords: Medical-basic research, Medical-clinical research

Conducts mechanistic and outcome-based research that emphasizes exercise rehabilitation, and provides research training in gerontology and geriatrics that will improve the lifestyle, independence, and functionality of older Americans with disability. The focus is on older patients who are chronically disabled by hemiparetic stroke. The center's hypothesis is that cardiovascular and neuromotor deconditioning are fundamental to disability in older adults living with functional impairments, and that these impairments are modifiable by disease-specific exercise and motor learning based rehabilitation. UM-OAIC investigators have developed new methods to conduct innovative exercise and motor learning-based rehabilitation research; determine the pathophysiology of the functional impairments associated with stroke, hip fracture and other chronic disabling diseases and investigate the mechanisms by which novel rehabilitation strategies improve functional and clinical outcomes; mentor the career

Center for Integrative Medicine

University of Maryland, Baltimore (UMB)

School of Medicine

<http://cim.umaryland.edu/>

Brian Berman, MD
Director

University of Maryland School of Medicine
Center for Integrative Medicine

East Hall

520 West Lombard St

Baltimore, MD 21201

Telephone: (410) 706-6166

Email: CIMInfo@som.umaryland.edu

Keywords: Medical-basic research, Medical-clinical research

The Center for Integrative Medicine is involved in a broad range of research activities aimed at creating a full spectrum of knowledge about the safety and effectiveness of complementary and alternative medicine (CAM). Overall research agenda covers the continuum from bench to bedside including: basic science investigations of the mechanism of action of complementary therapies, clinical trials of the efficacy, safety, and cost-effectiveness of complementary therapies using randomized controlled trials, clinical trials, and outcome study designs, outcomes research involving the collection of data from a non-randomized clinic population to assess efficacy, safety, and cost-effectiveness of particular treatment approaches or combinations of treatment approaches in a real-life situation.

Center for Research on Aging

University of Maryland, Baltimore (UMB)

School of Medicine

<http://www.medschool.umb.edu/research-centers/Center-for-Research-on-Aging/>

Anne Sullens, MS- Administrator

University of Maryland Center for Research on Aging

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Keywords: Human health

The center coordinates research and research training in those areas of gerontology that transcend traditional disciplinary lines and are amenable to an interdisciplinary approach to critical issues in aging research. It interfaces with the University's existing efforts in gerontology and geriatric medicine to develop research, educational and clinical programs that nurture and expand research and research funding in aging. Current research topics include Rehabilitation In Chronic Disease, Stroke Rehabilitation and Prevention, Hip Fracture, Obesity, Diabetes, and Nutrition, Exercise Physiology, Long-Term Care, Hypertension, Cardiovascular Disease, Interdisciplinary Geriatric Teams, Minority Health, Health Disparities, Health Services and Quality of Life, Pharmaceutical Care, Oral Health, Cancer and HIV, Neurocognitive Function, Peripheral Vascular Disease, Osteoarthritis, Osteoporosis, Pressure Ulcers, Adult Guardianship, End of Life Decision Making, Falls and Disability, Free Radicals, and Oxidative

Center for Vaccine Development and Global Health (CVD)

University of Maryland, Baltimore (UMB)

School of Medicine

<http://www.medschool.umb.edu/CVD/>

Kathleen M. Neuzil, MD, MPH, FIDSA

Director

Center for Vaccine Development and Global Health

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University of Maryland School of Medicine

Baltimore, MD 21201

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Email: jmorrison@som.umb.edu

Keywords: Global health, Public health

CVD is an internationally recognized center that works on genetically engineering and testing vaccines against cholera, typhoid, e coli, malaria and other infectious diseases. It is also the lead center in the Mid-Atlantic Regional Center of Excellence for Biodefense and Emerging Infectious Diseases (MARCE). It is the only university vaccine center in the world engaged in the full range of vaccinology - from basic science through vaccine development, and clinical testing in MD and around the world based on grants. Mission priorities include: quantifying the relative importance of various pathogens through epidemiologic studies, identifying virulence properties through studies of molecular pathogenesis to construct vaccine candidates, assessing the suitability of candidate vaccines in clinical studies, Measuring human immune responses to vaccines, evaluating the efficacy of candidate vaccines in large-scale field trials, and advising governments and international agencies on vaccine policy. CVD has been the

Institute of Human Virology (IHV)

University of Maryland, Baltimore (UMB)

School of Medicine

<http://www.ihv.org>

Robert C. Gallo, MD, Director

The Institute of Human Virology

725 West Lombard Street

Baltimore, MD 21201

Telephone: (410) 706-8614

Email:

Keywords: Bioscience

The Institute of Human Virology (IHV) is a world-class center of excellence focusing on biomedical research leading to improved treatment and prevention of on chronic viral diseases and virally linked cancers. More than 75 percent of the institute's clinical and research work targets HIV infection. Other viruses associated with hepatitis C, herpes and cancer are also studied. IHV provides care and treatment to 4,500 people living with HIV/AIDS in the Baltimore area and nearly 100,000 people through treatment programs in Africa and the Caribbean. Research accomplishments include the discovery of Materin that prevents Kaposi's sarcoma; the development of the first transgenic rat whose DNA has been manipulated to incorporate genes of HIV-1; the discovery of cytokines, the first known naturally-occurring HIV inhibitors; and a gene-based method for detecting dangerous microbes in the human body. Research is mainly basic science, vaccine development and clinical trials.

Mucosal Biology Research Center

University of Maryland, Baltimore (UMB)

School of Medicine

<https://www.umms.org/ummc/health-services/pulmonary-critical-care-medicine/research-clinical-trials/mucosal-biology-research-center>

Dr. Jeffrey D. Hasday, Program Head

Mucosal Biology Research Center, University of Maryland
School of Medicine

110 South Paca Street

Floor 2

Baltimore, MD 21201

Telephone: (410) 328-8141

Email:

Keywords: Medical-basic research

Research to understand the molecular basis for human diseases of the gastrointestinal and respiratory tracts. Center expertise includes on inflammatory bowel disease; innate immunity, host defense and tissue injury; nutrition and food intolerance, food allergies and asthma; autoimmune gastrointestinal and respiratory diseases such as celiac disease; gastrointestinal and pulmonary infections; SIRS/sepsis; and use of the gastrointestinal and respiratory tracts for drug delivery and sites of vaccination. Dr. Fasano's discovery of zonulin, a regulator of tight junctions in the intestinal wall, forms the platform technology for Alba Therapeutics, which he co-founded in 2004.

National Study Center for Trauma and Emergency Medical Systems

University of Maryland, Baltimore (UMB)

School of Medicine

http://www.medschool.umaryland.edu/NSC_Trauma/

Alan Faden, MD, Director, STAR-ORC

Shock, Trauma and Anesthesiology Research (STAR) Center
University of Maryland School of Medicine

Suite S247A

20 Penn St

Baltimore, MD 21201

Telephone: (410) 706-2984

Email: ksikorski@som.umaryland.edu

Keywords: Medical-patient care, Medical-clinical research

The Shock, Trauma and Anesthesiology Research organized research center (STAR-ORC) is a world-class, multi-disciplinary research and educational center focusing on brain injuries, critical care and organ support, resuscitation, surgical outcomes, patient safety and injury prevention. It is the first research center in the nation dedicated exclusively to the study of trauma, its complications and prevention.

Originally established by Congress as the Charles "McC." Mathias, Jr., National Study Center for Trauma and Emergency Medical Systems, the center was designated an organized research center at the University of Maryland School of Medicine in 2007.

Center for Computer Aided Drug Design

University of Maryland, Baltimore (UMB)

School of Pharmacy

<http://cadd.umaryland.edu/index.shtml>

Alexander D. MacKerell Jr., PhD, Director

Center for Computer Aided Drug Design, Dept. of
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Keywords: Pharmacy, Chemistry, Bioscience, Computer science

The Computer-Aided Drug Design (CADD) Center was created to foster collaborative research between biologists, biophysicists, structural biologists and computational scientists at the University of Maryland, Baltimore and beyond. The major goal of the CADD Center is to initiate these collaborations leading to the establishment of research projects to discover novel chemical entities with the potential to be developed into novel therapeutic agents. Current projects include dealing with glycogen phosphorylase, opioids/analgesics, and p56lck kinase.

Center for Nanomedicine and Cellular Delivery

University of Maryland, Baltimore (UMB)

School of Pharmacy

<https://www.pharmacy.umb.edu/centers/bio-and-nano-technology-center/>

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Bio- and Nano-technology Center
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Email: byu@rx.umb.edu
Keywords: Pharmacy

The Mission of the Center for Nanomedicine and Cellular Delivery (CNCD) at the University of Maryland is to create a multidisciplinary research environment that will provide expertise and foster collaborations for the design, development and translation into clinic of nanosystems for therapeutic and diagnostic purposes. Research areas are: nanofabrication and characterization, delivery of bioactive agents, pharmacokinetics, transport and subcellular fate, translational research, computer aided drug design and formulation and drug

Center for Translation Medicine

University of Maryland, Baltimore (UMB)

School of Pharmacy

<https://www.pharmacy.umb.edu/centers/ctm/>

Joga Gobburu, PhD, FCP, MBA, Director
Center for Translation Medicine
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Keywords: Pharmacy

University of Maryland School of Pharmacy's Center for Translational Medicine (CTM), a part of the Department of Pharmacy Practice and Science, aim to eliminate the silos and integrate information across development platforms. Here's how:
Using its unique ability to employ advanced and innovative analyses to create intelligence from information, the CTM analyzes and summarizes data from experiments and clinical trials using quantitative disease, drug, and trial models.
These quantitative models, along with cutting-edge development techniques such as adaptive and enrichment trials, are integrated into tools that drug developers, regulatory agencies, and other research organizations can use to guide decisions pertaining to "go/no-go", dosage, patient population, design, endpoint, analyses, and therapeutics choices.

Center on Drugs and Public Policy

University of Maryland, Baltimore (UMB)

School of Pharmacy

<https://www.pharmacy.umb.edu/centers/cdpp/>

Francis B. Palumbo, Executive Director
Center on Drugs and Public Policy, University of Maryland
School of Pharmacy
220 Arch Street

Baltimore, MD 21201

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Email: cdpp@rx.umb.edu
Keywords: Pharmacy, Public health

The CDPP specializes in providing credible, unbiased, and pragmatic solutions for government agencies, the pharmaceutical industry, professional organizations and private businesses on public health issues and practices involving medication use and regulatory matters. Main areas of research are health care policy, health care organization and finance studies, pharmacoconomics and outcomes research, pharmacoepidemiology, drug law and regulation, drug use studies, health services research, and international pharmaceutical policy.

Peter Lamy Center for Drug Therapy and Aging

University of Maryland, Baltimore (UMB)

School of Pharmacy

<http://www.pharmacy.umaryland.edu/centers/lamy/>

Nicole Brandt, PharmD, MBA, BCPP, BCGP, FASCP
Executive Director

The Peter Lamy Center for Drug Therapy and Aging,
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Email: lamycenter@rx.umaryland.edu

Keywords: Pharmacy, Medical-clinical research

The Peter Lamy Center serves as the focal point for research, education and service in geriatric pharmacotherapy. The center provides analyses to public and private decision makers to help them understand the salient tradeoffs in selecting medications, paying medication bills or implementing policies that affect prescription drug use. The center also does some clinical research with recent topics including examining the difference in care patients with depression receive and evaluating ambulatory older Americans referred by their community providers.

Pharmaceutical Research Computing

University of Maryland, Baltimore (UMB)

School of Pharmacy

<https://www.pharmacy.umaryland.edu/centers/prc/>

Eberechukwu Onukwugha, MS, PhD
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Pharmaceutical Research Computing
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Email: prc@rx.umaryland.edu

Keywords: Pharmacy, Computer science,
Mathematics/statistics

Provides research support for faculty, post-doctoral fellows, graduate students and other researchers with data warehousing and analysis needs.

Baltimore Ecosystem Study

University of Maryland, Baltimore County (UMBC)

<http://beslter.org/>

Bess Caplan, Ecology Education Program Leade
Baltimore Ecosystem Study, University of Maryland,
Baltimore County
5200 Westland Blvd
TRC Building, Room 134
Baltimore, MD 21227

Telephone: (410) 448-5663

Email: Caplanb@CaryInstitute.org

Keywords: Environmental science/sustainability

Aims to understand metropolitan Baltimore as an ecological system. The program brings together researchers from the biological, physical, and social sciences to collect new data and synthesize existing information on how both the built and wild ecosystems. The study specifically tries to understand the fluxes relationships and linkages in the system.

Center for Advanced Sensor Technology

University of Maryland, Baltimore County (UMBC)

<https://cast.umbc.edu/>

Karuna Mupparapu, Director

The Center for Advanced Sensor Technology
University of Maryland, Baltimore County
Technology Research Center (TRC) Bldg,
1000 Hilltop Circle
Baltimore, MD 21250

The Center for Advanced Sensor Technology promotes the development of optical based sensors for biomedical, bioprocess, environmental and homeland defense applications. We are a multidisciplinary group of chemists, molecular biologists, electrical engineers and chemical and biochemical engineers. Our main objective is to create innovative sensor technology that is high throughput and low-cost amenable for transfer to industry counterparts.

Telephone: (410) 455-3411

Email: karunam@umbc.edu

Keywords: Technology, Engineering

Center for Women and Information Technology

University of Maryland, Baltimore County (UMBC)

<https://cwit.umbc.edu/>

Dr. Penny Rheingans, Director

Center for Women and Information Technology, University of
Maryland, Baltimore County
1000 Hilltop Circle, ITE 452

Baltimore, MD 21250

The Center for Women and Information Technology (CWIT), established at the University of Maryland Baltimore County (UMBC) in July 1998, is dedicated to providing global leadership in achieving women's full participation in all aspects of information technology (IT). Women's participation in IT will strengthen the workforce, raise the standard of living for many women, and help to assure that information technology addresses women's needs and expands the possibilities for their lives.

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Email: rheingan@umbc.edu

Keywords: Equity, Underserved populations, Technology

University of Maryland, Baltimore County (UMBC) Technology Center

University of Maryland, Baltimore County (UMBC)

<http://www.bwtechumbc.com/>

Ellen Hemmerly

Executive Director

UMBC Research Park Corporation

5520 Research Park Drive
Suite 100

Baltimore, MD 21228

The bwtech@UMBC Research and Technology Park is a 71-acre community engaged in research, entrepreneurship and economic development. From our humble beginnings in 1989 in two trailers on the campus of the University of Maryland, Baltimore County (UMBC) to the present, bwtech@UMBC has been a leading generator of jobs and income for the region.

Our award-winning Incubator and Accelerator provides affordable office and laboratory space, flexible leasing terms and business support services to early-stage technology and bioscience companies. The five-building Research Park offers more established research and technology companies Class A office space in a suburban environment with free surface parking.

Telephone: (443) 543-5047

Email: cyberincubator@umbc.edu

Keywords: Technology, Entrepreneurship

Howard Hughes Medical Institute at University of Maryland, Baltimore County (UMBC)

University of Maryland, Baltimore County (UMBC)
Department of Chemistry and Biochemistry
<http://www.hhmi.umbc.edu/>

Michael Summers, PhD, Investigator
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Email: cindy@hhmi.umbc.edu
Keywords: Bioscience, Medical-basic research

Dr Michael Summers, investigator of Howard Hughes Medical Institute at University of Maryland, Baltimore county is primarily engaged in the research on application of nuclear magnetic resonance (NMR) to studies of the structure and function of proteins and macromolecular interactions. Nuclear magnetic resonance (NMR) and computational methods are employed in the laboratory to address protein-protein and protein-RNA interactions that occur as retroviruses assemble in infected cells.

Center for Information Security and Assurance

University of Maryland, Baltimore County (UMBC)
Department of Computer Science and Electrical Engineering
<http://www.cisa.umbc.edu>

Alan T. Sherman, PhD, Director
UMBC Center for Information Security and Assurance
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Email: sherman@umbc.edu
Keywords: Technology, Defense, Computer science

The UMBC Center for Information Security and Assurance (CISA) promotes research, education, and sound internal practices in information security and assurance. CISA's Cyber Defense Lab provides an isolated network of workstations available to UMBC students and faculty for research projects and classroom exercises. Faculty and students at UMBC actively engage in a broad spectrum of security research across several academic departments and research groups (see centers and faculty). Areas of interest include: cryptology, network security, internet security, intrusion detection, quantum cryptography, electronic commerce, secure software agents, key management for broadcast encryption, multicast security, cryptographic protocols, security for wireless systems, operating system security, security of health care information systems.

eBiquity Research Group

University of Maryland, Baltimore County (UMBC)
Department of Computer Science and Electrical Engineering
<http://ebiquity.umbc.edu/>

eBiquity Research Group
UMBC
Attn: Dr. Anupam Joshi, CSEE Department
Baltimore, MD 21250

Telephone: (410) 455-3500
Email: ebiquity@gmail.com
Keywords: Computer science

Its research explores the interactions between mobile computing, pervasive computing, multi-agent systems and artificial intelligence, and web-based services. Group members have research interests in the underlying areas, such as distributed systems, mobile networking and systems, data management for pervasive/mobile systems, ad-hoc networks, knowledge representation and reasoning, personalization, web/data-mining, multi-agent systems and security. Much of the research is driven by applications in the e-services area -- e-commerce, m-commerce, home-automation, wireless web, etc.

Computational Photonics Laboratory

University of Maryland, Baltimore County (UMBC)

Department of Computer Science and Electrical Engineering; Department of Mathematics & Statistics

<http://www.photonics.umbc.edu>

Curtis Menyuk
Professor and Group Leader

Optical Fiber Communications Laboratory
1000 Hilltop Circle
Department of Computer Science and Electrical Engineering
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Baltimore, MD 21250

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Keywords: Computer science, Engineering

The lab's research activities include the following topics: solutions in optical fibers, high-data-rate optical fiber communications, optical fiber lasers, photonic crystal fibers, randomly varying birefringence in optical fibers, polarization mode dispersion and other polarization effects, recirculating loop experiments, network testbeds, optical communications systems simulator, and fiber amplifiers.

Interactive Systems Research Center

University of Maryland, Baltimore County (UMBC)

Department of Information Systems

<https://isrc.umbc.edu/>

Wayne Lutters, Director
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Department, UMBC
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ITE 404
Baltimore, MD 21250

Telephone: (410) 455-3941
Email: lutters@umbc.edu
Keywords: Computer science

Mission is to investigate the design, implementation, and evaluation of interactive systems to support the development of systems that are usable and accessible. Research areas are: Collaborative editing, Context-aware adaptation in mobile environments, Content-based document conversion, Cross-cultural effect on computer-mediated communication or group decision-making, Cross cultural HCI and user interface design, Data entry for mobile devices, Designing effective distributed documents, Evaluating evaluation techniques, Guidelines for Design and Measurement of Interface Consistency on the Web, Information visualization tools for intrusion detection, Instant messaging, Perceived Security in E-Commerce, Reusing digital information: Search histories in information system user interfaces, Revisiting SRT & productivity, Situationally-induced impairments and disabilities, Tools and techniques for developing effective user interfaces, Ubiquitous computing, and Universal access to information

Imaging Research Center

University of Maryland, Baltimore County (UMBC)

Department of Visual Arts

<https://www.irc.umbc.edu/>

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Baltimore, MD 21250

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Email: irc@umbc.edu
Keywords: Resource/facility/instrument

The Imaging Research Center (IRC) is dedicated to investigating new technologies and their use for interpreting and presenting content. Since its inception in 1987, artists and researchers across disciplines have collaborated in the IRC's creative environment to develop new strategies and techniques in digital media. State-of-the-art facilities enable research in 3D visualization, immersive technologies, interactivity, installation, animation, high definition video, and sound. For almost 20 years IRC researchers and students have been exploring the rapidly developing landscape of visual technology. Initial research involved high-end 3D computer animation to create rich worlds and characters. Visualizations of the otherwise invisible, ranging from biology to long-gone or unrealized architecture continue to be created at the IRC for national broadcast and current feature films.

Goddard Planetary Heliophysics Institute

University of Maryland, Baltimore County (UMBC)

NASA

<https://gphi.umbc.edu/>

Cathy Manalansan

UMBC/GPHI

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Email: cmanalan@umbc.edu

Keywords: Aerospace/astronomy

In May 2011, the NASA Goddard Space Flight Center (GSFC) awarded a Cooperative Agreement to the University of Maryland, Baltimore County, to create a science center for collaborative research in Solar-Planetary Sciences at NASA's Goddard Space Flight Center, Greenbelt, MD. Through this arrangement, UMBC and its partners - University of Maryland College Park and American University - developed collaborative research programs in all areas of the Heliophysics sciences. This consortium between government and universities to create GPHI (Goddard Planetary Heliophysics Institute) not only provided a secure "home" for Heliophysics scientists, but also synergistically fostered new directions in research and technology.

Center for Advanced Studies in Photonics Research

University of Maryland, Baltimore County (UMBC)

Physics, Computer Science and Electrical Eng.; Mathematics and Statistics; Chemical and Biochemical Eng.

<http://www.umbc.edu/caspr/>

Center for Advanced Studies in Photonics Research

(CASPR), UMBC

1000 Hilltop Circle

Baltimore, MD 21250

Telephone: (410) 455-8740

Email: caspr@umbc.edu

Keywords: Quantum, Physics, Engineering

The Center for Advanced Studies in Photonics Research (CASPR) fosters advanced photonics research and technology development in the areas of optical communications, optical sensing and devices, nanophotonics, biophotonics, and quantum optics in order to benefit government, industry and scientific progress.

Center for Urban Environmental Research and Education

University of Maryland, Baltimore County (UMBC)

Technology Research Center

<https://cuere.umbc.edu/>

Claire Welty, Director and Professor

Center for Urban Environmental Research and Education,
University of Maryland, Baltimore County

1000 Hilltop Circle

UMBC, Technology Research Center 102

Baltimore, MD 21250

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Email: cuere@umbc.edu

Keywords: Environmental science/sustainability

The CUERE research team includes environmental engineers, scientists, and policy analysts. The center's research agenda focuses on relationships among natural and socioeconomic processes that occur in urban environments and their impact on public policy. The center is equipped with meeting facilities; integrated analytical, educational and research laboratories; and state-of-the-art computer and geographic information systems. Recent research projects include: State of the Baltimore Region report, Creating an Urban Ecosystem of Blue and Green Space in the Greater Baltimore Region, The Definition and Measurement of Urban Sprawl, and Watershed 263 (goal of the W263 project is to test the hypothesis that reductions in impervious surface and increases in vegetation will result in significant changes in urban hydrology and nitrogen retention in an urban "sewershed").

Joint Center for Earth Systems Technology

University of Maryland, Baltimore County (UMBC); National Aeronautics and Space Administration (NASA)
<https://jcet.umbc.edu/>

Belay Demoz, Director
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Keywords: Technology

The Joint Center for Earth Systems Technology (JCET) operates under cooperative agreement between the University of Maryland Baltimore County and the NASA Goddard Space Flight Center (GSFC). JCET meets the common interest of UMBC and GSFC to develop new technology for environmental remote sensing. JCET's research focuses on four themes: (i) atmospheric radiation, (ii) observations, (iii) clouds and precipitation and (iv) interdisciplinary studies.

Joint Center for Astrophysics

University of Maryland, Baltimore County (UMBC); National Aeronautics and Space Administration (NASA)
Department of Physics
<http://www.jca.umbc.edu>

Ian M. George, Director
Joint Center for Astrophysics, Department of Physics,
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Keywords: Aerospace/astronomy, Physics

The Joint Center for Astrophysics is a cooperative venture between the University of Maryland, Baltimore County [UMBC] and the former Laboratory for High Energy Astrophysics [LHEA] (now reorganized as part of the Exploration of the Universe Division [EUD]) at the NASA Goddard Space Flight Center [GSFC] in Greenbelt, Md. Activities of the JCA include research in high energy astrophysics, developing educational opportunities in astronomy for UMBC students, and participation in outreach educational activities to the university and the surrounding community.

GPHI at University of Maryland, Baltimore County

University of Maryland, Baltimore County (UMBC); National Aeronautics and Space Administration (NASA)
NASA
<https://gphi.umbc.edu/>

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Keywords: Aerospace/astronomy

In May 2011, the NASA Goddard Space Flight Center (GSFC) awarded a Cooperative Agreement to the University of Maryland, Baltimore County, to create a science center for collaborative research in Solar-Planetary Sciences at NASA's Goddard Space Flight Center, Greenbelt, MD. Through this arrangement, UMBC and its partners – University of Maryland College Park and American University – developed collaborative research programs in all areas of the Heliophysics sciences. This consortium between government and universities to create GPHI (Goddard Planetary Heliophysics Institute) not only provided a secure “home” for Heliophysics scientists, but also synergistically fostered new directions in research and technology.

Center for Food Systems Security and Safety

University of Maryland, College Park
<http://cfs3.umd.edu/>

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 University of Maryland
 0119 Symons Hall

College Park, MD 20742

Telephone: (301) 405-1209
 Email: cfs3@umd.edu
 Keywords: Food/agriculture, Public health

Emerging health issues surrounding food safety in our country have called to question the safety and security of our food supply both domestically and globally. While the United States enjoy some of the safest food in the world, the continuing incidences of outbreaks, recalls and warnings clearly demonstrate that there is substantial room for improvement. Solutions to food safety and security issues can only be achieved by combining the expertise, capabilities, and experiences of academia, industry and government. CFS3's unique locations gives us the capability to work cooperatively with each, allowing for access to an array of scientific partners in the Washington, D.C. area.

Maryland Pathogen Research Institute

University of Maryland, College Park
<http://www.life.umd.edu/mpri/>

Dr. David M. Mosser, Director
 MPRI
 University of Maryland
 3104 Biosciences Research Building
 College Park, MD 20742

Telephone: (301) 214-2594
 Email: dmosser@umd.edu
 Keywords: Bioscience, Infectious disease

MPRI brings together a comprehensive, broad-based approach to pathogen research that will improve human health, both nationally and internationally. The goals of the institute are to develop new cures for global infectious diseases, develop new techniques to detect pathogens in the environment, and prevent the natural or man-made spread of infectious diseases through the population.

Center for Research and Exploration

University of Maryland, College Park
 NASA, University of Maryland College Park, University of Maryland Baltimore County, Catholic University of America, Howard University
<http://cresst2.umd.edu/index.html>

Lee G. Mundy, PhD, CRESST II, Director

College Park, MD

Telephone: (301) 405-1529
 Email: lgm@astro.umd.edu
 Keywords: Aerospace/astronomy, Underserved populations

CRESST II researchers are initially focusing on the study of neutron stars, black holes, and extremely hot gas throughout the universe. The Center also works to increase the involvement of minority and women scientists in space science research and to facilitate university student participation in such research. CRESST operates an office on-site at GSFC to provide comprehensive support to GSFC and CRESST scientists to recruit new scientists, run student programs, assist with new science proposals, as well as handle visitors, scientific meetings, and summer schools. Quality science and effective collaboration are the top priorities.

Maryland Microfluidics Laboratory (MML)

University of Maryland, College Park
Department of Mechanical Engineering
<http://mml.umd.edu/mml/index.html>

Don DeVoe, PhD, Faculty Director
Maryland Microfluidics Laboratory (MML)
University of Maryland
3126 Glenn L. Martin Hall
College Park, MD 20742

Telephone:

Email: ddev@eng.umd.edu

Keywords: Bioscience, Engineering

Research in the Maryland Microfluidics Laboratory is focused on the development of micro and nanofluidic technologies enabling effective biomolecular analysis. Major research thrusts include multidimensional microfluidic biomolecular separation platforms, tools for microfluidic tools for high throughput biomarker discovery and clinical proteomics, interfaces coupling microfluidics to mass spectrometry, integrated ion channel platforms, and polymer micro/nanofluidic fabrication technologies. MML researchers also develop silicon MEMS technologies for bioanalysis and related applications. Microfabrication is performed using dedicated facilities in the newly-renovated MML clean room, and in the FabLab located in the new Kim Engineering Bldg.

Joint Quantum Institute

University of Maryland, College Park
Department of Physics
<http://jqj.umd.edu/>

Gretchen Campbell and Frederick Wellstood, Co-Directors
Joint Quantum Institute
University of Maryland
Room 2207
Atlantic Bldg.
College Park, MD 20742

Telephone: (301) 314-1908

Email: jqj-info@umd.edu

Keywords: Physics, Quantum

JQI will gather scientists from the Department of Physics at UMD, NIST and the Laboratory for Physical Sciences (LPS). UMD, NIST, and LPS bring to the JQI major experimental and theoretical research programs which are dedicated to the goals of controlling and exploiting quantum systems. Some of the topics being studied are listed here, with the institutions which are currently involved; these topics form the research basis of the JQI: Quantum properties of superconducting qubits, Quantum entanglement, control, and transport of atoms in cavities and optical lattices (UMD and NIST), Decoherence studies with atoms and condensed matter systems (UMD, NIST, and LPS), Spin- and charge-based quantum computing (UMD, NIST, and LPS), Topological quantum computing (UMD), Quantum coherence and entanglement (UMD, NIST, and LPS), The quantum-classical interface (UMD, NIST, and LPS), Quasi-one-dimensional superconductors as optical lattices (UMD), and Quantum computing with the fractional quantum Hall effect

Center for Biodiversity

University of Maryland, College Park (UMCP)
<http://www.life.umd.edu/research/biodiversity/index.htm>

Dr. Sara Via, Director

College Park, MD 20742

Telephone: (301) 405-8941

Email: sv47@umail.umd.edu

Keywords: Bioscience, Environmental science/sustainability

Center for Biodiversity links
the Basic Science and Human Impacts

The urgency to understand the origins and maintenance of biodiversity has never been greater. Humans rely on the web of life for food, fiber, building materials, medicines—as well as for life-sustaining fresh air and water. The University of Maryland's Center for Biodiversity was launched to meet the need for training and research in this vital field.

Our Mission is to prepare the next generation of scientists for the environmental challenges that will arise during this century.

Maryland Fire and Rescue Institute (MFRI)

University of Maryland, College Park (UMCP)

<https://www.mfri.org/>

Michael E. Cox Jr., Director
Maryland Fire and Rescue Institute, University of Maryland
4500 Campus Drive

College Park, MD 20740

Telephone: (301) 226-9900
Email: director@mfri.org
Keywords: Emergency response

Plans, researches, develops, and delivers quality programs to enhance the ability of emergency services providers to protect life, the environment, and property. MFRI is the State's fire and emergency service training agency. Includes Center for Firefighter Safety and Research Development

Maryland Institute for Technology in the Humanities

University of Maryland, College Park (UMCP)

<https://mith.umd.edu/>

Trevor Muñoz
Interim Director
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4130 Campus Drive
University of Maryland
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College Park, MD 20742

Telephone: (301) 405-8927
Email: mith@umd.edu
Keywords: Technology

The Maryland Institute for Technology in the Humanities (MITH) is a leading digital humanities center that pursues disciplinary innovation and institutional transformation through applied research, public programming, and educational opportunities. Jointly supported by the University of Maryland College of Arts and Humanities and the University of Maryland Libraries, MITH engages in collaborative, interdisciplinary work at the intersection of technology and humanistic inquiry. MITH specializes in text and image analytics for cultural heritage collections, data curation, digital preservation, linked data applications, and data publishing.

Program in Neuroscience and Cognitive Science

University of Maryland, College Park (UMCP)

<http://www.nacs.umd.edu>

Dr. Joshua Singer, Director
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Telephone: (301) 405-8910
Email: pkomarek@umd.edu
Keywords: Neuroscience

NACS Graduate Program offers world-class interdisciplinary training in several broad areas: Systems neuroscience, molecular and cellular neuroscience, computational and cognitive neuroscience, and cognitive science. Within and across these areas, NACS has faculty with internationally renowned research programs in vision, audition, sensorimotor integration, synaptic plasticity, language and communication, learning, memory and decision making, and neuromorphic engineering. These research programs are housed in over 12 different departments, which participate in the NACS Graduate Program in College Park. Includes partnerships with the National Institutes of Health and Children's National Medical Center.

Center for Bioinformatics and Computational Biology

University of Maryland, College Park (UMCP)

University of Maryland Institute for Advanced Computer Studies (UMIACS)

<https://www.cbcb.umd.edu/>

Michael P. Cummings, Interim Director
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8314 Paint Branch Dr.
College Park, MD 20742

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Email: info-cbcb@umiacs.umd.edu
Keywords: Bioscience, Computer science, Physics,
Mathematics/statistics, Engineering

The University of Maryland Center for Bioinformatics and Computational Biology is a multidisciplinary center dedicated to research on questions arising from the genome revolution. CBCB brings together scientists and engineers from many fields, including computer science, molecular biology, genomics, genetics, mathematics, statistics, and physics, all of whom share a common interest in gaining a better understanding of how life works. The Center for Bioinformatics and Computational Biology is organized as a center within the University of Maryland Institute for Advanced Computer Studies (UMIACS), an interdisciplinary research institute supporting high-performance computing research across the College Park campus.

Glenn L. Martin Wind Tunnel

University of Maryland, College Park (UMCP)

A James Clark School of Engineering

<https://windtunnel.umd.edu/>

Jewel Barlow, Director
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Telephone: (240) 464-3871
Email: barlow@umd.edu
Keywords: Aerospace/astronomy, Engineering,
Resource/facility/instrument

The Glenn L. Martin Wind Tunnel is a state of the art low speed wind tunnel that has been actively involved in aerodynamic research and development since 1949. The list of research and development tests carried out includes work on aircraft of many types and many other vehicles and devices. More than 1900 tests have been conducted to date. The Wind Tunnel can be used by companies if the University is contacted.

Center for Advanced Life Cycle Engineering

University of Maryland, College Park (UMCP)

A. James Clark School of Engineering

<http://www.calce.umd.edu>

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CALCE Electronic Products and Systems Center, University
of Maryland

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College Park, MD 20742

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Email: pecht@calce.umd.edu
Keywords: Engineering

The Center for Advanced Life Cycle Engineering (CALCE) is dedicated to providing a knowledge and resource base to support the development of competitive electronic components, products and systems. Areas of expertise are: Lead Free Issues, Supply Chain Management, Parts and Components, Printed Wiring Boards, Ball Grid Arrays, Permanent Interconnects, Photonics and Telecommunication, Contacts and Connectors, Accelerated Testing, Failure Analysis, Thermal Management, Electromagnetic Compatibility, Electronic Systems Cost Modeling, and Accelerated Testing.

Institute for Systems Research

University of Maryland, College Park (UMCP)

A. James Clark School of Engineering

<http://www.isr.umd.edu/>

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Institute for Systems Research
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College Park, MD 20742

Telephone: (301) 405-6615

Email: regli@umd.edu

Keywords: Engineering, Technology

The institute develops design and control methodologies for integrating components and technologies in complete systems. ISR's research agenda is a drive to advance and exploit fundamental methodological tools for solving systems engineering problems, including intelligent control; modeling and optimization; communications and signal processing; computing; operations research; human factors; reliability and risk assessment; and systems integration. The five research emphases are: Global Communications System - moving information globally and efficiently, Sensor-Actuator Network - connecting, understanding and controlling the physical world, Next-Generation Product Realization Systems - developing product streams and manufacturing systems, Societal Infrastructure Systems - supporting people and society through intelligent systems design, and Cross-Disciplinary Systems Education - developing technical, business and societal leaders.

Maryland Technology Enterprise Institute

University of Maryland, College Park (UMCP)

A. James Clark School of Engineering

<http://www.mtech.umd.edu/index.html>

Dr. Peter Sandborn
Professor and Director
Maryland Technology Enterprise Institute (Mtech)
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387 Technology Drive
College Park, MD 20742

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Email: sandborn@umd.edu

Keywords: Technology, Entrepreneurship, Engineering

The Maryland Technology Enterprise Institute (MTECH), a unit of the A. James Clark School of Engineering, accelerates new ventures, spurs economic growth, and brings university innovation to Maryland companies through technology entrepreneurship and partnership programs. MTECH Ventures provides entrepreneurship education to technology creators and delivers a portfolio of services and resources to entrepreneurs committed to bridging the gap between technical ideas and viable ventures. MTECH Partnerships leverages university innovation for Maryland companies.

Institute for Research in Electronics and Applied Physics

University of Maryland, College Park (UMCP)

A. James Clark School of Engineering; College of Computer, Mathematical, and Natural Sciences

<https://ireap.umd.edu/>

Thomas E. Murphy, Director
Institute for Research in Electronics and Applied Physics
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Energy Research Facility, Bldg. #223
College Park, MD 20742

Telephone: (301) 405-4951

Email: tem@umd.edu

Keywords: Physics

Research includes: Charged Particle Beams for Advanced Accelerator Application, High Power Microwave Generation, Materials Processing Laboratory for Advanced Materials, Experimental Plasma Physics, Laboratory for Ion Beam Research and Applications (LIBRA), Plasma Theory Group, Nonlinear Dynamics Research and Plasma Processing of Materials.

Maryland NanoCenter

University of Maryland, College Park (UMCP)

A. James Clark School of Engineering; Colleges of Computer, Math., & Phys. Sciences, and Chem. & Life Sciences

<https://www.nanocenter.umd.edu/>

Alice Mobaidin

Maryland NanoCenter, University of Maryland

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College Park, MD 20742

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Email: mobaidin@umd.edu

Keywords: Physics, Engineering

The Maryland Center for Integrated Nano Science and Engineering brings together cross-disciplinary groups of outstanding scientists and engineers to advance the frontiers of science and to develop nanotechnologies which improve our world. Research activities include: Scanning nanoprobe techniques, particle synthesis and nonmanufacturing, locating measuring and controlling nanoparticles, nanoelectronics, nanomanufactured systems, microsystem platforms for nanoscale research and technology, biomolecular engineering, nano-bio technology, combinatorial materials science and discovery, and complex multifunction and smart materials.

Keck Laboratory for the Analysis of Visual Motion

University of Maryland, College Park (UMCP)

A. James Clark School of Engineering; The College of Computer, Mathematical, and Natural Sciences

<http://www.nanocenter.umd.edu/labs/Keck/>

Dr. Ichiro Takeuchi

Lab Director

Keck Laboratory for the Analysis of Visual Motion, UM
Institute for Advanced Computer Studies

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Email: takeuchi@umd.edu

Keywords: Physics

The Keck Laboratory for the Analysis of Visual Motion was established in 1997 through a grant from the Keck Foundation,. The Laboratory will be used to explore fundamental problems in the recovery of three dimensional models of human movements. The Laboratory will include a large set of digital color cameras that will simultaneously view a person perform an action. Previous research included using advanced optimization procedures, to between four and seven synchronized video data streams of the person in motion. The time-varying articulation of the 3D model was then superimposed onto the viewpoints to show the accuracy of the recovery process.

Biotechnology Scale-Up Facility

University of Maryland, College Park (UMCP)

Biotechnology Program

<https://research.umd.edu/capabilities/core-facilities/biotechnology-scale-facility-bsf>

Ben Woodard, Director

Bioprocess Scale-Up Facility

1203 Chem./Nuc. Bldg. #90

College Park, MD 20742

Telephone: (301) 405-3909

Email: woodard@umd.edu

Keywords: Bioscience, Resource/facility/instrument

The Bioprocess Scale-Up Facility (BSF) is the Biotech Program's modern bioprocessing laboratory dedicated to the development and scale-up of biotechnology products and processes. With more than 678 fermentations conducted since 1998 alone, the BSF has accelerated the R&D of local biotechnology leaders such as Human Genome Sciences, NIH and MedImmune, as well as growing Maryland start-ups such as Martek Biosciences and Digene Corporation.

Animal and Avian Sciences

University of Maryland, College Park (UMCP)
College of Agriculture and Natural Resources
<https://ansc.umd.edu/>

Chad H. Stahl, Ph.D.

Professor and Chair
Department of Animal and Avian Sciences
University of Maryland
Department of Animal and Avian Sciences
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Bldg. 142
College Park, MD 20742

Telephone: (301) 405-1366

Email: ansc@umd.edu

Keywords: Veterinary, Food/agriculture

Aquaculture, Behavior and Animal Welfare, Biometrics, Cell Biology and Biochemistry, Equine, Food Safety and Food Products, Dairy and Livestock Production Systems, Nutrition, Poultry Production, Physiology, Growth and Development, Reproduction (Animal) are the areas of study for this school, and many professors also have research projects on these topics.

Harry R. Hughes Center for Agro-Ecology inc.

University of Maryland, College Park (UMCP)
College of Agriculture and Natural Resources
<https://agresearch.umd.edu/agroecol>

Dr. Suzanne Dorsey, Executive Director
Harry R. Hughes Center for Agro-Ecology, Inc.
124 Wye Narrows Drive
P.O.Box 169
Queenstown, MD 21658

Telephone: (410) 827-8056

Email: agroecology@umd.edu

Keywords: Environmental science/sustainability,
Food/agriculture

The Center supports a variety of public and private sector research projects of benefit to Maryland's farms and forests, owners and operators. Its mission is to develop innovative policies and foster new understandings that will help secure a viable future for the farms and productive forests so central to the state's economy and quality of life. Some recent research projects include: the use of the enzyme phytase in poultry feed to reduce phosphorus levels in manure, ways to improve the federal conservation security program ("green payments"), and protecting Maryland's investment in land preservation through supportive local zoning and compatible transportation policies.

Maryland Agricultural Experiment Station (MAES)

University of Maryland, College Park (UMCP)
College of Agriculture and Natural Resources
<https://agresearch.umd.edu/>

Adel Shirmohammadi, Ph.D., Professor
Associate Dean for Research/Associate Director of MAES
University of Maryland
College of Agriculture and Natural Resources
Office of the Dean
1296 Symons Hall
7998 Regents Drive
College Park, MD 20742

Telephone: (301) 405-2070

Email:

Keywords: Food/agriculture

The Maryland Agricultural Experiment Station (MAES) funds research conducted primarily by 115 faculty located within the College of Agriculture and Natural Resources, University of Maryland at College Park. Faculty utilize MAES' 10 research facilities, grouped into four research centers by geographical regions, for research that meets State, national, and international agricultural, environmental, economic, and social needs. The goal of these centers is to conduct research and provide rapid delivery of information to clientele in the region and State through interdisciplinary research and Extension programs.

Center for Scientific Computation and Mathematical Modeling

University of Maryland, College Park (UMCP)

College of Computer, Mathematical, and Physical Sciences (CMPS)

<https://www.cscamm.umd.edu/>

Pierre-Emmanuel Jabin, Director

The University of Maryland
CSCAMM

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4146 CSIC Building #406

College Park, MD 20742

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Email: info@cscamm.umd.edu

Keywords: Computer science, Mathematics/statistics

The primary goal of the Center is to foster research activity that highlights the interplay between novel computational algorithms and mathematical modeling, as complementary avenues to theory and experiment. CSCAMM encourages cross-fertilization of research activity that lies at the interface between different scientific fields utilizing scientific computation and mathematical modeling. Recent examples of such fields include weather forecasting based on multi-scale modeling/simulations of atmosphere-ocean-land interactions, nano-structures, protein folding and turbulence and transport in fluids and plasma.

Institute for Physical Science and Technology (IPST)

University of Maryland, College Park (UMCP)

College of Computer, Mathematical, and Physical Sciences (CMPS)

<http://www.ipst.umd.edu/>

Christopher Jarzynski, Director

Institute for Physical Science and Technology, University of Maryland

4115 Atlantic Building (bldg #224)

College Park, MD 20742

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Email: cjarzyns@umd.edu

Keywords: Technology, Physics, Engineering,
Mathematics/statistics

The Institute for Physical Science and Technology is a research institute where research in interdisciplinary areas that fall outside the boundaries of traditional academic departments is the primary mission. Research includes the AMO group, Biophysics Group, Chaos Group, Chemical Physics, Cosmic Ray Physics, Protein Folding, Fluctuations and Critical Phenomena, Intense Laser-Matter Interactions, Laboratory for Computation and Visualization, Plasma Science, Space and Upper Atmosphere Physics, Space Physics, Statistical Mechanics on Surfaces, Statistical Physics, and the Zeno Experiment.

Alfred Gessow Rotorcraft Center

University of Maryland, College Park (UMCP)

Department of Aerospace Engineering, A. James Clark School of Engineering

<http://www.agrc.umd.edu/>

Inderjit Chopra, Director

Alfred Gessow Rotorcraft Center, University of Maryland

University of Maryland

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Email: chopra@umd.edu

Keywords: Engineering, Aerospace/astronomy

The Alfred Gessow Rotorcraft Center conducts research in rotorcraft aerodynamics, dynamics, composite structures, flight mechanics, CFD, acoustics, smart structures and transmission and gears. Unique facilities include two fully instrumented rotor rigs, a hover tower, and a 10' vacuum chamber. Research areas include: Computational aeroacoustics, Active control of noise using smart structures technology, Prediction, measurement and validation of vibration and loads, Active/passive damping control of rotor systems, Reconfigurable flight control system, Repair of composite structures, HUM: Fault detection and reconfiguration of rotorcraft transmission, Computational fluid dynamics for rotor wakes, Rotor tip vortex formation and decay using 3-D LDV system, Modeling of rotor wakes in maneuvering flight, Analysis and design of helicopter active control systems, Methodology development for rotor-head fault detection, Aeromechanics analysis of trailing-edge flap rotors, Refined modeling of coupled composite rotor,

Autonomous Vehicle Laboratory

University of Maryland, College Park (UMCP)

Department of Aerospace Engineering, A. James Clark School of Engineering

<http://www.avl.umd.edu/>

J. Sean Humbert, PhD, Director
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University of Maryland
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College Park, MD 20742

Telephone: (301) 405-3282

Email: humbert@umd.edu

Keywords: Aerospace/astronomy, Engineering

The Autonomous Vehicle Laboratory (AVL) conducts research and development in the areas of advanced aerospace vehicle concepts that incorporate autonomous and intelligent software for making complex decisions. Applications include micro, mini and full-scale Uninhabited Air Vehicles, nano-satellites, and other robotic systems. Specific research interest of the faculty and students involved in the lab include: Adaptive and morphing structural wing concepts, Flight mechanics, stability and control, Integration of embedded hardware/software systems, Ubiquitous computing and virtual systems, Adaptive learning and control, Path planning and autonomous decision, Fault detection and system reconfiguration, Sensors for autonomous navigation, Anomalous situation response in flight management systems, Expendable UAV autopilot integration and testing, and Reconfigurable autopilot design, integration, and testing.

Center for Hypersonics and Research

University of Maryland, College Park (UMCP)

Department of Aerospace Engineering, A. James Clark School of Engineering

<https://aero.umd.edu/research/chr>

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4298 Campus Drive
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College Park, MD 20742

Telephone: (301) 405-2376

Email:

Keywords: Aerospace/astronomy, Physics

Hypersonics research at Maryland falls roughly into the areas of fundamental flow physics and applied hypersonic vehicle studies while targeting the following specific research areas: Shock-shock interactions, Shock-vortex interactions, Sharp leading-edge physics, Shock physics, Hypersonic L/D and volumetrics, Hypersonic vehicle design with mission objectives, Fuel selection and hypersonic vehicle design, Inverse design of hypersonic inlets, Star bodies for minimum drag, Optimal hypersonic boost-glide trajectories, Reentry physics and high altitude flight, Spacecraft aeromaneuvering, and Micro engines.

Space Systems Laboratory

University of Maryland, College Park (UMCP)

Department of Aerospace Engineering, A. James Clark School of Engineering

<http://www.ssl.umd.edu>

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Space Systems Laboratory, University of Maryland

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Email: dakin@ssl.umd.edu

Keywords: Aerospace/astronomy

The Space Systems Laboratory (SSL) is focused on experimental research aimed at understanding and improving the nation's ability to perform useful work in space. Current research in the Space Systems Laboratory is focused on space robotics, extravehicular activity (EVA), space suit design, space human factors, and theory and application of adaptive nonlinear control. The SSL currently has four robotic systems either in development or under test, including a telerobotic flight experiment being developed for NASA for flight at the end of this decade. In 1992, the Neutral Buoyancy Research Facility (NBRF) was completed. The NBRF is the only neutral buoyancy facility located on a college campus, and gives the SSL world-class research facilities.

Laboratory for Millimeter-Wave Astronomy (LMA)

University of Maryland, College Park (UMCP)

Department of Astronomy

<https://www.astro.umd.edu/rareas/lma/>

Stuart Vogel, Director

Department of Astronomy, University of Maryland

PSC 1164

College Park, MD 20742

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Email: vogel@astro.umd.edu

Keywords: Aerospace/astronomy

The Laboratory for Millimeter-wave Astronomy (LMA) leads the astronomy department's participation in the Combined Array for Research in Millimeter-wave Astronomy (CARMA) and is involved in a variety of projects including instrumentation for NASA Stratospheric Observatory for Infrared Astronomy, broadband spectrometers for the NRAO Greenbank Telescope, and development of space interferometer missions concepts and laboratory interferometry testbeds in collaboration with Goddard Space Flight Center. The LMA group include 5 professorial faculty, 4 research scientists, 4 postdocs, and 6 graduate students. A broad range of science is pursued by the LMA group utilizing space and ground based astronomical facilities at optical, infrared, and radio wavelengths.

Planetary Data System (PDS) Small Bodies Node (SBN)

University of Maryland, College Park (UMCP)

Department of Astronomy

<https://pds-smallbodies.astro.umd.edu/>

Ludmilla Kolokova, SBN Manager

Department of Astronomy

Small Bodies Node

University of Maryland College Park

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Email: ludmilla@astro.umd.edu

Keywords: Aerospace/astronomy

The Planetary Data System (PDS) is a distributed archive of solar system data prepared in a standard format for use primarily by astronomical observers and mission planners, as well as educators and students. The Small Bodies Node (SBN) specializes in data concerning asteroids, comets and interplanetary dust. Activities at PDS data nodes like the SBN include: restoring datasets from past missions, formatting and archiving data from current and on-going programs, coordinating the creation and archiving of data from campaigns still in the planning stages, supporting the archive, so that the files are available to the community, and assisting users in interpreting the data.

Center for Comparative and Evolutionary Biology of Hearing

University of Maryland, College Park (UMCP)

Department of Biology, College of Chemical and Life Sciences

<https://ccebh.umd.edu/>

Catherine Carr & Sandra Gordon-Salant, Co-Directors
Center for the Comparative and Evolutionary Biology of
Hearing, Dept. of Biology, University of Maryland

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Email: cecarr@umd.edu

Keywords: Hearing, Neuroscience

The C-CEBH has as its overall theme the study of auditory neuroscience, with considerable emphasis in many of our laboratories on questions that directly or indirectly related to issues on evolution and comparative hearing. The goal of this evolutionary and comparative approach is to develop a better understanding of the function auditory systems and the origins of vertebrate hearing. To this end, investigators in the C-CEBH use a wide range of animal models to understand the complexities of hearing among the vertebrates including humans. Research laboratories in C-CEBH use experimental models that include insects (Yager), fish (Popper), amphibians (Yager, Popper), reptiles (Dooling, Carr), birds (Carr, Dooling, Hall), and a variety of mammalian species including ferrets (Shamma, Simon), bats (Moss), and humans (Gordon-Salant, Poeppel, Leek, and Ryals). Research methods include molecular biology, neurophysiology, psychophysics, brain imaging, neuroethology, microscopy at all levels,

Center for Technology and Systems Management

University of Maryland, College Park (UMCP)
Department of Civil and Environmental Engineering
<http://ctsm.umd.edu/>

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Keywords: Technology

The mission of the CTSM is to advance the state of the art of technology and systems analysis for the benefit of people and the environment. The focus is always on enhancing safety, efficiency and effectiveness. Following an assessment of a client's needs, unique programs and individual solutions are developed, drawing upon the past experiences of both the client and professional staff. Some example projects are: Assessment of the load potential for the passage of various truck configurations on representative bridge structures, American Trucking Association; Development of engineered marine system assessment methodology, National Maritime Center of the U.S. Coast Guard; Development of reliability curves for ice-making machines, Scotsman Ice, Inc.; Development of risk-based constructability guidelines for the mobile offshore base, Office of Naval Research, U.S. Navy; Early detection of reliability concerns, Ford Motor Company; and hosting and support of the web-based reliability

Maryland Transportation Technology Transfer Center

University of Maryland, College Park (UMCP)
Department of Civil and Environmental Engineering
<http://www.mdt2center.umd.edu/>

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Keywords: Technology

Mission is to foster the development and application of innovative approaches to existing and emerging transportation needs through research, education, and deployment assistance. The CATT provides a bridge between the intelligent transportation systems (ITS) community, the information technology community and other disciplines essential to the successful application of ITS.

Bridge Engineering Software and Technology Center at UMCP

University of Maryland, College Park (UMCP)
Department of Civil and Environmental Engineering, A. James Clark School of Engineering
<https://www.best.umd.edu/>

Chung C. Fu, PhD, PE, Director
The BEST Center, Department of Civil and Environmental Engineering, University of Maryland
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Keywords: Technology, Engineering

The Bridge Engineering Software & Technology (BEST) Center of the University of Maryland was established in 1986 to develop bridge related technology and provide a mechanism whereby the bridge oriented software which was developed for the Maryland State Highway Administration is made available on a commercial basis to other state design agencies and private consultants. To ensure that the services and software provided by the BEST Center is of demonstrable quality, in order to avoid potential liability, the State of Maryland has provided substantial resources to support the commercialization process.

Active, Logic, Metacognitive Computation and Mind (ALMECOM)

University of Maryland, College Park (UMCP)

Department of Computer Science

<http://www.cs.umd.edu/active/>

Don Perlis, Director

Donald Perlis

University of Maryland

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Keywords: Computer science

The acronym ALMECOM stands for Active Logic, Metacognitive Computation, and Mind. Active Logic is a time-sensitive formalism that has been developed with real-world applications and their challenges in mind. Active logic explicitly reasons in time, and incorporates a history of its reasoning as it runs. This characteristic makes active logic more flexible than traditional AI systems and therefore more suitable for commonsense, real-world reasoning. Current research includes real-time planning with deadlines, noting and resolving misidentification errors, noting and resolving contradictions, presuppositions in natural language and agents with common sense (this is all to programs computers with the ability to do or understand these things).

Human Computer Interaction Lab (HCIL)

University of Maryland, College Park (UMCP)

Department of Computer Science

<https://hcil.umd.edu/>

Niklas Elmqvist, Director

Human-Computer Interaction Lab

University of Maryland

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Keywords: Computer science, Technology

The Human-Computer Interaction Lab (HCIL) at the University of Maryland conducts research on advanced user interfaces and their development processes. Interdisciplinary research teams study the entire technology development life-cycle which includes the initial technology design, implementation issues, and evaluation of user performance. Current work includes: information visualization, interfaces for digital libraries, multimedia resources for learning communities, zooming user interfaces (ZUIs), technology design methods with and for children, and instruments for evaluating user interface technologies.

University of Maryland Institute for Advanced Computer Studies (UMIACS)

University of Maryland, College Park (UMCP)

Department of Computer Science

<http://www.umiacs.umd.edu/>

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Keywords: Computer science

The UMIACS faculty conduct research programs covering a broad range of areas, addressing both fundamental core computer science issues and fundamental problems at the interface between computer science and other disciplines. Includes: Center for Automation Research, Center for Bioinformatics and Computational Biology, Center for Human Enhanced Secure Systems, Computational Linguistics and Information Processing, Computer Vision Laboratory, Distributed Systems Software Laboratory, Fraunhofer Center at Maryland, Global Land Cover Facility, Graphics and Visual Informatics Laboratory, Human Computer Interaction Laboratory, Keck Lab for the Comp. Modeling of Visual Movement, Language and Media Processing Laboratory, Laboratory for Computational Cultural Dynamics, Laboratory for Parallel and Distributed Computing, Maryland Information and Network Dynamics Lab, and the Perceptual Interfaces and Reality Laboratory.

Active Harmony: Dynamic Resource Management

University of Maryland, College Park (UMCP)

Department of Computer Science; College of Computer, Mathematical and Physical Sciences

<http://www.dyninst.org/harmony>

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Keywords: Computer science

Active Harmony, a software architecture that supports distributed execution of computational objects in such environments through the following innovations: dynamic execution environment, automatic application adaptation, and shared-data interfaces.

Computational Linguistics and Information Processing Laboratory (CLIP)

University of Maryland, College Park (UMCP)

Department of Computer Science; Department of Linguistics; iSchool, Robert H. Smith School of Business

<http://www.umiacs.umd.edu/research/CLIP/index.htm>

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Keywords: Computer science, Language

Part of the Neural Modeling Group. The language analysis group consists of two main entities: The Natural Language Group and the Database Group. The natural language group focuses on several areas of broad scale multilingual processing, e.g., machine translation, scalable Translingual document detection, and cross-language information retrieval. The database group focuses on architectures for wide area computation with heterogeneous information servers, e.g., scientific discovery from biomolecular data sources.

Graphics and Visual Informatics Laboratory

University of Maryland, College Park (UMCP)

Department of Computer Science; UM Institute for Advanced Computer Studies (UMIACS)

<http://www.cs.umd.edu/gvil/>

Amitabh Varshney, Director

Graphics and Visual Informatics Laboratory, UM Institute for Advanced Computer Studies

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Keywords: Technology, Computer science

The mission of GVIL is to improve the efficiency and usability of visual computing applications in science, engineering, and medicine. The scope of this laboratory's research covers design of algorithms and data structures for reconciling realism and interactivity for very large graphics datasets, rapid access to distributed graphics datasets across memory and network hierarchies, and study of the influence of heterogeneous display and rendering devices over the visual computing pipeline. The activities of the laboratory involve development of visual computing tools and technologies to support the following research-driving applications: protein folding and rational drug design, navigation and interaction with mechanical CAD datasets, and ubiquitous access to distributed three-dimensional graphics datasets.

Communications and Signal Processing Laboratory

University of Maryland, College Park (UMCP)
Department of Electrical and Computer Engineering
<http://www.cspl.umd.edu/>

Dr. K. J. Ray Liu, Director
Communications and Signal Processing Laboratory
University of Maryland
Room 2232 Jeong Kim Engineering Building
College Park, MD 20742

The research areas in Communications and Signal Processing can be categorized into three main areas: communications, networking, and signal and image processing.

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Keywords: Engineering, Computer science

The MEMS Sensors and Actuators Lab (MSAL)

University of Maryland, College Park (UMCP)
Department of Electrical and Computer Engineering (ECE); Institute for Systems Research (ISR); Maryland NanoCenter; University of
<http://www.umdsal.com/>

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Keywords: Computer science, Engineering

The MEMS Sensors and Actuators Lab (MSAL) in the Department of Electrical and Computer Engineering (ECE), the Institute for Systems Research (ISR), the Maryland Nanocenter, Fischell Department of Bioengineering (BIOE), University of Maryland Energy Research Center (UMERC), A.J. Clark School of Engineering, University of Maryland (UMD) was established in January 2000. Since then, a wide variety of projects have been pursued in the fields of MEMS and NEMS Fabrication Technologies and Devices. We have a history of developing III-V optical MEMS devices in InP and are working toward integrated biosensing concepts to complement ongoing research using the biopolymer chitosan for biodetection. Other research thrusts include the development of 3-D fabrication techniques and microball bearing technologies for Power MEMS applications such as microgenerators, micromotors, and micropumps. With the advent of new energy harvesting methods, we hope to converge our research areas towards

Laboratory for Green Nanophotonics,

University of Maryland, College Park (UMCP)
Department of Electrical and Computer Engineering, A. James Clark School of Engineering
<http://www.enee.umd.edu/photonics>

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Keywords: Quantum, Engineering, Computer science

Research areas include: Optoelectronics components for datacom and telecom, Chem-Bio Sensing and Environmental Monitoring, Microwave Optoelectronics, Photonic Crystals, and Surface Plasmons.

Global Land Cover Facility

University of Maryland, College Park (UMCP)

Department of Geography; UM Institute for Advanced Computer Studies (UMIACS)

<http://www.landcover.org/>

John Townshend, Principal Investigator

Global Land Cover Facility

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Email: glfc@umd.edu

Keywords: Environmental science/sustainability

The Global Land Cover Facility (GLCF) provides earth science data and products to help everyone to better understand global environmental systems. In particular, the GLCF develops and distributes remotely sensed satellite data and products that explain land cover from the local to global scales. GLCF research focuses on determining land cover and land cover change around the world. Land cover is the discernible vegetation, geologic, hydrologic or anthropogenic features on the planet's land surface. These features, such as forests, urban area, croplands and sand dunes, can be measured and categorized using satellite imagery. Land cover change can be assessed by comparing one area with two images taken at different dates. Determining where, when, how much and why change occurs with land cover is a crucial scientific concern. It is imperative that appropriate tools be made available to better manage and adapt to change.

Isotope Geochemistry Lab

University of Maryland, College Park (UMCP)

Department of Geology

<https://www.geol.umd.edu/facilities/igl.php>

Richard J. Walker, Director

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Keywords: Environmental science/sustainability,
Chemistry

The Isotope Geochemistry Laboratory (IGL) is part of the Geochemistry Laboratories of the Department of Geology. The IGL comprises a set of laboratories for the preparation and isotopic analysis of a wide range of geological materials. These laboratories include separate Mass Spectrometry (2), Chemistry (2), Mineral Separation and Rock Preparation facilities. The mission of the IGL is to produce the highest quality isotope data, to innovate in techniques development and applications, to train students and visitors the techniques involved in gathering such data, and to maintain itself as a world-class isotope measurement facility.

Plasma Mass Spectrometry Laboratory

University of Maryland, College Park (UMCP)

Department of Geology

<https://www.geol.umd.edu/~mcdonoug/Lithium%20Group/la-icp-ms.html>

William F. McDonough, Director

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Keywords: Chemistry, Aerospace/astronomy,
Resource/facility/instrument

The Plasma Laboratory provides the tools necessary for characterizing the chemical and isotopic compositions of materials, including the ability to provide micron scale analyses. Our research agenda is broad and reaches beyond that of the Earth and Planetary Sciences (i.e., including Chemistry, Biology, Material Sciences, Archeology, etc). Our primary focus, however, is using the chemical and isotopic analyses of materials to elucidate the processes involved in the origin and evolution of the Earth and other terrestrial bodies in the solar system. Our students and faculty are involved in a spectrum of studies, including the chemical signatures of upwelling in the oceans, secular evolution of the composition of seawater, crustal differentiation, chemical fractionation processes involved in core-mantle separation, the nature, evolution and timing of differentiation of pallasite meteorites, the condensation behavior of elements in the solar nebula, and other topics. Many of these studies are conducted in collaboration with several faculty

Cognitive Motor Behavior Lab

University of Maryland, College Park (UMCP)

Department of Kinesiology, College of Health and Human Performance; School of Public Health

<http://www.sph.umd.edu/KNES/research/cmb.html>

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Keywords: Neuroscience

The Cognitive Motor Neuroscience Laboratory focuses on neural and higher-level mechanisms underlying the selection, planning, learning, initiation, and execution of movement. Using an interdisciplinary approach, these processes are studied from infancy to the end of the lifespan. Research programs in the laboratory include adaptive sensorimotor control and integration, exercise psychophysiology, perceptual motor development, movement disorders, and computational motor neuroscience.

Norbert Wiener Center for Harmonic Analysis and Applications

University of Maryland, College Park (UMCP)

Department of Mathematics, College of Computer, Mathematical and Physical Sciences

<http://www.norbertwiener.umd.edu/>

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Keywords: Mathematics/statistics, Engineering

The Norbert Wiener Center has three goals: Research Activities in harmonic analysis and applications; Education in the Mathematics of Advanced Industrial Technology (MAIT); and Interaction within the Harmonic Analysis Community. Examples of projects include: algorithm for fast data acquisition in magnetic resonance imaging, concurrent signal processing algorithms, waveform design, sigma-delta quantization, spectral wavelets sets, uncertainty principles and signal decomposition, and p-adic wavelet theory.

Center for Environmental Energy Engineering

University of Maryland, College Park (UMCP)

Department of Mechanical Engineering, A. James Clark School of Engineering

<http://www.ceee.umd.edu/>

Yunho Hwang
Center for Environmental Energy Engineering
University of Maryland, Department of Mechanical Engineering

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Keywords: Engineering, Environmental science/sustainability

The Center for Environmental Energy Engineering, is a leader in research and education in environmentally responsible, economically feasible distributed energy conversion systems for buildings and transportation. The center is divided into four consortia based on the research pursued by each group. The consortia are Alternative Cooling Technologies & Application (ACTA), Integrated Systems Optimization (ISOC), Cooling, Heating and Power (CHP), Advanced Heat Transfer/Advanced Heat Exchangers (AHT/AHX).

Center for Risk and Reliability

University of Maryland, College Park (UMCP)

Department of Mechanical Engineering, A. James Clark School of Engineering

<http://crr.umd.edu/>

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Keywords: Engineering

CRE focused primarily on the research and development needs of the industry in product and process reliability. CTRS mainly addressed the research and development needs of the government agencies in risk analysis and risk-informed decision making. Reliability engineering faculty is engaged in a wide range of research activities both in reliability and in risk analysis. The subjects of study include systems (from large and complex to nano-level), software, human, organizations, complex process, and natural environment. The behavior of these complex entities are studied (a) on the phenomenological level to understand fundamental causes of failures or accidents and corresponding preventive measures, and (b) from a predictive perspective to assess the levels of reliability, safety, or security. Therefore the topics cover experimental work on materials and structures of components and systems, development of computational models and simulation codes, functional and causal modeling of

Smart Materials and Structures Research Center

University of Maryland, College Park (UMCP)

Department of Mechanical Engineering, A. James Clark School of Engineering

<http://www.smsrc.umd.edu>

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Keywords: Engineering

The Smart Materials and Structures Research Center (SMSRC) was formed in 1994 to catalyze the development of existing and new smart materials and structures technologies, and to educate a new generation of multidisciplinary engineers. Projects conducted by SMSRC researchers: Micromechanics of Structurally Embedded Fiber Optic Sensors, Simultaneous Strain/Temperature Sensor Development, Long Tapered Fiber Vibration Mode Sensors, Three-strain Sensor Development Using Microcavities and Gratings, Planar Waveguide High Temperature Sensors, Embedded Fiber Optic Sensors for Health Monitoring of Composite Reinforced Filament Wound Pressure Vessels, Fiber Optic Sensor Development for Shock Loading Applications, Shape Sensing Using Distributed Fiber Optic Sensor Technology, and Long Period Grating Biochemical Sensors.

Condensed Matter Theory Center

University of Maryland, College Park (UMCP)

Department of Physics

<https://www.physics.umd.edu/cmtc/>

Sankar Das Sarma, PhD, Director
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Keywords: Physics, Quantum

The purpose of CMTC is to maintain sustained excellence in theoretical condensed matter physics at the University of Maryland. The currently active research topics in CMTC are quantum computation in semiconductor nanostructures, spin qubits and spin quantum computation, spin coherence, topological quantum computation, quantum Hall effects, quantum phases of condensed cold atom systems and optical lattices, quantum phase transitions, spintronics, transport in low dimensional semiconductor nanostructures, physics of graphene and nanowires, exotic superconductivity, topological matter and phases, quantum computation in neutral atomic systems, quantum condensed phases, many-body theory in low-dimensional semiconductor structures, strongly correlated phenomena, ferromagnetic semiconductors, spin Hall effects, coherent quantum effects, elementary excitations and collective modes in low-dimensional systems, collective coherent phenomena in solids, physics of metal-

Laboratory of Comparative Psychoacoustics

University of Maryland, College Park (UMCP)

Department of Psychology, College of Behavioral and Social Sciences

<http://doolinglab.umd.edu/>

Robert Dooling, Director
Laboratory of Comparative Psychoacoustics, Department of
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University of Maryland, College Park
Psychology Department
College Park, MD 20742

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Keywords: Neuroscience

Research in the Laboratory of Comparative Psychoacoustics is aimed at understanding how animals communicate with one another using sound and whether there are parallels with how humans communicate with one another using speech and language. Specific projects are on vocal learning and vocal development in budgerigars, the regeneration of auditory hair cells and recovery of hearing and the vocalizations in small birds following hearing damage, and the effect of noise on hearing. Other studies focus on how small birds localize sounds, how they perceive complex sounds such as bird vocalizations and human speech, and how the bird ear functions.

Laboratory for Automation Psychology and Decision Process

University of Maryland, College Park (UMCP)

Department of Psychology; University of Maryland Institute for Advanced Computer Studies (UMIACS)

<http://lap.umd.edu/LAP/>

Kent L. Norman, PhD
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Email: lapdp@lap.umd.edu
Keywords: Computer science

Dedicated to understanding the cognitive processes involved at the human/computer interface. Current projects involve survey design, dynamic decisions, sports decisions, computer rage and accessibility.

Composites Research Laboratory

University of Maryland, College Park (UMCP)

Departments of Aerospace Engineering, Mechanical Engineering, and Materials Science Engineering

<http://www.core.umd.edu>

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Composites Research Laboratory, University of Maryland

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Keywords: Chemistry, Engineering

The Composites Research Laboratory at the University of Maryland, College Park provides an environment for educational, research, and development activity in composite materials and structures. The goals of the laboratory are to promote the understanding and the use of composite materials, to maintain up-to-date manufacturing and testing facilities to conduct basic research, and to provide an accessible knowledge and technology base.

Center for Automation Research (CfAR)

University of Maryland, College Park (UMCP)

Dept. of Computer Science, Institute for Advanced Computer Studies (UMIACS); Institute for Systems Research

<http://www.cfar.umd.edu/>

Larry Davis, Director
Center for Automation Research
University of Maryland
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College Park, MD 20742

Contains the CVL, GVIL, KECK and LAMP labs. Research areas include computer science, advanced computer studies and systems research.

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Keywords: Computer science, Technology

Neural Systems Laboratory

University of Maryland, College Park (UMCP)

Dept. of Electrical and Computer Eng. and The Inst. for Systems Research, A. James Clark School of Engineering

<http://www.isr.umd.edu/Labs/NSL/nsi.html>

Shihab A. Shamma, Director
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Keywords: Engineering, Neuroscience

The Neural Systems Laboratory studies the functionality of the mammalian auditory system through a wide range of disciplines and techniques ranging from theoretical models to neurophysiological investigations and psychoacoustical experiments. Current Projects include: Rapid task-related plasticity of spectrotemporal receptive fields in primary auditory cortex, Applications and robotic implementations of auditory processing, Spectrotemporal analysis in the auditory cortex, and Physiological basis of auditory streaming in auditory cortex.

The Computational Sensorimotor Systems Laboratory (CSSL)

University of Maryland, College Park (UMCP)

Dept. of Electrical and Computer Engineering, Inst. For Systems Research, Neuroscience and Cognitive Sciences Program, Dept. of

<http://www.isr.umd.edu/Labs/CSSL/simonlab/Home.html>

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Keywords: Sensation/perception, Computer science, Engineering, Neuroscience

The Computational Sensorimotor Systems Lab focuses on the exploration, analysis, modeling and implementation of biological sensorimotor systems for both scientific and engineering purposes. Specifically, we are interested in the neural basis of fast, accurate sensorimotor processing and long-term learning in these systems. Prof. Horiuchi specializes in neuromorphic analog VLSI design, neural computation in sensorimotor systems (e.g., bats), and their application to mobile robotics. Prof. Simon specializes in the application of modern signal processing techniques to the neurophysiology of auditory processing in the avian (e.g., chick and barn owl) system and to the analysis of magnetoencephalography (MEG) to auditory processing in humans.

Center for Networking of Infrastructure Sensors

University of Maryland, College Park (UMCP)

Depts. of Civil and Environmental Eng., and Electrical and Computer Eng., A. James Clark School of Engineering

<http://www.cnis.umd.edu/>

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Keywords: Aerospace/astronomy, Engineering

The University of Maryland, College Park, has developed a remote, real-time surveillance system to demonstrate the ultra-broadband capability of hybrid Free Space Optical (FSO)/RF links. The system transmits ultra-high bandwidth, high resolution images from surveillance cameras monitoring regions of interest on campus. Active research grants: Broadband Free Space Optical and RF Wireless Networks with Topology and Diversity Control, Optical Wireless Sensor Networks for Critical Infrastructure Surveillance, and Scalable Multiplayer Control of Join Battlespace Networks.

Center for Advance Study of Language

University of Maryland, College Park (UMCP)

DoD

<https://www.casl.umd.edu/>

Steve Fetter, Acting Executive Director
Center for Advance Study of Language

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Keywords: Language, Defense

Founded in 2003 as a DoD university affiliated research center with a nationally recognized research staff, the University of Maryland Center for Advanced Study of Language (CASL) is the first and only national resource dedicated to addressing the language needs of the Intelligence Community (IC). CASL's overarching mission is to defend and protect our country by improving our language readiness and capabilities.

- Bring the best of academe and industry to the hardest government problems
- Provide the knowledge, resources, and technologies critical to analyst job performance
- Advance workforce readiness for both regular and surge capabilities
- Improve operational performance
- Underpin critical leadership decisions on immediate and future

Tissue Engineering and Biomaterials Laboratory

University of Maryland, College Park (UMCP)

Fischell Department of Bioengineering

<http://tebl.umd.edu/>

John Fisher
Fischell Dept of Bioengineering
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University of Maryland
College Park, MD 20742

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Keywords: Engineering, Bioscience

The Tissue Engineering & Biomaterials Laboratory is located within the Fischell Department of Bioengineering at the University of Maryland. Our lab uses the principles of both engineering and life sciences to develop biomaterials that improve the quality of life of ill or injured patients. We begin with polymer science methods to synthesize novel hydrolytically degradable polymers and then fabricate these polymers into easily implantable biomaterials. Molecular and cellular biology principles are then incorporated to understand the interaction of cells, tissues, and higher life systems with these novel biomaterials. Areas of focus in our lab include the study of biomaterials for the delivery of therapeutics, scaffolds for orthopedic tissue engineering applications, and the interaction of biomaterials and tissues. Please use this site as both a window into the work and personnel at the Tissue Engineering & Biomaterials Laboratory as well as a gateway to bioengineering, cell biology, and biomaterials research.

Fraunhofer Center - Maryland

University of Maryland, College Park (UMCP)

Fraunhofer Center for Experimental Software Engineering, Maryland

<https://www.cese.fraunhofer.org/>

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Keywords: Computer science, Engineering

The leading competence center for applied research and technology transfer in experimental software engineering. FC-MD supports research and development in the field of software engineering and its enabling technology. Collaborates with private-sector companies, government agencies, and academic institutions to develop innovative, actionable approaches to address their software issues. Mission is to advance the state-of-the-practice in software development and acquisition organizations by applying state-of-the-art research results. Its approach is based on the following fundamental principles: applying empirical methods to evaluate processes and products, identifying improvement areas and proposing changes, understanding the impact of changes on measures of success, utilizing experience to guide technical and management choices, tailoring solutions for specific customer contexts and transferring proven technologies into practice.

Laboratory for Plasma Processing of Materials

University of Maryland, College Park (UMCP)

Institute for Research in Electronics and Applied Physics, the Department of Materials Science and Engineering.

<https://lppm.umd.edu/>

Prof. Gottlieb Oehrlein
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Keywords: Engineering

The Laboratory for Plasma Processing of Materials, headed by Prof. Gottlieb Oehrlein, is part of the Institute for Research in Electronics and Applied Physics and the Department of Materials Science and Engineering.

The major scientific theme of this group is non-equilibrium low temperature plasma science as used for production of novel materials and nanoscale structures, along with surface modifications of materials. The latter may either be used to enhance functional properties of materials, or these processes may take place inadvertently, e.g. the erosion of wall materials in a plasma device used for fusion by plasma wall interactions followed by transport in the plasma and possibly mixing with other wall materials. By combining characterization data of gas phase species and gas solid interactions, a scientific understanding of these complex environments is possible. The group utilizes a broad array of specialized gas phase and surface

Center for Electronic Markets and Enterprises

University of Maryland, College Park (UMCP)

Robert H. Smith School of Business

<https://www.rhsmith.umd.edu/centers-excellence/digits>

Il-Horn Hann
, Director
Center for Electronic Markets and Enterprises, Robert H.
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Keywords: Technology

The purpose of the Center for Electronic Markets and Enterprises (CEME) is to foster multidisciplinary research on how the networked economy is transforming markets and businesses and to disseminate this research. Information technology (IT) makes possible new markets and business models. The Center sponsors research which explores the factors associated with the success and failure of these new models, the impact of new markets and businesses on the economy, and the design of new kinds of net centric organizations.

Laboratory for Language And Media Processing (LAMP)

University of Maryland, College Park (UMCP)

University of Maryland Institute for Advanced Computer Studies (UMIACS)

<http://lamp.cfar.umd.edu>

Laboratory for Language and Media Processing, UMIACS

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Keywords: Language, Computer science

This lab is composed of two groups, the media analysis group and the language analysis group. The media analysis group is focused on providing tools and techniques for access to large heterogeneous databases of multimedia information objects. The primary theme of the research is to provide automatic access to information sources by addressing issues involved in initial processing, organization, manipulation and retrieval. The language analysis group consists of two main entities: The Natural Language Group and the Database Group. The natural language group focuses on several areas of broad scale multilingual processing, e.g., machine translation, scalable Translingual document detection, and cross-language information retrieval. The database group focuses on architectures for wide area computation with heterogeneous information servers, e.g., scientific discovery from biomolecular data sources.

Perceptual Interface and Reality Laboratory

University of Maryland, College Park (UMCP)

University of Maryland Institute for Advanced Computer Studies (UMIACS)

<http://www.umiacs.umd.edu/labs/pirl>

Ramani Duraiswami, Director

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Center for Automation Research

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Keywords: Computer science, Sensation/perception, Engineering

Perceptual Interfaces are concerned with extending human computer interaction to use all modalities of human perception. Current research efforts are focused at including vision, audition, and touch in the process. The goal of perceptual reality is to create virtual and augmented versions of the world, that are perceptually identical to the human with the real world. The goal of creating perceptual user interfaces is to allow humans to have natural means of interacting with computers, appliances and devices using voice, sounds, gestures, and touch. Another portion of the lab's research is concerned with creating prosthetic devices for the vision and hearing impaired, by mapping inputs from one modality into equivalent ones in another, so that computationally augmented input streams can be created with extra content from the missing modality.

Earth System Science Interdisciplinary Center

University of Maryland, College Park (UMCP); Earth Sciences Directorate at the NASA/Goddard Space Flight Center

Departments of Atmospheric & Oceanic Science, Geology, Geography

<http://essic.umd.edu/joom2/>

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Keywords: Environmental science/sustainability

The goal of ESSIC is to enhance our understanding of how the atmosphere, ocean, land, and biosphere components of the Earth interact and the influence of human activities on this system. This is accomplished via studies of the interaction between the physical climate system and biogeochemical cycles. The major research thrusts are studies of Climate Variability and Change, Atmospheric Composition and Processes, the Global Carbon Cycle (including Terrestrial and Marine Ecosystems/Land Use/Cover Change), and the Global Water Cycle. This research is accomplished via analyses of in situ and remotely sensed observations together with component and coupled ocean-atmosphere-land models. Together this provides a foundation for understanding and forecasting changes in the global environment and regional implications. Data assimilation and regional downscaling provide the means by which the observations and models are linked to study the interactions between the physical climate

Joint Institute for Food Safety and Applied Nutrition

University of Maryland, College Park (UMCP); Food and Drug Administration (FDA)
<https://jifsan.umd.edu/>

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Keywords: Food/agriculture, Public health

The Institute will foster the missions of FDA and the University through the creation of partnerships to increase the quantity and quality of research, which will provide the basis for sound public health policy. It will promote food safety and human nutrition and animal health and production through an integrated academic and regulatory science program. This includes multidisciplinary research, outreach and educational programs, and policy studies. The participation of FDA scientists in JIFSAN collaborative research programs related to FDA's mission and the consultative arrangements with other scientists associated with FDA, the Institute, and the University will ensure the critical science-based foundation needed to establish sound food safety policy. In addition, opportunities exist for collaborative projects with other Federal and state agencies, private industry, consumer and trade groups, and international organizations with mutual interests.

Cooperative Institute for Satellite Earth System Studies

University of Maryland, College Park (UMCP); National Oceanic and Atmospheric Administration (NOAA)
<http://cicsmd.umd.edu/>

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Keywords: Aerospace/astronomy, Environmental science/sustainability

The Institute was established as a mechanism to foster the following: Collaborative research between NOAA and the University in studies of satellite climatology, climate diagnostics, modeling and prediction, Serve as a center for scientists and engineers who when working on problems of mutual interest, could focus on studies contributing to the understanding of the earth-ocean-atmosphere climate system, climate modeling, climate prediction, and satellite climatology, Stimulate the training of scientists and engineers in appropriate disciplines in the atmospheric and earth sciences. Research topics include: Remote Sensing For Weather, climate and Oceans, Modeling, Satellite Precipitation: Analysis and Validation, and Understanding Climate Variability.

Center for Energetic Concepts Development

University of Maryland, College Park (UMCP); Naval Surface Warfare Center (NSWC)
Department of Mechanical Engineering
<http://cecd.umd.edu/>

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Keywords: Technology, Engineering

Established to foster continued advancements in energetics manufacturing, science and research, while educating the next generation of energetics experts. Current projects: functionally graded energetic materials, lean financial processes workshop, MK125 rapid improvement event, microfabricated sequential-leaf time delay mechanisms and nanostructured energetic materials.

National Center of Excellence for Aviation Operations Research (NEXTOR)

University of Maryland, College Park (UMD)

FAA

<http://www.nextor.org/>

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Keywords: Aerospace/astronomy

NEXTOR is a Government-Academic-Industry alliance dedicated to the advancement of aviation research and technology. NEXTOR is sponsored by the Federal Aviation Administration (FAA) Office of Technology Development and Operations Planning.

In collaboration with the FAA and its industry partners, NEXTOR looks to develop an understanding of how the National Airspace System (NAS) service providers and users will respond to alternative system architectures, operational concepts, investment strategies and finance mechanisms. The knowledge and capabilities gained from this government-sponsored Research Program provides critical information to executives and senior government officials on a host of issues ranging from near-term investment choices to long-term strategies.

Through its Knowledge Exchange Program, NEXTOR researchers,

Center for Vascular and Inflammatory Diseases (CVID)

University of Maryland. Baltimore

School of Medicine

<http://www.medschool.umaryland.edu/cvid/>

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Keywords: Bioscience, Chemistry, Medical-basic research, Medical-clinical research

CVID conducts multidisciplinary research, integrating basic molecular and cell biology, biochemistry, immunology and genetics with applied and clinical cardiology to advance knowledge of vascular and inflammatory diseases. Inflammation is emerging as a key contributor to many vascular diseases including stroke, myocardial infarction, hypertension, diabetes, and chronic kidney disease, and further, plays a major role in autoimmune diseases, arthritis and allergic reactions. Research includes the function of proteases, the role of tissue glutaminase (tTG), angiogenesis, mechanisms of anti-cancer agents, chronic B cell hyperactivity, hematopoiesis, cytokines that regulate protection from apoptosis, gene therapy approaches for undesirable immune responses, inflammatory events, mechanisms of tumor spreading and tissue/organ injury and repair. The center was established in 2005 with faculty and staff formerly of the American Red Cross Holland Labs.

Institute of Marine and Environmental Technology

University System of Maryland (USM)

The University of Maryland Baltimore (UMB), the University of Maryland Baltimore County (UMBC), and the University of Maryland

<https://imet.usmd.edu/institute-marine-and-environmental-technology>

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Keywords: Environmental science/sustainability

IMET is a joint University System of Maryland research institute. IMET's mission is to study the biology of coastal marine biosystems and ensure their sustainable use, as well as exploit marine-derived systems to improve human health. IMET brings together faculty members from three major USM research institutions -the University of Maryland Baltimore (UMB), the University of Maryland Baltimore County (UMBC), and the University of Maryland Center for Environmental Science (UMCES)- in a dedicated state-of-the-art research facility located in Baltimore's Inner Harbor. IMET's work includes the use of aquaculture and genomics to foster conservation and creation of marine resources, including marine bioenergy; environmental sensor development; environmental remediation; developmental biology; marine biomedicine; and molecular and cellular systems.

Human Studies Facility (HSF)

Department of Agriculture (USDA)

Beltsville Human Nutrition Res. Center (BHNRC)

<https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/human-study-unit/>

David Baer, Research Leader
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The Human Studies Facility (HSF) supports the execution of human studies at the Beltsville Human Nutrition Research Center. A new state-of-the-art research complex significantly expands the HSF clinical research area. The core services within HSF include study volunteer recruitment, volunteer screening, study biological sample collection and processing, and managing the dietary unit. The dietary unit is primarily designed for planning, preparing and serving specialized controlled diets to free-living adults.

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Keywords: Medical-clinical research

Agricultural Research Service, Foreign Disease Weed Science Research Unit

Department of Agriculture (USDA)

Agricultural Research Service

<https://www.ars.usda.gov/northeast-area/frederick-md/foreign-disease-weed-science-research/>

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Keywords: Food/agriculture

Research focuses primarily on new or emerging plant pathogens which are not yet established in the U.S. and which must be kept under containment. Studies include 1) identification and control of pathogens which pose a potential threat to American agriculture and 2) use of foreign pathogens for biological control of introduced weeds. Primary objective of the research on disease threatening pathogens is to develop accurate methods for rapid identification and exclusion. The unit also assists in developing controls to compromise the impact of the disease, if established. The primary objective of the weed biocontrol research is to find pathogens not present in the U.S. but which are keeping the target weed under natural control in its native habitat. Studies are conducted on molecular and pathological characterization to assure safe release. The overall goal of the weed research is to support sustainable agriculture by assisting American agriculture in eliminating its reliance on chemicals for control of weeds. Research is

Agricultural Research Service, Food Surveys Research Group

Department of Agriculture (USDA)

Henry A. Wallace Beltsville Agricultural Res. Center. (BARC), Beltsville Human Nutrition Res. Center (BHNRC)

<https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/food-surveys-research-group/>

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The mission of the Food Surveys Research Group is to monitor and assess food consumption and related behavior of the U.S. population by conducting surveys and providing the resulting information for food and nutrition-related programs and public policy decisions. One of five units in the BHNRC.

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Keywords: Agriculture/food

Agricultural Research Service, Diet, Genomics, Immunology Laboratory

Department of Agriculture (USDA)

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<https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/diet-genomics-and-immunology->

Joe Urban, Research Leader

ARS Diet, Genomics, Immunology Laboratory, Beltsville
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The Diet, Genomics, and Immunology Laboratory focuses on three main research areas (1) determine human requirements, functions, and basic mechanisms of action for specific vitamins and minerals; (2) develop methodology for assessment of mineral and vitamin nutrition in humans; (3) develop cost-effective cellular, molecular, and immunological methods for evaluating micro-nutrient requirements and functions, and the effect of nutritional status on immune function. One of five units in the BHNRC.

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Keywords: Food/agriculture, Human health

Agricultural Research Service, Food Components and Health Laboratory

Department of Agriculture (USDA)

Henry A. Wallace Beltsville Agricultural Res. Center. (BARC), Beltsville Human Nutrition Res. Center (BHNRC)

<https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/food-components-and-health-lab/>

David Baer, Research Leader

Food Components and Health Laboratory
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The Food Components and Health Laboratory (FCHL) conducts research on diet as related to human health. Scientists measure metabolic and physiologic responses to whole foods and dietary constituents including traditional nutrients, phytochemicals and functional foods. Clinical and invitro approaches identify diet-induced modulation of biomarkers of chronic diseases such as obesity, diabetes, cancer and cardiovascular disease. The Food Components and Health Laboratory is one of five units in BHNRC of USDA, ARS.

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Keywords: Food/agriculture, Bioscience

Agricultural Research Service, Food Composition and Methods Development Laboratory (FCMDL)

Department of Agriculture (USDA)

Henry A. Wallace Beltsville Agricultural Res. Center. (BARC), Beltsville Human Nutrition Res. Center (BHNRC)

<https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/food-composition-and-methods->

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ARS Food Composition and Methods Development
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The mission of the Food Composition and Methods Development Laboratory (FCMDL) is to develop innovative measurement systems for the determination of food components that influence human health. One of five units in BHNRC of USDA, ARS.

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Keywords: Agriculture/food

Agricultural Research Service, Nutrient Data Laboratory

Department of Agriculture (USDA)

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<https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/nutrient-data-laboratory/>

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The Mission of the Nutrient Data Laboratory is "To develop authoritative food composition databases and state of the art methods to acquire, evaluate, compile and disseminate composition data on foods and dietary supplements available in the United States." One of five units in the BHNRC.

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Keywords: Food/agriculture

Agricultural Research Service, Beltsville Agricultural Research Center (BARC)

Department of Agriculture (USDA)

Henry A. Wallace Beltsville Agricultural Research Center (BARC)

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The Beltsville Agricultural Research Center is the USDA's largest scientific installation and contains the following labs: Hydrology and Remote Sensing Lab; Animal Parasitic Diseases Lab; Adaptive Cropping Systems Lab; Environmental Microbial & Food Safety Lab; Animal Genomics and Improvement Lab; Animal Biosciences & Biotechnology Lab; Bee Research Lab; National Germplasm Resources Lab; Invasive Insect Biocontrol & Behavior Lab; Genetic Improvement for Fruits & Vegetables Lab; Molecular Plant Pathology Lab; Soybean Genomics & Improvement Lab; Systematic Entomology Lab; Sustainable Perennial Crops Lab; Sustainable Agricultural Systems Lab; Food Quality Lab; and Mycology and Nematology Genetic Diversity and Biology Lab.

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Keywords: Environmental science/sustainability,
Food/agriculture, Veterinary, Bioscience

Agricultural Research Service, Animal and Natural Resources Institute

Department of Agriculture (USDA)

Henry A. Wallace Beltsville Agricultural Research Center (BARC), Agricultural Research Service

<https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/>

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The Animal and Natural Resources Institute (ANRI) is located at the Henry A. Wallace Beltsville Agricultural Research Center (BARC) in Beltsville, Maryland. The research mission of the Animal and Natural Resources Institute (ANRI), is to conduct research and to develop technology transfer programs that ensure high quality and safe food while protecting the natural resource base and the environment. ANRI consists of nine laboratories that each obtain a specific research goal.

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Agricultural Research Service, Beltsville Human Nutrition Research Center (BHNRC)

Department of Agriculture (USDA)

Henry A. Wallace Beltsville Agricultural Research Center (BARC), Agricultural Research Service

<https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/>

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Keywords: Food/agriculture, Bioscience, Public Health

The Beltsville Human Nutrition Research Center (BHNRC) is the largest of USDA's human nutrition research facilities and the home of the first human nutrition research conducted by USDA, dating back to the late 1890's. Its current program spans the human nutrition and health continuum, from investigating the role of nutrients and food components at the cellular level, to examining the impact of dietary interventions on health in animal and human research, to conducting mission critical surveys to find out what people are eating while supporting an expanded understanding of what's in food.

The mission of the Beltsville Human Nutrition Research Center is to define, through research, the role of food and its components in optimizing human health and in reducing the risk of nutritionally related disorders in the diverse population.

NIST - Information Technology Laboratory

Department of Commerce, National Institute of Standards and Technology (NIST)

<https://www.nist.gov/itl>

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Keywords: Technology, Metrology

The Information Technology Laboratory (ITL) has the broad mission of supporting U.S. industry, government, and academia with measurements and standards that enable new computational methods for scientific inquiry, assure IT innovations for maintaining global leadership, and re-engineer complex societal systems and processes through insertion of advanced information technology. Through its efforts, ITL seeks to enhance productivity and public safety, facilitate trade, and improve the quality of life. Major areas of focus are Computer Security, Digital Information Access, Computational Modeling and Virtual Measurements, Software Conformance and Advanced Networking.

Center for Coastal Monitoring and Assessment

Department of Commerce, National Oceanic and Atmospheric Administration (NOAA)

<http://ccma.nos.noaa.gov>

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Keywords: Environmental science/sustainability

The Center for Coastal Monitoring and Assessment's mission is to assess and forecast coastal and marine ecosystem conditions through research and monitoring.

Located in Silver Spring, MD, the scientists of CCMA conduct field observations on regional and national scales. The center provides the best available scientific information for resource managers and researchers, technical advice, and accessibility to data. CCMA's science addresses five major environmental stressors: Pollution, Land and Resource Use, Invasive Species, Climate Change, and Extreme Natural Events.

National Centers for Coastal Ocean Science

Department of Commerce, National Oceanic and Atmospheric Administration (NOAA)

<http://www.cop.noaa.gov/>

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Keywords: Environmental science/sustainability

The Center for Sponsored Coastal Ocean Research (CSCOR) develops and improves predictive capabilities for managing the Nation's use of its coastal resources through competitive research programs. CSCOR also supports efforts to translate the results of its research investments, and those of others, into accessible and useful information for coastal managers, planners, lawmakers, and the public to help balance the needs of economic growth with those of conserving the resources of our Nation's Great Lakes, estuaries, and coastal ocean.

CSCOR provides a focal point for coastal ocean research within the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Coastal Ocean Science (NCCOS). Together with partners within NOAA and other organizations responsible for coastal resources, CSCOR advances the scientific understanding needed to protect

National Weather Service

Department of Commerce, National Oceanic and Atmospheric Administration (NOAA)

<https://www.weather.gov/>

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Keywords: Environmental science/sustainability

The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

Center for Satellite Applications and Research

Department of Commerce, National Oceanic and Atmospheric Administration (NOAA)

National Environmental Satellite, Data, and Information Service (NESDIS)

<https://www.star.nesdis.noaa.gov/star/index.php>

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Keywords: Aerospace/astronomy

The Center for Satellite Applications and Research (STAR) is the science arm of the National Environmental Satellite, Data and Information Service (NESDIS), which acquires and manages the nation's operational Earth-observing satellites. NESDIS provides data from these satellites, and conducts research to make that possible. STAR's mission is to transfer satellite observations of the land, atmosphere, ocean, and climate from scientific research and development into routine operations, and to offer state-of-the-art data, products and services to decision-makers.

Office of Oceanic and Atmospheric Research

Department of Commerce, National Oceanic and Atmospheric Administration (NOAA)
National Environmental Satellite, Data, and Information Service (NESDIS)
<https://research.noaa.gov/>

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Keywords: Environmental science/sustainability

The Office of Oceanic and Atmospheric Research (OAR) or "NOAA Research" provides the research foundation for understanding the complex systems that support our planet. Working in partnership with other organizational units of the National Oceanic and Atmospheric Administration, a bureau of the Department of Commerce, NOAA Research provides better forecasts, earlier warnings for natural disasters and a greater understanding of the Earth. Its role is to provide unbiased science to better manage the environment, nationally and globally. For a short description of each respective research of each division see: <http://www.noaa.gov/research.html>

Army Research Laboratory – Adelphi Laboratory Center - ALC

Department of Defense
Army Research Laboratory, Department of the Army
<https://www.arl.army.mil/who-we-are/locations/alc/>

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Keywords: Defense

The U.S. Army Research Laboratory (ARL) of the Army Materiel Command is the Army's corporate, or central, laboratory for materiel technology. Its diverse assortment of unique facilities and its workforce of government engineers and scientists comprise the largest source of world class integrated research and analysis in the Army. ARL's programs consist of basic and applied research and survivability/lethality analysis. ARL consists of six directorates and the Army Research Office. These organizations focus on technology areas critical to strategic dominance across the entire spectrum of operations. <https://www.arl.army.mil/www/default.cfm?page=231>

ARL's Open Campus is a collaborative endeavor, with the goal of building a science and technology ecosystem that will encourage groundbreaking advances in basic and applied research areas of relevance to the Army. Through the Open Campus framework, ARL

Army Research Laboratory – Computational and Information Sciences Directorate

Department of Defense
Army Research Laboratory, Department of the Army
<http://www.arl.army.mil/main/main/default.cfm?Action=31&Page=31>

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Keywords: Defense, Computer science, Technology

The U.S. Army Research Laboratory's Computational and Information Sciences Directorate (CISD) serves as the principal Army organization for basic and applied research in information sciences, network sciences, battlefield environment, and advanced computing and computational sciences to provide the Warfighter with knowledge superiority and to ensure U.S. military superiority. CISD's technologies provide the strategic, operational and tactical information dominance across the spectrum of operations. CISD, in collaboration with academic and industry partners, conducts basic and applied research resulting in technologies that support state-of-the-art capabilities in the distribution and/or assimilation of real or simulated digitized battlespace information. <https://www.arl.army.mil/www/default.cfm?page=30>

Army Research Laboratory - Human Research and Engineering Directorate

Department of Defense

Army Research Laboratory, Department of the Army

<http://www.arl.army.mil/main/main/default.cfm?Action=31&Page=31>

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Keywords: Defense

The U.S. Army Research Laboratory's Human Research and Engineering Directorate (HRED) serves as the U.S. Army's principal organization for conducting basic and applied research in the Human Sciences, focusing on future technologies to enhance Soldier performance and Soldier-system interactions. HRED is 1) the execution agent for Army Human Systems Integration (Army HSI, formerly known as MANPRINT), which assesses and addresses critical human performance issues for systems throughout the Army's acquisition process and 2) the Army's Science and Technology (S&T) organization whose mission is to develop and integrate, for field demonstration, technologies for training and mission rehearsal. HRED coordinates technologies within the Army, other services and their laboratories, industry, and academia to leverage basic and applied research opportunities for the benefit of the Army.

<https://www.arl.army.mil/www/default.cfm?page=31>

Army Research Laboratory - Sensors and Electron Devices Directorate

Department of Defense

Army Research Laboratory, Department of the Army

<http://www.arl.army.mil/main/Main/default.cfm?Action=32&Page=32>

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The U.S. Army Research Laboratory's Sensors and Electron Devices Directorate (SEDD) is the principal Army organization for basic and applied research in sensors, electron devices, and power and energy to ensure U.S. military superiority. SEDD conducts innovative research in the areas of sensors, electron devices and power and energy to provide the Army with affordable enabling technology in advanced electro-optical technologies; flexible displays; advanced RF technologies; electronic materials and devices; autonomous sensing; micro autonomous technologies; hybrid electric vehicle, platform, and pulse power; directed energy; and micro, Soldier, and portable power. SEDD coordinates technologies within the Army, other services.

<https://www.arl.army.mil/www/default.cfm?page=32>

Army Research Laboratory - Survivability/Lethality Analysis Directorate

Department of Defense

Army Research Laboratory, Department of the Army

<https://www.arl.army.mil/www/default.cfm?page=33>

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Keywords: Defense

The U.S. Army Research Laboratory's Survivability/Lethality Directorate is the premier source of expertise in survivability, lethality and vulnerability (SLV) assessments, for senior leaders, developers and evaluators helping to ensure that U.S. personnel and equipment survive and function effectively in hostile circumstances. SLAD conducts analytical investigations, modeling and simulations, and laboratory and field experiments to provide its analyses as well as technical advice, and to be the subject-matter expert on survivability and lethality matters to program executive officers (PEOs) and program managers (PMs), users, testers, the Army's independent evaluator, and other customers. SLAD's products support milestone decisions concerning critical operational survivability and lethality issues for Army systems with critical survivability issues that could affect Soldiers' lives. In order to best serve the Army's analytical needs we leverage both research conducted by other Army labs as well as other services and

Army Research Laboratory – Vehicle Technology Directorate

Department of Defense

Army Research Laboratory, Department of the Army

<https://www.arl.army.mil/www/default.cfm?page=34>

Army Research Laboratory - Weapons and Materials
Research Directorate - APG
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Keywords: Defense, Technology

The U.S. Army Research Laboratory's Vehicle Technology Directorate (VTD) is the principal U.S. Army science and technology organization responsible for the pursuit of mobility-related research leading to overmatch capabilities and improved reliability for Army vehicles and platforms. VTD's mission is to discover, innovate, and transition cutting-edge technologies within autonomy, mechanics, propulsion, and reliability sciences to enhance existing and revolutionize future Army vehicles. The Directorate is divided into four divisions: Propulsion, Mechanics, Vehicle Applied Research, and Autonomous Systems, which focus on technology areas such as platform structures, propulsion, intelligent systems, and logistics.

The VTD mission is accomplished through in-house basic and applied research as well as collaborations with other ARL functions, RDECOM, other services, PMs/PEOs, academia, and industry partners. The mission is additionally enhanced through teaming with and leveraging

Army Research Laboratory - Weapons and Materials Research Directorate

Department of Defense

Army Research Laboratory, Department of the Army

<http://www.arl.army.mil/main/main/default.cfm?Action=35&Page=35>

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Email:
Keywords: Defense, Technology

Research Directorate (WMRD) is the principal Army organization for research and development in weapons and materials technologies. WMRD conceives, exploits, matures, and transitions novel concepts and technologies in the areas of weapons, protection, robotics, and materials to enhance the lethality and survivability of America's ground forces. WMRD also solves technical problems associated with developmental and fielded weapon systems and provides technology and support for enhanced survivability and lethality system assessment and for the Army's decision-making process. WMRD coordinates technologies within the Army, other services and their laboratories, industry, and academia to leverage basic and applied research opportunities for the benefit of the Army.

<https://www.arl.army.mil/www/default.cfm?page=35>

Edgewood Chemical Biological Center

Department of Defense (DoD)

Army Material Command, Army Res., Dev. and Engineering Command, Dept. of the Army

<http://www.ecbc.army.mil/>

Eric L. Moore, Ph.D.
Director of the Edgewood Chemical Biological Center
Edgewood Chemical Biological Center
5183 Black Hawk Road
Edgewood Chemical Biological Center
AMSRD-ECB-PI-BP-CP/Kennedy E3330
Aberdeen Proving Ground, MD 21010

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Keywords: Bioscience, Chemistry, Defense

ECBC is the nation's principal research and development center for non-medical chemical and biological defense. ECBC develops technology in the areas of detection, protection, and decontamination and provides support over the entire lifecycle - from basic research through technology development, engineering design, equipment evaluation, product support, sustainment, field operations and disposal.

Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground

Department of Defense (DoD)

Army Medical Research and Materiel Command, Department of the Army

<http://usamricd.apgea.army.mil/>

Suaquita Perry

Army Medical Research Institute of Chemical Defense

2900 Ricketts Point Road

Aberdeen Proving Ground, MD 21010

Mission is to discover and develop medical countermeasures to chemical warfare agents and to train and educate personnel in the medical management of chemical casualties.

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Keywords: Bioscience, Chemistry, Defense

Army Medical Research Institute of Infectious Diseases, Ft. Detrick

Department of Defense (DoD)

Army Medical Research and Materiel Command, Department of the Army

<http://www.usamriid.army.mil>

Gary A. Wheeler

Colonel, Medical Corps

Army Medical Research Institute of Infectious Diseases

(AMRIID)

1425 Porter Street

Attn: MCMR-UIZ-R

Frederick, MD 21702

USAMRIID has spearheaded research to develop medical solutions—vaccines, drugs, diagnostics, and information—to protect our service members from biological threats. Our unique capabilities include biosafety level-3 and -4 laboratories, world-class expertise in the generation of biological aerosols for testing candidate vaccines and therapeutics, and fully-accredited animal research facilities.

Telephone:

Email: [usarmy.detrack.medcom-](mailto:usarmy.detrack.medcom-usamriid.mbx.usamriid-pao@mail.mil)

usamriid.mbx.usamriid-pao@mail.mil

Keywords: Bioscience, Infectious disease, Human health

Armed Forces Radiobiology Research Institute

Department of Defense (DoD)

Defense for Personnel and Readiness; Defense for Health Affairs; Uniformed Services Univ. of Health Sciences

<https://www.usuhs.edu/afri>

CAPT John G Gilstad, Chief, MMO

Armed Forces Radiobiology Research Institute

4301 Jones Bridge Road

Bethesda, MD 20814

The Armed Forces Radiobiology Research Institute (AFRI), a triservice laboratory chartered by the U.S. Congress in 1961, conducts research in the field of radiobiology and related matters essential to the operational and medical support of the U.S. Department of Defense and the military services. AFRI research, conducted by principal investigators under the direction of the scientific director, encompasses five research thrusts: Biodosimetry, Military Metals, Radiation Countermeasures, Radiation Infection Treatment, and Radiation Neutralization.

Telephone: (301) 295-2950

Email: dept-afmmmo@usuhs.edu

Keywords: Bioscience, Defense

Army Test & Evaluation Command

Department of Defense (DoD)

Department of the Army

<https://www.army.mil/atec>

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Email:

Keywords: Defense

The U.S. Army Test and Evaluation Command (TECOM) is the Army's principal materiel testing organization for weapons and equipment. TECOM tests military hardware of every description under precise conditions across the full spectrum of arctic, tropical, desert, and other natural and controlled environments on highly instrumented ranges and test courses. TECOM has nine test centers, including the U.S. Army Combat Systems Test Activity located at Aberdeen Proving Ground. This test center's capabilities are in: direct fire; robotics; fire control; clothing/personal/general equipment; vehicles/support equipment; sensors/signatures; lethality/vulnerability; transportability; and high explosive warhead/fuse.

Army Aberdeen Test Center

Department of Defense (DoD)

Department of the Army; Army Test & Evaluation Command

<http://www.atec.army.mil>

COL Morris L. Bodrick
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Email:

Keywords: Defense

Aberdeen Test Center (ATC) is a Major Range and Test Facility Base (MRTFB), operating under the guidance of Department of Defense (DoD) Directive 3200.11 and is a national asset with the mission to primarily support DoD test and evaluation (T&E) requirements. ATC also conducts testing for federal, state and local governments, academia, private industry, and foreign governments. ATC is the DoD lead test center for automotive testing, manned and unmanned ground vehicles (MGVs and UGVs), guns and munitions (direct fire and small arms) testing, and live fire vulnerability/lethality testing. Major missions include: Automotive – Wheeled and Tracked Vehicles (conducting 80% of the Army Automotive testing); Firepower; Survivability/Lethality; Warfighter (Soldier Systems and Support Equipment, Training Exercises); Military Environmental Technologies; and Maritime Systems.

Naval Medical Research Center

Department of Defense (DoD)

Department of the Navy

<https://www.med.navy.mil/Naval-Medical-Research-Center/>

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Keywords: Defense, Medical-basic research

Focusing on finding solutions both to conventional medical problems on the battlefield such as bleeding, and to non-conventional weapons such as thermobaric blast, biological agents, or radiation. Research is being conducted in the fields of Infectious Diseases, Biological Warfare Defense, Dental Research, and Combat Casualty Care.

U.S. Naval Research Laboratory, Chesapeake Bay Detachment

Department of Defense (DoD)

Department of the Navy (DoN), Office of Naval Research (ONR), U.S. Naval Research Laboratory (NRL)

<https://www.nrl.navy.mil/Our-Work/Field-Sites/Chesapeake-Bay-Detachment-CBD/>

Victor Chen

The Chesapeake Bay Detachment (CBD) occupies a 168-acre site near Chesapeake Beach, Maryland, and provides facilities and support services for research in radar, electronic warfare, optical devices, materials, communications, and fire research. Basic research is also conducted in radar antenna properties, testing of radar remote sensing concepts, use of radar to sensor ocean waves, and laser propagation. CBD also hosts facilities of the Navy Technology Center for Safety and Survivability, which conducts fire research on simulated carrier, surface, and submarine platforms.

Chesapeake Beach, MD

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Keywords: Defense

Uniformed Services University of Health Sciences

Department of Defense (DoD)

Military Health System (MHS)

<https://www.usuhs.edu/>

Yvonne Maddox, Ph.D., Vice President of Research

Uniformed Services University

4301 Jones Bridge Road

Building A, Room A1032

Bethesda, MD 20814

The University's research program covers a range of clinical and other topics important to both the military and public health. Infectious diseases, trauma medicine, health maintenance, and cancer are areas of particular strength. Researchers are also making important new efforts in state-of-the-art fields that cut across disciplines, such as genomics, proteomics, and drug-delivery mechanisms.

Telephone: (301) 295-3303

Email: <https://docs.google.com/forms/d/e/1FAIpQLSf6KrgjDJj-BIMzNzJBQ6v3dZiILScTBHVQ9ENWMTuH4wcfg/viewform>

Keywords: Public health, Defense, Medical-basic research, Medical-clinical research

Naval Air Warfare Center, Aircraft Division (NAWCAD) - Patuxent River

Department of Defense (DoD)

Naval Air Systems Command, Department of the Navy

<http://www.navair.navy.mil/nawcad/>

Rear Adm. Shane G. Gahagan

U.S. Navy

NAWCAD Commander

Naval Air Warfare Center, Aircraft Division (NAWCAD)

22347 Cedar Point Rd

Building 2185, Suite 3250

Patuxent River, MD 20670

NAVAIR, Naval Air Systems Command, working with industry, delivers high quality, affordable products and support to the operating forces. Products and services include: aircraft, avionics, air-launched weapons, electronic warfare systems, cruise missiles, unmanned aerial vehicles, launch and arresting gear, training equipment and facilities, and all other equipment related to Navy and Marine Corps air power. NAVAIR provides total life cycle support of all naval aviation weapon systems including research, design, development, and engineering; acquisition; test and evaluation; training facilities and equipment; repair and modification; and in-service engineering and logistics support.

Telephone: (301) 757-5136

Email: nav_helpdesk.fct@navy.mil

Keywords: Defense, Aerospace/astronomy, Engineering

Naval Explosive Ordnance Disposal Technology Division

Department of Defense (DoD)

Naval Sea Systems Command (NAVSEA), Department of the Navy

<http://www.navsea.navy.mil/Home/Warfare-Centers/NSWC-Indian-Head-EOD-Technology/>

NSWC, IHEODTD Public Affairs Office
Bldg 20 Suite 113
3767 Strauss Ave
Indian Head, MD 20640

Telephone: (301) 744-1345
Email: nswc.iheodtd.pao@navy.mil
Keywords: Defense

The Naval Explosive Ordnance Disposal Technology Division (NAVEODTECHDIV) is a field activity of the Naval Sea Systems Command (NAVSEA). Located 30 miles South of Washington, D.C. in Charles County, Maryland, NAVEODTECHDIV is a unique support activity administered by the U.S. Navy and utilized by all the Armed Services who work together to determine Joint Explosive Ordnance Disposal (EOD) requirements. It is committed to providing excellent engineering and technical services in support of Joint Service EOD programs and other customer requirements.

Naval Surface Warfare Center - Carderock Division (NSWCCD)

Department of Defense (DoD)

Naval Sea Systems Command (NAVSEA), Department of the Navy

<http://www.navsea.navy.mil/Home/Warfare-Centers/NSWC-Carderock/>

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NSWC Carderock Division
Congressional and Public Affairs Office
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West Bethesda, MD 20817

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Email: CRDIVCPAO@navy.mil
Keywords: Defense, Technology

The Division houses world-class facilities and laboratories. As a major component of the Naval Sea Systems Command the Carderock Division provides cradle-to-grave support for its technical products over an enormous range of scientific areas related to surface and undersea platforms. The Division addresses the full spectrum of applied maritime science and technology, from the theoretical and conceptual beginnings, through design and acquisition, to implementation and follow-on engineering. This includes all technical aspects of improving the performance of ships, submarines, military water craft, and unmanned vehicles, as well as research for military logistics systems. In addition, the Division is uniquely chartered by Congress to support America's maritime industry. Includes the National Maritime Technology Information Center (NMTIC).

Naval Surface Warfare Center - Indian Head Division (IHDIV)

Department of Defense (DoD)

Naval Sea Systems Command (NAVSEA), Department of the Navy

<http://www.navsea.navy.mil/nswc/indianhead/default.aspx>

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Keywords: Defense

As a Department of Defense (DoD) Energetics Center, the Indian Head Division, Naval Surface Warfare Center (IHDIV/NSWC) is a leader in the Navy's Energetics Enterprise—its job is to research and provide energetics and energetic systems for our fighting forces around the globe. "Energetic systems" refers to explosives, propellants, pyrotechnics and their immediately related components. Complimenting our energetic materials formulation work, we research, develop, test and engineer the range of technologies necessary to deliver ordnance to the military.

Telemedicine and Advanced Technology Research Center

Department of Defense (DoD)

U.S. Army Medical Research and Materiel Command's (USAMRMC)

<https://www.tatrc.org>

Telemedicine and Advanced Technology Research Center
(TATRC)

Bldg. 1054 Patchel Street

ATTN: MCMR-TT (TATRC)

Fort Detrick, MD 21702

Telephone: (301) 619-7927

Email: marketingdirector@tatrc.org

Keywords: Defense, Technology, Human health

TATRC's research programs consist of seven portfolios and a new initiatives and basic science program, for addressing the ever-changing world of medical requirements both on the battlefield and in hospitals of the future. The fields of research are: Medical Robotics, Health Information Technologies, Medical Imaging Technologies, Advanced Prosthetics and Human Performance, Computational Biology, Mobile Computing and Remote Monitoring, Simulation and Training Technology, Chronic Disease Management, Neuroscience, Regenerative Medicine, Nano-Medicine and Biomaterials, and Medical Logistics. Current projects include: Robotics-Autonomous Casualty Care Programs, Battlefield Medical Information System Tactical - Joint, Electronic Information Carrier, Web-Enabled Refractive Surgery Information System (WebRSIS), Personal Information Carrier, and Special Medical Augmented Response Teams.

Walter Reed Army Institute of Research (WRAIR)

Department of Defense (DoD)

Walter Reed Army Medical Center

<http://www.wrair.army.mil/>

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Telephone: (301) 319-9000

Email:

Keywords: Medical-basic research, Defense

Its mission is to conduct biomedical research that is responsive to Department of Defense and U.S. Army requirements and delivers life saving products including knowledge, technology, and medical materiel that sustain the combat effectiveness of the warfighter. Research divisions include: Biochemistry, Neurosciences Psychology, Experimental Therapeutics, Pathology, Military Casualty Research, Retrovirology, Regulated Activities, Veterinary Medicine, Preventative Medicine and Communicable Diseases and Immunology.

National Center for Health Statistics

Department of Health and Human Services (HHS)

Centers for Disease Control and Prevention (CDC)

<https://www.cdc.gov/nchs/index.htm>

Charles Rothwell, Director
National Center for Health Statistics
3311 Toledo Road

Hyattsville, MD 20782

Telephone: (301) 458-4000

Email: cdcinfo@cdc.gov

Keywords: Mathematics/statistics, Public health

Uses a variety of approaches to efficiently obtain information from the sources most able to provide information. Collects data from birth and death records, medical records, interview surveys, and through direct physical exams and laboratory testing. NCHS is a key element of our national public health infrastructure, providing important surveillance information that helps identify and address critical health problems. Statistics include state by state breakdown, and are on topics such as accidents, alcoholism, heart disease, homicide, life expectancy, stroke and suicide.

Fogarty International Center

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.fic.nih.gov/Pages/Default.aspx>

Roger I. Glass, Director
Fogarty International Center, National Institutes of Health
31 Center Drive, MSC 2220
Building 31, Room B2C02
Bethesda, MD 20892

The Fogarty International Center is dedicated to advancing the mission of the National Institutes of Health by supporting and facilitating global health research conducted by U.S. and international investigators, building partnerships between health research institutions in the U.S. and abroad, and training the next generation of scientists to address global health needs.

Telephone: (301) 496-1415
Email: ficinfo@nih.gov
Keywords: Global health

Frederick National Laboratory for Cancer Research

Department of Health and Human Services, National Institutes of Health (NIH)

<https://frederick.cancer.gov/>

Frank Blanchard, Director of Public Affairs
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Frederick, MD 21702

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Keywords: Bioscience, Medical-basic research

The National Cancer Institute at Frederick (NCI-Frederick), part of the National Institutes of Health (NIH), is one of two NCI campuses. The NCI's clinical researchers and the NIH Clinical Center are located on the NIH campus in Bethesda. The NCI's Frederick campus is located within Fort Detrick, a U.S. Army base. NCI-Frederick focuses on direct research aimed at identifying the causes of cancer, AIDS, and related diseases. More than 100 scientists are investigating the genetic, molecular, environmental, and behavioral factors that contribute to human cancers, as well as identifying new targets for cancer diagnosis, treatment, and prevention. NCI-Frederick also provides core scientific expertise and advanced technology development to NCI, NIAID (the National Institute for Allergy and Infectious Diseases), and other components of NIH via the Research Technology Program (RTP) and other programs directed by SAIC-Frederick, Inc., a subsidiary of Science Applications International Corporation.

National Cancer Institute

Department of Health and Human Services, National Institutes of Health (NIH)

<http://www.cancer.gov>

Norman E. Sharpless, M.D., Director
National Cancer Institute, NCI Public Inquiries Office
9609 Medical Center Drive
BG 9609 MSC 9760
Bethesda, MD 20892

Seeks to provide, coordinate, and manage information technology, and to advance computational science, particularly in respect to the discovery of biomedical knowledge. NIH wants to stimulate new ways of combining skills and disciplines in the physical, biological, and social sciences to realize the great promise of 21st century medical research. Research is focused on cancer, specifically large-scale genome sequencing and other investigations of the disease.

Telephone: (800) 422-6237
Email: <https://www.cancer.gov/contact/email-us>
Keywords: Medical-basic research

National Center for Complementary and Alternative Medicine

Department of Health and Human Services, National Institutes of Health (NIH)

<https://nccih.nih.gov/>

David Shurtleff, Ph.D.
National Center for Complementary and Integrative Health
(NCCIH)

9000 Rockville Pike
Bethesda, MD 20892

Telephone: (888) 644-6226

Email:

Keywords: Medical-basic research, Medical-clinical
research

The National Center for Complementary and Alternative Medicine (NCCAM) is the Federal Government's lead agency for scientific research on complementary and alternative medicine (CAM). The mission of NCCAM is to: Explore complementary and alternative healing practices in the context of rigorous science, Train complementary and alternative medicine researchers, Disseminate authoritative information to the public and professionals.

National Center on Minority and Health Disparities

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nimhd.nih.gov/>

Eliseo J. Pérez-Stable, M.D., Director
National Center on Minority Health and Health Disparities
6707 Democracy Boulevard, Suite 800
National Institutes of Health
Bethesda, MD 20892

Telephone: (301) 402-1366

Email: NIMHDinfo@NIMHD.NIH.gov

Keywords: Equity, Underserved populations

The mission of the National Center on Minority Health and Health Disparities (NCMHD) is to promote minority health and to lead, coordinate, support, and assess the NIH effort to reduce and ultimately eliminate health disparities. In this effort NCMHD will conduct and support basic, clinical, social, and behavioral research, promote research infrastructure and training, foster emerging programs, disseminate information, and reach out to minority and other health disparity communities.

National Eye Institute

Department of Health and Human Services, National Institutes of Health (NIH)

<https://nei.nih.gov/>

Paul A. Sieving, M.D., Ph.D., Director
National Eye Institute
31 Center Drive MSC 2510
Information Office
Bethesda, MD 20892

Telephone: (301) 496-5248

Email: 2020@nei.nih.gov

Keywords: Medical-basic research

The NEI conducts and supports research that helps prevent and treat eye diseases and other disorders of vision. This research leads to sight-saving treatments, reduces visual impairment and blindness, and improves the quality of life for people of all ages. NEI-supported scientists are working toward transplanting healthy cells into diseased retinas. This research may lead to new treatments for people with blinding retinal diseases, including AMD and retinitis pigmentosa. NEI-supported scientists are developing "neuroprotection" methods that will prevent or slow glaucoma cell damage and promote the survival of retinal cells damaged by glaucoma. Researchers are exploring gene-based treatments to slow some forms of retinal degeneration.

National Heart, Lung and Blood Institute

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nhlbi.nih.gov/>

Gary H. Gibbons, Director
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P.O. Box 30105
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Telephone: (301) 592-8573
Email: nhlbiinfo@nhlbi.nih.gov
Keywords: Medical-basic research, Medical-clinical research

The Institute plans, conducts, fosters, and supports an integrated and coordinated program of basic research, clinical investigations and trials, observational studies, and demonstration and education projects. Research is related to the causes, prevention, diagnosis, and treatment of heart, blood vessel, lung, and blood diseases, and sleep disorders.

National Human Genome Research Institute

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.genome.gov/>

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Communications and Public Liaison Branch
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31 Center Drive, MSC 2152
Bethesda, MD 20892

Telephone: (301) 402-0911
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Keywords: Medical-basic research, Bioscience

The National Human Genome Research Institute led the Human Genome Project for the National Institutes of Health, which culminated in the completion of the full human genome sequence in April 2003. Now, NHGRI moves forward into the genomic era with research aimed at improving human health and fighting disease. Current projects include the genome sequencing program, clinical research and the ethical, legal and social implications research program. To that end NHGRI supports the development of resources and technology that will accelerate genome research and its application to human health. A critical part of the NHGRI mission continues to be the study of the ethical, legal and social implications (ELSI) of genome research. NHGRI also supports the training of investigators and the dissemination of genome information to the public and to health professionals.

National Institute of Allergy and Infectious Diseases

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.niaid.nih.gov/>

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Keywords: Bioscience, Medical-basic research, Medical-clinical research, Human health, Infectious disease

The National Institute of Allergy and Infectious Diseases (NIAID) conducts and supports basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases. For more than 50 years, NIAID research has led to new therapies, vaccines, diagnostic tests, and other technologies that have improved the health of millions of people in the United States and around the world.

National Institute of Arthritis and Musculoskeletal and Skin Diseases

Department of Health and Human Services, National Institutes of Health (NIH)

<http://www.niams.nih.gov>

Stephen I. Katz, MD, PhD, Director
Office of Science Policy, Planning and Communications
National Institute of Arthritis and Musculoskeletal and Skin Diseases
National Institutes of Health
31 Center Dr. - MSC 2350
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Bethesda, MD 20892

The mission of the National Institute of Arthritis and Musculoskeletal and Skin Diseases is to support research into the causes, treatment, and prevention of arthritis and musculoskeletal and skin diseases, the training of basic and clinical scientists to carry out this research, and the dissemination of information on research progress in these diseases.

Telephone: (301) 496-8190

Email: NIAMSinfo@mail.nih.gov

Keywords: Medical-basic research, Medical-clinical research

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nibib.nih.gov/>

Jill Heemskerk, Ph.D., Acting Director
National Institute of Biomedical Imaging and Bioengineering (NIBIB)
Building 31, Room 1C14
9000 Rockville Pike
Bethesda, MD 20892

The National Institute of Biomedical Imaging and Bioengineering (NIBIB) is dedicated to improving human health through the integration of the physical and biological sciences. The research agenda of the NIBIB will dramatically advance the Nation's health by improving the detection, management, understanding, and ultimately, the prevention of disease. NIBIB-supported research brings advances in fields ranging from physics to nanotechnology to bear on the challenges of diagnosing, preventing and treating disease.

Telephone: (301) 496-8859

Email: info@nibib.nih.gov

Keywords: Technology, Human health

National Institute of Child Health and Human Development

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nichd.nih.gov/>

Diana W. Bianchi, M.D., Director
Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

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Email: NICHDInformationResourceCenter@mail.nih.gov

Keywords: Public health, Equity, Medical-basic research, Medical-clinical research

Its mission is to ensure that every person is born healthy and wanted, that women suffer no harmful effects from reproductive processes, and that all children have the chance to achieve their full potential for healthy and productive lives, free from disease or disability, and to ensure the health, productivity, independence, and well-being of all people through optimal rehabilitation. It conducts and supports research on topics related to the health of children, adults, families, and populations. Some of these topics include: Reducing infant deaths; Improving the health of women, men, and families; Understanding reproductive health and fertility/infertility; Learning about growth and development; Examining, preventing and treating problems of birth defects, mental retardation, and developmental disabilities; and Enhancing well-being of persons through the lifespan with optimal rehabilitation research.

National Institute of Dental and Craniofacial Research

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nidcr.nih.gov/>

Martha J. Somerman, DDS, PhD, Director
National Institute of Dental and Craniofacial Research
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Keywords: Dental, Medical-basic research, Medical-clinical research

The mission of the National Institute of Dental and Craniofacial Research (NIDCR) is to improve oral, dental and craniofacial health through research, research training, and the dissemination of health information. It accomplishes its mission by: performing and supporting basic and clinical research, conducting and funding research training and career development programs to ensure an adequate number of talented, well-prepared and diverse investigators, coordinating and assisting relevant research and research-related activities among all sectors of the research community, and promoting the timely transfer of knowledge gained from research and its implications for health to the public, health professionals, researchers, and policy-makers. This is accomplished through 4 research centers: the Center for Integrative Biology and Infectious Diseases, the Center for Clinical Research, the Center for Health Promotion and Behavioral Research, and the Center for Biotechnology and Innovation.

National Institute of Diabetes and Digestive and Kidney Diseases

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.niddk.nih.gov/>

Griffin P. Rodgers, M.D., M.A.C.P., Director

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Email: healthinfo@niddk.nih.gov
Keywords: Medical-basic research, Medical-clinical research, Chronic disease

The National Institute of Diabetes and Digestive and Kidney Diseases conducts and supports research on many of the most serious diseases affecting public health. The Institute's Division of Intramural Research encompasses the broad spectrum of metabolic diseases such as diabetes, inborn errors of metabolism, endocrine disorders, mineral metabolism, digestive diseases, nutrition, urology and renal disease, and hematology. Basic research studies include biochemistry, nutrition, pathology, histochemistry, chemistry, physical, chemical, and molecular biology, pharmacology, and toxicology. NIDDK extramural research is organized into divisions of program areas: Division of Diabetes, Endocrinology, and Metabolic Diseases, Division of Digestive Diseases and Nutrition, and Division of Kidney, Urologic, and Hematologic Diseases. The Division of Extramural Activities provides administrative support and overall coordination. A fifth division, the Division of Nutrition Research Coordination, coordinates government nutrition

National Institute of General Medical Sciences

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nigms.nih.gov/Pages/default.aspx>

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Keywords: Medical-basic research, Bioscience

The National Institute of General Medical Sciences supports basic biomedical research that increases understanding of life processes and lays the foundation for advances in disease diagnosis, treatment, and prevention. The Institute's programs encompass the areas of cell biology, biophysics, genetics, developmental biology, pharmacology, physiology, biological chemistry, bioinformatics, computational biology, and minority biomedical research and training. NIGMS is organized into the following divisions: Division of Cell Biology and Biophysics, Division of Genetics and Developmental Biology, Division of Pharmacology, Physiology, and Biological Chemistry, Division of Minority Opportunities in Research, and the Center for Bioinformatics and Computational Biology.

National Institute of Mental Health

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nimh.nih.gov/index.shtml>

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Telephone: (866) 614-6464
Email: nimhinfo@nih.gov
Keywords: Medical-basic research, Medical-clinical research, Public health

The NIMH mission is to reduce the burden of mental illness and behavioral disorders through research on mind, brain, and behavior. This public health mandate demands that we harness powerful scientific tools to achieve better understanding, treatment, and eventually, prevention of these disabling conditions that affect millions of Americans. To fulfill its mission, the Institute: conducts research on mental disorders and the underlying basic science of brain and behavior, supports research on these topics at universities and hospitals around the United States, collects, analyzes, and disseminates information on the causes, occurrence, and treatment of mental illnesses, supports the training of more than 1,000 scientists to carry out basic and clinical research, and communicates information to scientists, the public, the news media, and primary care and mental health professionals about mental illnesses, the brain, behavior, mental health, and opportunities and advances in research in these areas.

National Institute of Neurological Disorders and Stroke

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.ninds.nih.gov/>

Walter J. Koroshetz, M.D., Director
NIH Neurological Institute

P.O. Box 5801
Bethesda, MD 20824

Telephone: (301) 496-5751
Email:
Keywords: Neuroscience, Medical-basic research, Medical-clinical research

The mission of NINDS is to reduce the burden of neurological disease - a burden borne by every age group, by every segment of society, by people all over the world. To support this mission, NINDS: conducts, fosters, coordinates, and guides research on the causes, prevention, diagnosis, and treatment of neurological disorders and stroke, and supports basic research in related scientific areas, provides grants-in-aid to public and private institutions and individuals in fields related to its areas of interest, including research project, program project, and research center grants, operates a program of contracts for the funding of research and research support efforts in selected areas of institute need, provides individual and institutional fellowships to increase scientific expertise in neurological fields, conducts a diversified program of intramural and collaborative research in its own laboratories, branches, and clinics, and collects and disseminates research information related to neurological disorders.

National Institute of Nursing Research

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.ninr.nih.gov/>

Patricia A. Grady, Director
National Institute of Nursing Research National Institutes of Health
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Room 5B03
Bethesda, MD 20892

Telephone: (301) 496-0207
Email: info@ninr.nih.gov
Keywords: Medical-basic research, Medical-clinical research, Equity

The National Institute of Nursing Research supports clinical and basic research to establish a scientific basis for the care of individuals across the life span-from management of patients during illness and recovery to the reduction of risks for disease and disability, the promotion of healthy lifestyles, promoting quality of life in those with chronic illness, and care for individuals at the end of life. NINR accomplishes its mission by supporting grants to universities and other research organizations as well as by conducting research intramurally at laboratories in Bethesda, Maryland. NINR research includes all age groups and is based on adequate gender and minority representation.

National Institute on Aging

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nia.nih.gov/>

Richard J. Hodes, PhD, Director
National Institute on Aging
31 Center Drive, MSC 2292
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Bethesda, MD 20892

Telephone: (800) 222-2225
Email: niaic@nia.nih.gov
Keywords: Human health

NIA's mission is to improve the health and well-being of older Americans through research, and specifically, to support and conduct high-quality research on aging processes, age-related diseases, and special problems and needs of the aged, as well as train and develop highly skilled research scientists from all population groups, develop and maintain state-of-the-art resources to accelerate research progress, and disseminate information and communicate with the public and interested groups on health and research advances and on new directions for research.

National Institute on Alcohol Abuse and Alcoholism

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.niaaa.nih.gov/>

George F. Koob, Ph.D, Director
National Institute on Alcohol Abuse and Alcoholism (NIAAA)
5635 Fishers Lane, MSC 9304

Bethesda, MD 20892

Telephone: (301) 443-3860
Email: niaaaweb-r@exchange.nih.gov
Keywords: Medical-basic research

NIAAA provides leadership in the national effort to reduce alcohol-related problems by: conducting and supporting research in a wide range of scientific areas including genetics, neuroscience, epidemiology, health risks and benefits of alcohol consumption, prevention, and treatment, coordinating and collaborating with other research institutes and Federal Programs on alcohol-related issues, collaborating with international, national, state, and local institutions, organizations, agencies, and programs engaged in alcohol-related work, and translating and disseminating research findings to health care providers, researchers, policymakers, and the public. Current research initiatives are in the following topics: Basic Research on Medications Development for Alcohol-Use Disorders, Genetic Studies of Vulnerability to Alcohol, Mechanisms and Markers of Alcohol-Induced Organ Damage and Organ Protection, Behavioral and Genetic Risk Factors for Alcoholism, Long-term, and Community-Based

National Institute on Deafness and other Communication Disorders (NIDCD)

Department of Health and Human Services, National Institutes of Health (NIH)

<https://www.nidcd.nih.gov/>

Judith A. Cooper, Acting Director
NIDCD Office of Health Communication and Public Liaison
31 Center Drive, MSC 2320

Bethesda, MD 20892

Telephone: (301) 827-8183
Email: nidcdinfo@nidcd.nih.gov
Keywords: Medical-clinical research

NIDCD is mandated to conduct and support biomedical and behavioral research and research training in the normal and disordered processes of hearing, balance, smell, taste, voice, speech, and language. The Institute also conducts and supports research and research training related to disease prevention and health promotion; addresses special biomedical and behavioral problems associated with people who have communication impairments or disorders; and supports efforts to create devices which substitute for lost and impaired sensory and communication function. NIDCD accomplishes its mandate through the Division of Intramural Research, which conducts research in laboratories at the NIH, and the Extramural Research Program, a program of research grants, career development awards, individual and institutional research training awards, center grants, and contracts to public and private research institutions and organizations. As a whole, the Institute supports and conducts approximately 600 research

National Institute on Drug Abuse

Department of Health and Human Services, National Institutes of Health (NIH)

<http://www.drugabuse.gov/>

Nora D. Volkow, PhD, Director
National Institute on Drug Abuse
Office of Science Policy and Communications
Public Information and Liaison Branch
Room 5213, MSC 9561
6001 Executive Boulevard
Bethesda, MD 20892

NIDA's mission is to lead the Nation in bringing the power of science to bear on drug abuse and addiction. NIDA supports over 85 percent of the world's research on the health aspects of drug abuse and addiction. NIDA supported science addresses the most fundamental and essential questions about drug abuse, ranging from the molecule to managed care, and from DNA to community outreach research. Its goal is to ensure that science, not ideology or anecdote, forms the foundation for all of our Nation's drug abuse reduction efforts.

Telephone: (301) 443-1124

Email: information@nida.nih.gov

Keywords: Public health, Medical-basic research, Medical-clinical research

National Institutes of Health: Clinical Center

Department of Health and Human Services, National Institutes of Health (NIH)

<https://clinicalcenter.nih.gov/>

Dr. James K. Gilman
Chief Executive Officer
National Institute of Health: Clinical Center
9000 Rockville Pike
10 Center Drive
Bethesda, MD 20892

The NIH Clinical Center will serve as the nation's premier research hospital for conducting clinical research to improve the health of human kind. It will also serve as a national resource for clinical research by developing diagnostic and therapeutic interventions, enhancing systems to ensure the safe, efficient, and ethical conduct of clinical research, training clinical researchers, and leading the response to the nation's public health needs. As the nation's clinical research center, the NIH Clinical Center is dedicated to improving human health by providing an outstanding environment that facilitates: development of diagnostic and therapeutic interventions; training of clinical researchers; and, development of processes to ensure the safe, efficient, and ethical conduct of clinical research.

Telephone: (301) 496-2563

Email: ccpressgroup@cc.nih.gov

Keywords: Medical-clinical research, Medical-patient care

Nanotechnology Characterization Lab

Department of Health and Human Services, National Institutes of Health (NIH)

National Cancer Institute

<https://nanolab.cancer.gov/>

Scott E. McNeil, Ph.D., Director
Nanotechnology Characterization Laboratory
National Cancer Institute at Frederick

Attn: Nanotechnology Characterization Laboratory P.O. Box
B
Building 469
Frederick, MD 21702

Working in concert with the National Institute of Standards and Technology (NIST) and the U.S. Food and Drug Administration (FDA), the National Cancer Institute (NCI) established the Nanotechnology Characterization Laboratory to perform preclinical efficacy and toxicity testing of nanoparticles. The NCL will serve as a national resource and knowledge base for all cancer researchers to facilitate the regulatory review of nanotechnologies intended for cancer therapies and diagnostics. As part of its assay cascade, the NCL will characterize nanoparticles' physical attributes, their in vitro biological properties, and their in vivo compatibility using animal models. The time required to characterize nanomaterials from receipt through the in vivo phase is anticipated to be one year.

Telephone: (301) 846-6939

Email: ncl@mail.nih.gov

Keywords: Bioscience, Medical-basic research

National Cancer Institute Technology Transfer Branch

Department of Health and Human Services, National Institutes of Health (NIH)

National Cancer Institute (NCI)

<https://techtransfer.cancer.gov/aboutttc>

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9609 Medical Center Dr.
Bethesda, MD 20892

Telephone: (240) 276-5530

Email:

Keywords: Medical-basic research, Medical-clinical research, Entrepreneurship/tech transfer

The Technology transfer Branch (TTB) provides a complete array of services to support the National Cancer Institute's technology development activities. To ensure that these activities comport with Federal statutes, regulations and the policies of the National Institutes of Health, a large part of TTB's responsibilities includes the day-to-day negotiations of transactional agreements between the NCI and outside parties, including universities, pharmaceutical and biotechnology companies. These agreements provide for: the exchange of research materials under the Simple Letter of Agreement (SLA); collaborative research conducted under cooperative research and development agreements (CRADAs); preclinical and clinical studies of the safety and efficacy of new pharmaceuticals under clinical trial agreements (CTAs); and exchange of confidential information under confidential disclosure agreements (CDAs).

Chemical Security Analysis Center

Department of Homeland Security

DHS Science & Technology Directorate

<https://www.dhs.gov/science-and-technology/csac>

Chemical Security Analysis Center

Aberdeen Proving Ground, MD 21010

Telephone:

Email: csacinfo@st.dhs.gov

Keywords: Defense, Chemistry

The Department of Homeland Security established the Chemical Security Analysis Center (CSAC) to provide a scientific basis for the awareness of chemical threats and the attribution of their use against the American public. The CSAC is a resource that provides a centralized compilation of chemical hazard data, using this data in an organized effort for threat analytical purposes. It is located at the Edgewood Area of Aberdeen Proving Ground and draws upon the expertise in chemical defense, chemical agents, and toxic industrial chemicals resident at the Proving Ground.

The CSAC partners with organizations such as the Edgewood Chemical Biological Center, the Medical Research Institute for Chemical Defense, the Center for Health Promotion and Preventive Medicine, and the Chemical Materials Agency. In addition, the CSAC draws upon expertise from various organizations for specific projects.

Patuxent Wildlife Research Center

Department of the Interior

U.S. Geological Survey

<https://www.pwrc.usgs.gov/>

John French, Center Director
USGS Patuxent Wildlife Research Center
12100 Beech Forest Road, STE 4039

Laurel, MD 20708

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Email: webmaster@patuxent.usgs.gov

Keywords: Veterinary

The Center develops and manages national inventory and monitoring programs and is responsible for the North American Bird Banding Program and leadership of other national bird monitoring programs. The Center's scientific and technical assistance publications, wildlife data bases, and electronic media are used nationally and worldwide in managing biological resources. Researches amphibians, reptiles, and birds, biodiversity, contaminants, monitoring, populations and wetlands and communities.

Veterans Health Administration (VHA), Baltimore

Department of Veterans Affairs

https://www.maryland.va.gov/locations/baltimore_va_medical_center.asp

Veterans Health Administration
10 North Greene Street

Baltimore, MD 21201

Telephone: (410) 605-7000

Email:

Keywords: Medical-patient care, Medical-clinical research

Baltimore VA Medical Center offers veterans state-of-the-art medical technology, clinical services and research programs. One of the largest funded research and development programs in the VA system, including studies in diabetes, immunology, oncology, virology, cellular biology and infectious diseases. Geriatric Research, Education and Clinical Center, one of only 21 in the VA system nationwide, conducts research on the prevention of stroke and cardiovascular disease through exercise and nutrition therapy in older veterans. The Baltimore VA Medical Center coordinates one of only two MS Centers of Excellence throughout the VA. The center is responsible for facilitating clinical care, research and education for patients with MS in the Eastern part of the country. The Baltimore VA Medical Center is also the home base for one of VA's eight Mental Illness Research, Education and Clinical Centers. This program is dedicated to improving the provision of health care to veterans suffering from severe mental

VA Center of Excellence in Exercise & Robotics for Neurological Disorders

Department of Veterans Affairs

Rehabilitation Research & Development Service

<https://www.rehab.research.va.gov/cent/baltimore.html>

Richard Macko, MD, Director

10 North Greene Street

Baltimore VAMC
RR&D Center (153)

Baltimore, MD 21201

Telephone: (410) 605-7000

Email:

Keywords: Neuroscience, Technology

The VA Center for Excellence in Exercise and Robotics for Neurological Disorders is focused on identifying and testing exercise-related ways to improve function and minimize disability in the context of neurological illness. The center was funded in 2005 and is located in the Baltimore VA Medical Center. In addition to student and resident training in research, the Center is coordinating three distinct research studies examining different aspects of exercise and robotics: Velocity vs. Duration; Modular Lower Extremity Robotics-Assisted Exercise After Stroke; and Reshaping Exercise Habits and Beliefs (REHAB) Following Stroke.

Environmental Science Center, EPA, Region 3

Environmental Protection Agency (EPA)

<https://www.epa.gov/aboutepa/about-region-3s-laboratory-and-field-services-epas-environmental-science-center>

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Environmental Science Center, U.S. Environmental
Protection Agency
701 Mapes Road

Fort Meade, MD 20755

Telephone: (215) 814-5122

Email:

Keywords: Environmental science/sustainability

The facility provides office space for 150 people and consolidates six leased facilities into one government-owned site. The facility represents a partnership between the Region 3 and EPA HQ. Approximately 2/3 of the 70 laboratories at the facility support Region 3 personnel including Analytical Services and Quality Assurance Branch, the Field Inspection Program, and the Mid Atlantic Integrated Assessment Program. The remaining laboratories support HQ Office of Pesticides Program Personnel and the Baltimore resident office of EPA's Criminal Investigation Division. At the Environmental Science Center, EPA scientists conduct tests on soil, air and water samples to determine the presence of pollutants and other contaminants. EPA microbiologists test drinking water to ensure its safety. Hospital disinfectants are tested to ensure the validity of their claims and chemists develop the analytical methods necessary to monitor pesticide residues in food. Science center staff also inspect and investigate manufacturing

FDA - Center for Veterinary Medicine (CVM)

Food and Drug Administration (FDA)

Office of Foods and Veterinary Medicine

<https://www.fda.gov/AboutFDA/CentersOffices/OfficeofFoods/CVM/default.htm>

Dr. Steven Solomon, Director
Center for Veterinary Medicine
Food and Drug Administration
7519 Standish Place
HFV-1
Rockville, MD 20855

Telephone: (240) 402-7002
Email: AskCVM@fda.hhs.gov
Keywords: Veterinary

The Center for Veterinary Medicine (CVM) regulates the manufacture and distribution of food additives and drugs that will be given to animals. These include animals from which human foods are derived, as well as food additives and drugs for pet (or companion) animals. CVM is responsible for regulating drugs, devices, and food additives given to, or used on, over one hundred million companion animals, plus millions of poultry, cattle, swine, and minor animal species. (Minor animal species include animals other than cattle, swine, chickens, turkeys, horses, dogs, and cats.)

FDA - Center for Biologics Evaluation and Research Organization (CBER)

Food and Drug Administration (FDA)

Office of Medical Products and Tobacco

<https://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CBER/>

Peter Marks, M.D., Ph.D., Director
Division of Communication and Consumer Affairs
Office of Communication, Outreach and Development
Food and Drug Administration
Building 71 Room 3103
10903 New Hampshire Avenue
Silver Spring, MD 20993

Telephone: (240) 402-8010
Email: ocod@fda.hhs.gov
Keywords: Bioscience

Ensures the safety, potency and effectiveness of biological products for the prevention, diagnosis, and treatment of disease. Regulates allergenics, blood, cellular and gene therapy, devices, tissues, vaccines, and xenotransplantation.

FDA - Center for Devices and Radiological Health Organization (CDRH)

Food and Drug Administration (FDA)

Office of Medical Products and Tobacco

<https://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDRH/>

Center for Devices and Radiological Health, U.S. Food and Drug Administration
10903 New Hampshire Ave

Silver Spring, MD 20993

Telephone: (301) 796-7100
Email: DICE@fda.hhs.gov
Keywords: Public health, Technology

CDRH is responsible for ensuring the safety and effectiveness of medical devices and eliminating unnecessary human exposure to man-made radiation from medical, occupational and consumer products. There are thousands of types of medical devices, from heart pacemakers to contact lenses. Radiation-emitting products regulated by FDA include microwave ovens, video display terminals, and medical ultrasound and x-ray machines. The center accomplishes its mission by: reviewing requests to research or market medical devices; collecting, analyzing, and acting on information about injuries and other experiences in the use of medical devices and radiation-emitting electronic products; setting and enforcing good manufacturing practice regulations and performance standards for radiation-emitting electronic products and medical devices; monitoring compliance and surveillance programs for medical devices and radiation-emitting electronic products; and providing technical and other nonfinancial assistance to

FDA - Center for Drug Evaluation and Research Organization (CDER)

Food and Drug Administration (FDA)

Office of Medical Products and Tobacco

<https://www.fda.gov/about-fda/fda-organization/center-drug-evaluation-and-research-cder>

Division of Drug Information
Hillandale Building, 4th Floor
10001 New Hampshire Ave
Silver Spring, MD 20993

Telephone: (301) 796-5400

Email: CDERCENTERDIRECTOR@fda.hhs.gov

Keywords: Public health, Pharmacy

The Center for Drug Evaluation and Research (CDER) performs an essential public health task by making sure that safe and effective drugs are available to improve the health of people in the United States.

As part of the U.S. Food and Drug Administration (FDA), CDER regulates over-the-counter and prescription drugs, including biological therapeutics and generic drugs. This work covers more than just medicines. For example, fluoride toothpaste, antiperspirants, dandruff shampoos and sunscreens are all considered "drugs."

NASA Goddard Space Flight Center

National Aeronautics and Space Administration (NASA)

<https://www.nasa.gov/goddard>

NASA Goddard Space Flight Center
Mail Code 130
Public Inquiries
Greenbelt, MD 20771

Telephone: (301) 286-2000

Email:

Keywords: Aerospace/astronomy

The mission of the Goddard Space Flight Center is to expand knowledge of the Earth and its environment, the solar system and the universe through observations from space. To assure that our nation maintains leadership in this endeavor, it is committed to excellence in scientific investigation, in the development and operation of space systems and in the advancement of essential technologies. In pursuit of this challenge, the Center will: Conduct a preeminent program of research in the space and Earth science disciplines using measurements from space complemented by suborbital, ground-based and laboratory measurements and by theoretical investigations, Develop and operate a broad spectrum of flight missions that are responsive to the needs of the science community, Provide and operate spaceflight tracking and data acquisition network, Develop innovative technology and instruments critical to the success of our mission, and Develop and maintain advanced information systems for

Transgenic Core Facility

National Institute of Mental Health

<https://www.nimh.nih.gov/labs-at-nimh/research-areas/research-support-services/tgc/index.shtml>

NIMH Transgenics MSC 4405
49 Convent Drive
Building 49 B1 C25
Bethesda, MD 20892

Telephone: (301) 594-5160

Email: transgenics@nih.gov

Keywords: Bioscience, Neuroscience,
Resource/facility/instrument

The NIMH transgenic core facility's mission is to discover the role of specific genes in the development and function of the nervous system. In some neurological diseases the genetic basis of pathology is known and can be modeled in mice. In collaboration with NIH neuroscience investigators the facility produces transgenic research animals and modified embryonic stem cells.

NIST - Engineering Laboratory

National Institute of Standards and Technology (NIST)

<https://www.nist.gov/el>

Dr. Howard Harary, Director
National Institute of Standards and Technology
Information Technology Laboratory
100 Bureau Drive, Stop 8900

Gaithersburg, MD 20899

Telephone: (301) 975-5900
Email: howard.harary@nist.gov
Keywords: Engineering, Metrology

The Engineering Laboratory promotes U.S. innovation and industrial competitiveness in areas of critical national priority by anticipating and meeting the measurement science and standards needs for technology-intensive manufacturing, construction, and cyber-physical systems, including the Smart Grid Program Office in ways that enhance economic prosperity and improve the quality of life.

NIST - Materials Measurement Laboratory

National Institute of Standards and Technology (NIST)

<https://www.nist.gov/mml>

Dr. Eric Lin, Director
Material Measurement Laboratory

100 Bureau Drive, M/S 8300
Gaithersburg, MD 20899

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Email: mmllinfo@nist.gov
Keywords: Technology, Metrology, Chemistry

The Material Measurement Laboratory (MML) is one of two metrology laboratories within the National Institute of Standards and Technology (NIST). The MML supports the NIST mission by serving as the national reference laboratory for measurements in the chemical, biological and material sciences. Our activities range from fundamental and applied research on the composition, structure and properties of industrial, biological and environmental materials and processes, to the development and dissemination of tools including reference measurement procedures, certified reference materials, critically evaluated data, and best practice guides that help assure measurement quality.

NIST - Physical Measurement Laboratory

National Institute of Standards and Technology (NIST)

<https://www.nist.gov/pml>

James Otlhoff, Director
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Gaithersburg, MD 20899

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Email: pml-webmaster@nist.gov
Keywords: Physics

The Physical Measurement Laboratory (PML) develops and disseminates the national standards of length, mass, force and shock, acceleration, time and frequency, electricity, temperature, humidity, pressure and vacuum, liquid and gas flow, and electromagnetic, optical, microwave, acoustic, ultrasonic, and ionizing radiation. Its activities range from fundamental measurement research through provision of measurement services, standards, and data.

PML applies its measurement capabilities to problems of national significance through collaborations with industry, universities, professional and standards setting organizations, and other agencies of government. It supports the research community in such areas as communication, defense, electronics, energy, environment, health, lighting, manufacturing, microelectronics, radiation, remote sensing, space, and transportation. PML establishes spectroscopic methods and

NIST- Center for Neutron Research

National Institute of Standards and Technology (NIST)

<https://www.nist.gov/ncnr>

Dr. Robert Dimeo, Director
NIST Center for Neutron Research
100 Bureau Drive, Mail Stop 6100
National Institute of Standards and Technology
Gaithersburg, MD 20899

Telephone: (301) 975-6210
Email: robert.dimeo@nist.gov
Keywords: Metrology

The NCNR is part of the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland. Its activities focus on providing neutron measurement capabilities to the U.S. research community.

It is a national center for research using thermal and cold neutrons, offering its instrumentation for use by all qualified applicants. Many of its instruments rely on intense beams of cold neutrons emanating from an advanced liquid hydrogen moderator.

Research Directorate

National Security Agency (NSA)

<https://www.acq.osd.mil/rd/>

Dale Ormond, Director
Research Associate Directorate, National Security Agency
9800 Savage Road, Suite 6541
4434799572, 3016887866
Fort Meade, MD 20755

Telephone: (443) 479-9572
Email: nsaarc@nsaarc.net, smallbusiness@nsa.gov
Keywords: Defense

The Research Directorate conducts leading-edge research to support signals intelligence and information assurance missions. The NSA has developed valuable technologies in: advanced mathematics, advanced computing, communications and networking, information processing, microelectronics, and other technologies. There is also a program developing security enhanced Linux.

Laboratory for Physical Sciences (LPS)

National Security Agency (NSA); University of Maryland College Park (UMCP)

<http://www.lps.umd.edu>

Laboratory for Physical Sciences
8050 Greenmead Drive

College Park, MD 20740

Telephone: (301) 935-6400
Email:
Keywords: Quantum, Physics, Engineering

The Laboratory for Physical Sciences is a unique facility where university and federal government personnel collaborate on research in advanced communication and computer technologies. Faculty and students from the UMCP Departments of Physics, Electrical and Computer Engineering, and Materials and Nuclear Engineering all conduct research in LPS laboratories in the areas listed above. Research areas are: quantum computing, microelectronics research, photonics and optoelectronics, nanostructures, magnetism, thermal management, fiber optics and molecular beam epitaxy.

Smithsonian Environmental Research Center (SERC)

Smithsonian Institution

<https://serc.si.edu/>

Tuck Hines, Director
Smithsonian Environmental Research Center
647 Contees Wharf Road

Edgewater, MD 21037

Telephone: (443) 482-2200

Email:

Keywords: Environmental science/sustainability

The Smithsonian Environmental Research Center (SERC) leads the Nation in research on linkages of land and water ecosystems in the coastal zone, and provides society with knowledge to meet critical environmental challenges in the 21st century. Research areas include: effects of global change, biodiversity and invasions, land use and landscape ecology, coastal foodwebs, biogeochemical cycles and nutrient availability, biocomplexity, and plant and animal population dynamics.

Information Technology Research Laboratory

US Department of Commerce

National Institute of Standards and Technology

<https://www.nist.gov/itl>

100 Bureau Drive, Stop 8900
Gaithersburg, MD 209899

Telephone: (301) 975-2900

Email: itl_inquiries@nist.gov

Keywords: Technology, Metrology

Develops standards, measurements and testing for interoperability, security, usability of information systems. Also includes computer science, mathematics and statistics research.

NIST - Center for Nanoscale Science and Technology

US Department of Commerce

National Institute of Standards and Technology (NIST)

<https://www.nist.gov/cnst>

James G. Kushmerick
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Gaithersburg, MD 20899

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Email: james.kushmerick@nist.gov

Keywords: Technology, Metrology

The Center enables science and industry by providing essential measurement methods, instrumentation, and standards to support all phases of nanotechnology development, from discovery to production. The CNST also offers access to the CNST Nanofab and Nanolab. CNST will: provide measurement methods, standards and technology to support all phases of nanotechnology development from discovery to production; develop and maintain the Nanofab, a national facility with state-of-the-art nanoscale fabrication and measurement capabilities; allow access to prototype fabrication and measurement tools with capabilities beyond the commercial state of the art; provide small companies access to sophisticated and expensive nanotechnology tools and the opportunity to do rapid prototyping; apply a multidisciplinary approach to problem solving that involves partnering with industry, academia, and other government agencies; serve as a hub to link the external nanotechnology community to the vast

Southern Research Institute- Infectious Disease Research Facility

The University of Alabama at Birmingham
<https://www.SouthernResearch.org>

Arthur J. Tipton, Ph.D.
President and CEO
Southern Research Institute
431 Aviation Way

Frederick, MD 21701

Telephone: (301) 694-3232
Email:
Keywords: Bioscience

Southern Research Institute is a not-for-profit 501(c)(3) scientific research organization founded in 1941 that conducts preclinical drug discovery and development, advanced engineering research in materials, systems development, and environment and energy research. More than 550 scientific and engineering team members support clients and partners in the pharmaceutical, biotechnology, defense, aerospace, environmental and energy industries. Southern Research is headquartered in Birmingham, Ala., with facilities in Wilsonville, Ala., Frederick, Md., and Durham, NC and offices in Huntsville, Ala., New Orleans, La., and Washington, DC. The facility in Frederick, Maryland has a specific focus on infectious disease research.

Aeras

Areas
<http://www.aeras.org/>

Jacqueline E. Shea, PhD
Chief Executive Officer
Areas Global Headquarters

1405 Research Blvd
Rockville, MD 20850

Telephone: (301) 547-2900
Email:
Keywords: Infectious disease, Public health, Underserved populations

Aeras is a non-profit product development organization dedicated to the development of effective tuberculosis (TB) vaccines and biologics to prevent TB across all age groups in an affordable and sustainable manner. Aeras utilizes its broad capabilities and technologies in collaboration with numerous partners and stakeholders to support the development of vaccines and other biopharmaceuticals to address TB and other significant public health needs of underserved populations.

Battelle, Eastern Science and Technology Center

Battelle Corporation
<https://www.battelle.org/>

Battelle Eastern Science and Technology Center (BEST Center)

1204 Technology Drive
Aberdeen, MD 21001

Telephone: (410) 306-8651
Email: nationalsecurity@battelle.org
Keywords: Defense, Bioscience, Chemistry

Battelle is the world's largest independent research and development organization; it conducts \$6.5 billion in global R&D annually through contract research, laboratory management, and technology commercialization. The BEST Center, its \$20-million, 81,000-square-foot facility in Aberdeen, MD, comprises a state-of-the-art conference facility and modern laboratories for chemical and biological defense work, providing both analytical and testing services to a wide range of military and commercial clients in the area. The integration of experienced scientists with Biosafety Level (BSL)-2 and BSL-3 laboratories allows for the delivery of solutions for R&D needs as well as product development. Other core skills available to clients include biomarker services; systems integration and engineering; process and environmental management; response planning and emergency management; training, exercises, and planning; environmental compliance; information and knowledge management; and

Biomedical Research Institute (BRI)

Biomedical Research Institute (BRI)

<http://www.afbr-bri.com>

Philip LoVerde PhD, President
Biomedical Research Institute

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Keywords: Bioscience, Infectious disease

The Biomedical Research Institute (BRI), founded in Rockville, MD in 1968, is a not-for-profit research institute, with a major emphasis on basic research in schistosomiasis. The institute provides life cycle stages of the schistosome parasites to the international community, principally through contracts with the National Institutes of Health in Bethesda, MD.

Howard Hughes Medical Institute

Howard Hughes Medical Institute

<https://www.hhmi.org/>

Erin O'Shea, PhD, President
Howard Hughes Medical Institute

4000 Jones Bridge Road
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Keywords: Medical-basic research, Bioscience

The Howard Hughes Medical Institute, a non-profit medical research organization, that plays a powerful role in advancing scientific research and education in the United States. Its scientists, located across the country and around the world, have made important discoveries that advance both human health and our fundamental understanding of biology. In a complementary program at HHMI's Janelia Farm Research Campus in Loudoun County, Virginia, leading scientists are pursuing long-term, high-risk, high-reward research in a campus specially designed to bring together researchers from disparate disciplines. The Institute also aims to transform science education into a creative, interdisciplinary endeavor that reflects the excitement of real research. During fiscal 2011, the Institute made disbursements of \$905 million, including \$825 million for biomedical research and \$80 million in grants to support science education and international science. The Institute's endowment at the close of fiscal 2011 stood at about \$16

Integrated Biotherapeutics Inc.

Integrated Biotherapeutics Inc.

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Keywords: Bioscience, Infectious disease

IBT is a research-based company dedicated to development of vaccines and therapeutics targeting emerging infectious agents. The company progresses internal research programs and offers antiviral, antibacterial, and vaccine testing services through its preclinical CRO, IBT Bioservices.

J. Craig Venter Institute

J. Craig Venter Institute
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The JCVI is a not-for-profit research institute in Rockville, MD and San Diego, CA dedicated to the advancement of the science of genomics; the understanding of its implications for society; and communication of those results to the scientific community, the public, and policymakers. Founded by J. Craig Venter, Ph.D., the JCVI is home to approximately 300 scientists and staff with expertise in human and evolutionary biology, genetics, bioinformatics/informatics, information technology, high-throughput DNA sequencing, genomic and environmental policy research, and public education in science and science policy. The legacy organizations of the JCVI are: The Institute for Genomic Research (TIGR), The Center for the Advancement of Genomics (TCAG), the Institute for Biological Energy Alternatives (IBEA), the Joint Technology Center (JTC), and the J. Craig Venter Science Foundation. The JCVI is a 501 (c)(3) organization.

Medstar Health Research Institute

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MedStar Health Research Institute is the research arm of MedStar Health. It provides scientific, administrative and regulatory support for research that complements MedStar's clinical services and teaching programs. The Research Institute conducts clinical, healthcare delivery and outcomes research in all of the hospital and ambulatory settings, which are located throughout Maryland and Washington, D.C

Novavax

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Novavax, Inc. (Nasdaq: NVAX) is a clinical-stage biopharmaceutical company creating novel vaccines to address a broad range of infectious diseases worldwide. Using innovative virus-like particle (VLP) and recombinant nanoparticle technology, as well as new and efficient manufacturing approaches, the company produces potent vaccine candidates to combat diseases, with the goal of allowing countries to better prepare for and more effectively respond to rapidly spreading infections. Novavax is committed to using its technology platforms to create geographic-specific vaccine solutions and is therefore involved in several international partnerships, including collaborations with Cadila Pharmaceuticals of India and LG Life Sciences of Korea. Together, these companies have worldwide commercialization capacity and the global reach to create real and lasting change in the biopharmaceutical field.

Alvin & Lois Lapidus Cancer Institute*Sinai Hospital**LifeBridge Health Center*<http://www.lifebridgehealth.org/CancerInst/CancerInst.aspx>

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The Alvin & Lois Lapidus Cancer Institute at LifeBridge Health's mission is to provide patients with access to advanced treatment options in the community setting. We conduct clinical trials for prevention and treatment of various cancers including breast, lung, gastrointestinal, genitourinary, melanoma and hematologic diseases. Additionally, we participate in supportive care studies for treatment of conditions associated with cancer and cancer treatments, such as anemia, mucositis and cachexia (a weak emaciated condition often caused by cancer), that greatly affect patients' quality of life. Clinical trials offered at the Alvin & Lois Lapidus Cancer Institute are sponsored by various pharmaceutical companies and national institutions such as the National Cancer Institute, or initiated by the Sinai Hospital physicians.

Center for Joint Preservation and Replacement*Sinai Hospital**LifeBridge Health Center*<http://www.lifebridgehealth.org/RIAO/CenterforJointPreservationandReplacement.aspx>

Ronald E. Delanois, M.D., Director

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Keywords: Medical-patient care

The Center for Joint Preservation and Replacement at Sinai Hospital is a multi-disciplinary center that focuses on nonoperative and surgical methods to treat joint pain and disorders while using the most advanced technology. At the Center, conservative methods are used to preserve the natural function of the joint and increase its longevity. Such treatments include physical therapy, medication, injections, and state-of-the-art gait analysis. When conservative methods prove ineffective, the most advanced surgical techniques are implemented. Surgeons at the Center for Joint Preservation and Replacement have performed more than 8,000 joint reconstruction and joint replacement procedures.

International Center for Limb Lengthening*Sinai Hospital**LifeBridge Health Center*<http://www.lifebridgehealth.org/RIAO/InternationalCenterforLimbLengthening2.aspx>

John E. Herzenberg, MD, Co-Director

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Keywords: Medical-patient care

The International Center for Limb Lengthening (ICLL) is internationally recognized as the most experienced center for limb lengthening and reconstruction in the world, committed to providing the most comprehensive and technologically advanced treatments available for children and adults with upper and lower limb length discrepancies, short stature, limb deformities, nonunions, bone defects, bone infections, joint contractures, and arthritis.

Krieger Eye Institute at Sinai Hospital

Sinai Hospital

LifeBridge Health Center

<http://www.lifebridgehealth.org/Sinai/KriegerEyeInstituteatSinaiHospital.aspx>

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Keywords: Medical-patient care

Sinai's Department of Ophthalmology is based in the Krieger Eye Institute, which provides a full range of ophthalmic consultation services. At the forefront of ocular disease research and patient care, the Krieger Eye Institute has a highly trained staff of ophthalmologists, each of whom has a particular subspecialty. Today, the full-time ophthalmology staff has grown to cover the major subspecialties with highly experienced staff members directing the subspecialty departments. Staff members are also committed to teaching and research with the ophthalmology residency program. Generous contributions from The Zanvyl Krieger Foundation and The Statter-Rosenthal Foundation established the Krieger Eye Institute and the ophthalmology clinic, allowing for Department expansion into the Sinai Medical Office Building and within Sinai Hospital.

The Sandra and Malcolm Berman Brain & Spine Institute

Sinai Hospital

LifeBridge Health Center

<http://www.lifebridgehealth.org/BrainSpine/BrainSpineInstitute.aspx>

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The Sandra and Malcolm Berman Brain & Spine Institute is the only comprehensive, integrated inpatient and outpatient program in Maryland dedicated to improving outcomes in patients with diseases of the nervous system and spine. We bring together multidisciplinary teams of neurologic, neurosurgical, and rehabilitation physicians with other medical specialists who work together to provide the advanced resources, expertise, and comprehensive care necessary to treat patients living with specific neurologic disorders. Our program is based on the premise that every patient deserves compassionate, personalized attention throughout the continuum of care, from diagnosis to treatment to recovery and rehabilitation. What sets us apart is easy access to extraordinary one-to-one care combined with advanced treatment that is typically found only at a tertiary institution.

The Aerospace Corporation - Columbia

The Aerospace Corporation

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Keywords: Aerospace/astronomy, Defense

The Aerospace Corporation has provided independent technical and scientific research, development, and advisory services to national-security space programs since 1960. It is a federally funded research and development center (FFRDC) for the United States Air Force and the National Reconnaissance Office and supports all national-security space programs.

The Aerospace Corporation - Silver Spring

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The Aerospace Corporation has provided independent technical and scientific research, development, and advisory services to national-security space programs since 1960. It is a federally funded research and development center (FFRDC) for the United States Air Force and the National Reconnaissance Office and supports all national-security space programs.

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Keywords: Aerospace/astronomy, Defense

The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc

The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc

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The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. (HJF) is a private, not-for-profit organization authorized by Congress to support research at the Uniformed Services University of the Health Sciences and throughout the military medical community. Since its creation in 1983, HJF has provided services to meet the unique needs of military medicine and served as a vital link between the military medical community and federal and private partners

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