Funding Opportunities for the College of Arts and Letters

1. John Carter Brown Library Research Fellowships in History and the Humanities

**Sponsor:** John Carter Brown Library

**Deadline:** January 10, 2010

**Amount:** $40,000


**Abstract:** Sponsorship of research at the JCB Library is reserved exclusively for scholars whose work is centered on the colonial history of the Americas, including all aspects of the European, African, and Native American involvement. Approximately twenty-five Research Fellowships will be awarded for the period June 1 - May 31. Short-Term Fellowships are available for periods of two to four months and carry a stipend of $1,600/month. Long-Term Fellowships are for five to nine months with a stipend of $4,000/month.

2. Law and Social Sciences

**Sponsor:** National Science Foundation (NSF)

**Deadline:** Jan. 15, 2010; Aug. 15, 2010

**Amount:** No fixed limit


**Abstract:** This program supports social scientific studies of law and law-like systems of rules, institutions, processes, and behaviors. The primary consideration is that the research shows promise of advancing a scientific understanding of law and legal process. Research on social control, crime causation, violence, victimization, legal and social change, patterns of discretion, procedural justice, compliance and deterrence, and regulatory enforcement are among the many areas that have recently received program support. The program welcomes proposals that advance fundamental knowledge about legal interactions, processes, relations, and diffusions that extend beyond any single nation, as well as about how local and national legal institutions, systems, and cultures affect or are affected by transnational or international phenomena. Thus, proposals may locate the research within a single nation or between or across legal systems or regimes.
3. **Career Development Fellowship for Scholar of German Jewry**

   **Sponsor:** Baeck Institute, Leo (LBI)

   **Deadline:** Mar 01, 2010

   **Amount:** $20,000

   **Web link:** [http://www.lbi.org/career.html](http://www.lbi.org/career.html)

   **Abstract:** The Leo Baeck Institute for the Study of History and Culture of German-speaking Jewry is offering a Career Development Award as a personal grant to a scholar or professional in an early career stage, e.g. before gaining tenure in an academic institution or its equivalent, whose proposed work will deal with historical or cultural issues of the Jewish experience in German-speaking lands.

4. **Virginia Center for the Creative Arts - Residential Fellowships/ Mid-Atlantic Arts Foundation Creative Fellowships Program**

   **Sponsor:** Virginia Center for the Creative Arts (VCCA)/ Mid-Atlantic Arts Foundation

   **Deadline:** January 15, 2010

   **Amount:** a fully funded one month residency and a $250 travel subsidy

   **Web link:** [http://www.vcca.com/programs.html](http://www.vcca.com/programs.html)

   **Abstract:** VCCA is a working retreat for writers, visual artists, composers, and proponents of New Genres, located at Mt. San Angelo, adjacent to Sweet Briar College. The basis for admission to this highly selective residency program is professional achievement or promise of achievement. Artists are accepted at the VCCA without consideration for their financial situation. The actual cost of a residency at the Virginia Center is $180 per day per Fellow; however, Fellows contribute according to ability. Through its Creative Fellowships Program (the Mid-Atlantic Arts Foundation supports a fully-funded one month residency for an artist from Virginia. Artists wishing to be considered for a Mid-Atlantic Fellowship should apply directly to the VCCA at the January 15 deadline (for residencies from June to September). The VCCA makes selections and then the MAAF provides funding for the residency and a $250 travel subsidy. Requires a non-refundable filing fee of $25; citizenship unrestricted.
1. **Seedcorn Funding Initiative**

   **Sponsor:** Chartered Institute of Management Accountants (CIMA)

   **Deadline:** Continuous. All applications will be subject to a fast track review process.

   **Amount:** Applicants may apply for funding of up to $8,000. (£5,000) on projects that are consistent with the areas outlined in the CIMA Research Strategy.


   **Abstract:** CIMA welcomes the following two types of application:

   1. Applications from inexperienced researchers, that may include those researchers with experience only as research assistants; those without previous funding awards; or those who have not previously acted as a principal researcher.

   2. Applications from researchers with an idea/concept that they wish to develop or feasibility studies - a feasibility study may be an evaluation or analysis of a proposed research project, including reviewing issues that could impact its success.

   CIMA encourages research effort into a wide range of topics as the following:

   1. The impact of climate change on business
   2. Customer value
   3. Enterprise governance
   4. Narrative reporting
   5. Risk management
   6. Corporate governance
   7. External reporting and board effectiveness
   8. Transformation of the finance function
   9. Improving effectiveness in organization
   10. Performance management
   11. Management insight and analysis to improve decision making

2. **Economic Institutions, Behavior and Performance**

   **Sponsor:** Sloan Foundation, Alfred P. Selected National Issues

   **Deadline:** Continuous. Grant requests can be made at any time. A brief letter of inquiry, rather than a fully developed proposal, is an advisable first step for an applicant.

   **Amount:** Amount requested should be fitting of project.

   **Web link:** [http://www.sloan.org/program/4](http://www.sloan.org/program/4)

   **Abstract:** Grants in the Economic Institutions, Behavior and Performance program primarily support basic empirical and policy-relevant research in economics, management, regulation, law, and political economy related to the structure, behavior and performance of the U.S. economy and its place in the global economy. Grants are also made to convey the results of this research to policymakers in ways that are useful to them.
3. Research Projects

**Sponsor:** Chartered Institute of Management Accountants (CIMA)

**Deadline:** Continuous. Applications for sponsorship or research funding can be made at any time during the year on an ad hoc basis or in direct response to calls for papers under research initiatives. Applicants should note that it takes approximately 14-16 weeks to evaluate and approve a research proposal depending on the amount of the requested grant.

**Amount:** There are flexible financial limits, upper and lower, on the size of funding awarded. In practice, grants are typically between £5,000 and £40,000 depending on the scope of the project.


**Abstract:** The Chartered Institute of Management Accountants (CIMA) encourages and supports research which develops the science of management accounting. CIMA's research programme is specifically designed to promote and develop the science of management accountancy. It welcomes both academic and practitioner proposals. Each application is judged on its academic rigour, quality, originality and potential contribution to CIMA's research objectives.

Support may be financial or other assistance, including
- research assistance for literature reviews;
- development of the research instrument;
- conducting the data collection (using on-line tools for data collection);
- data analysis; and
- help with the development of business oriented outputs.

4. Glen McLaughlin Prize for Research in Accounting Ethics

**Sponsor:** University of Oklahoma Price College of Business School of Accounting

**Deadline:** Dec 01, 2009

**Amount:** $15,000

**Web link:** [http://aaahq.org/calls/GlenMcLaughlin2010.pdf](http://aaahq.org/calls/GlenMcLaughlin2010.pdf)

**Abstract:** The John T. Steed School of Accounting invites scholars to submit their unpublished papers examining the implications of ethics in any area of accounting. The development of the ethical concepts in the paper may be rooted in ethical philosophy, but authors should feel free to draw upon ethical insights from other disciplines such as sociology, psychology, biology, economics, and humanities. The paper is best viewed as an interdisciplinary work, contributing to the understanding of ethical concepts and then applying this understanding to accounting issues in an effective way. Examples of topics suitable for the prize include (but not limited to):
- corporate disclosure practices;
- financial reporting, valuation, and performance measurement;
- management control systems;
- executive compensation structure and incentive issues;
- assurance services and litigation;
- corporate governance and internal control;
- forecasting and the role of financial analysts; and
- tax reporting and disclosure.
5. **Competitive Manuscript Award**

**Sponsor:** American Accounting Association (AAA)

**Deadline:** Jan 31, 2010

**Eligibility:** Applicants must be members of the association and associate members who have earned their Ph.D. within the past five years

**Amount:** $50,000

**Web link:** [http://aaahq.org/awards/award5.htm](http://aaahq.org/awards/award5.htm)

**Abstract:** The Competitive Manuscript Award encourages research among members of the association and associate members who have recently earned their Ph.D. Any subject matter in the field of accounting is proper for inclusion in this contest. Manuscripts must generally conform to the style and length requirements of *The Accounting Review*.

6. **Changes in Health Care Financing and Organization (HCFO)**

**Sponsor:** Johnson Foundation, Robert Wood (RWJF)

**Deadline:** Continuous. Grants are awarded on a rolling basis; proposals may be submitted at any time.

**Amount:** $200,000


**Abstract:** Changes in Health Care Financing and Organization (HCFO) supports policy analysis, research, evaluation and demonstration projects that provide policy leaders timely information on health care policy and financing issues. Supported projects include:
- examining significant issues and interventions related to health care financing and organization and their effects on health care costs, quality and access; and
- exploring or testing major new ways to finance and organize health care that have the potential to improve access to more affordable and higher quality health services.

Three categories of projects will be considered for funding under this solicitation:
1. Policy analyses and research to design and analyze major health care financing strategies, including strategies where financing and organization are integrally related
2. Evaluations of major financing strategies already in place
3. Demonstrations to test new financing strategies: Support for demonstrations is limited to the data collection and analysis portions of a demonstration. HCFO grants may and should be used to complement other funding of demonstrations.

All projects must address how current public and private mechanisms for financing health care or proposed major changes in those mechanisms will affect health care costs, access or quality.

Projects may be initiated from within many disciplines, including health services research, economics, sociology, political science, public policy, public health, public administration, law and business administration.
Funding Opportunities for the Darden College of Education:

1. Biology of Manual Therapies (R01)

   **Sponsor:** National Institutes of Health (NIH)

   **Deadline:** Feb 05, 2010

   **Amount:** Amount requested should be fitting of the proposed project.


   **Abstract:** The purpose of the program is to encourage the submission of high quality studies of the basic science and mechanisms of action underlying the biomechanical, immunological, endocrinological and/or neurophysiological consequences of manual therapies, such as spinal manipulation, mobilization and massage therapy.

2. Developmental and Learning Sciences (DLS)

   **Sponsor:** National Science Foundation (NSF)

   **Deadline:** Jan 15, 2010; Jul 15, 2010

   **Eligibility:** Academic Institution; Nonprofit

   **Amount:** $15,000 - $100,000


   **Abstract:** DLS supports fundamental research that increases our understanding of cognitive, linguistic, social, cultural, and biological processes related to children's and adolescents' development and learning. Research supported by this program will add to our basic knowledge of how people learn and the underlying developmental processes that support learning, with the objective of leading to better educated children and adolescents who grow up to take productive roles as workers and as citizens. Among the many research topics supported by DLS are developmental cognitive neuroscience; development of higher-order cognitive processes; transfer of knowledge from one domain or situation to another; use of molecular genetics to study continuities and discontinuities in development; development of peer relations and family interactions; multiple influences on development, including the impact of family, school, community, social institutions, and the media; adolescents' preparation for entry into the workforce; cross-cultural research on development and learning; and the role of cultural influences and demographic characteristics on development. Additional priorities include research that: incorporates multidisciplinary, multi-method, microgenetic, and longitudinal approaches; develops new methods, models, and theories for studying learning and development; and integrates different processes (e.g., learning, memory, emotion), levels of analysis (e.g., behavioral, social, neural), and time scales (e.g. infancy, middle childhood, adolescence).
3. **National Science Foundation - Informal Science Education (ISE)**

   **Sponsor:** NSF

   **Deadline:** Mandatory Preliminary Proposal: June 24, 2010  
   **Full proposal:** November 18, 2010

   **Amount:** The ISE program expects to make approximately 40 awards based on anticipated funding of $25 million each in FY 2010 and FY 2011 for new awards. It is anticipated that approximately 6 Research, 6 Pathways, 20 Full-Scale Development, 3 Broad Implementation, and 5 Communicating Research to Public Audiences awards will be made as Standard or Continuing Grants per year, pending availability of funds.

   - Research: Project duration from one to five years. The maximum award is $1,500,000.
   - Pathways: Project duration is up to two years. The maximum award is $250,000.
   - Full-Scale Development: Project duration may be from one to five years. Full-Scale Development proposals will normally be funded in the $1 million to $3 million dollar range.
   - Broad Implementation: Project duration may be from one to five years. Broad Implementation proposals will normally be funded in the $1 million to $3 million dollar range.
   - Communicating Research to Public Audiences: Project duration may be up to two years and the maximum award is $150,000.


   **Abstract:** The Informal Science Education (ISE) program solicitation has been revised to allow five categories of proposals: Research; Pathways; Full-Scale Development; Broad Implementation; and Communicating Research to Public Audiences. The required information, project duration, and maximum award amount vary for each project type. Each submission must clearly indicate, at the beginning of both the Project Summary and Project Description, which project type is being proposed. Only one project type per proposal is allowed. The ISE program invests in projects that promote lifelong learning of STEM in a wide variety of informal settings. Funding is provided for projects that advance understanding of informal STEM learning, that develop and implement innovative strategies and resources for informal STEM education, and that build the national professional capacity for research, development, and practice in the field.

4. **National Institute on Disability and Rehabilitation Research (NIDRR)--Disability and Rehabilitation Research Projects and Centers Program--Field Initiated (F1) Projects [OSERS]**

   **Sponsor:** The National Institute on Disability and Rehabilitation Research (NIDRR)

   **Deadline:** January 6, 2010

   **Amount:** Estimated Average Size of Awards: $200,000.


   **Abstract:** The purpose of the program is to plan and conduct research, or development activities. Awards will be made in two distinct categories: (1) research, and (2) development, for a period of up to three years (36 months). For review purposes, the research category is designated as (84.133G-1) and development is designated as (84.133G-2).
The purpose of the FI Projects program is to develop methods, procedures, and rehabilitation technology that maximize the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with disabilities, especially individuals with the most severe disabilities. Another purpose of the FI Projects program is to improve the effectiveness of services authorized under the Rehabilitation Act of 1973, as amended.

In carrying out a research activity under an FI research grant, a grantee must identify one or more hypotheses or research questions and, based on the hypotheses or research questions identified, perform an intensive, systematic study directed toward producing (1) new scientific knowledge, or (2) better understanding of the subject, problem studied, or body of knowledge.

In carrying out a development activity under an FI project development grant, a grantee must use knowledge and understanding gained from research to create materials, devices, systems, or methods, including designing and developing prototypes and processes, that are beneficial to the target population. Target population means the group of individuals, organizations, or other entities expected to be affected by the project. There may be more than one target population because a project may affect those who receive services, provide services, or administer services.

Through the implementation of the Plan, NIDRR seeks to (1) improve the quality and utility of disability and rehabilitation research; (2) foster an exchange of expertise, information, and training to facilitate the advancement of knowledge and understanding of the unique needs of individuals with disabilities from traditionally underserved populations; (3) determine the best strategies and programs to improve rehabilitation outcomes for individuals with disabilities from underserved populations; (4) identify research gaps; (5) identify mechanisms of integrating research and practice; and (6) disseminate findings.
Funding Opportunities for the College of Health Sciences:

1. **Innovative Technology Development for Cancer Research (R21)**
   
   **Sponsor:** NIH
   
   **Deadline:** recurring through October 1, 2010 - Feb 16, Jun 16
   
   **Eligibility:** Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the PD/PI is invited to work with his/her organization to develop an application for support
   
   **Amount:** up to $275,000 in direct costs over a two year period
   
   **Program Announcement #:** RFA-CA-10-005
   
   
   **Abstract:** This program focuses on early stage development of cancer-relevant technologies. If successful, these technologies would accelerate the research and understanding of basic cancer biology, cancer treatment and diagnosis, cancer prevention, cancer control and epidemiology, and/or cancer health disparities. This FOA solicits R21 applications and is suitable for projects at their inception, conceptual or idea based, where technical feasibility of the proposed technology or methodology has not yet been established. The R21 mechanism requires high potential impact and allows for an element of technical risk; projects proposed in response to this FOA may reflect this level of risk but must have concurrent potential to produce a major impact in a broad area of cancer-relevant research. All projects must include quantitative milestones (i.e. technical metrics that determine whether the specific aims have been accomplished). Projects proposing to use technology that is already established or projects where the novelty resides in the biological or clinical question being pursued are examples of topics not appropriate for this solicitation and will be returned as non-responsive. This funding opportunity is part of a broader NCI-sponsored Innovative Molecular Analysis Technologies (IMAT) Program

2. **Biosignature Discovery for Personalized Treatment in Depression (U01)**
   
   **Sponsor:** NIH
   
   **Deadline:** LOI: December 14, 2009; Application: January 13, 2010
   
   **Eligibility:** Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the PD/PI is invited to work with his/her organization to develop an application for support
   
   **Amount:** Amount requested should be fitting of project, the total project period and costs for an application submitted may not exceed four years or $6 million total costs per year, which will include facilities & administrative costs by consortium participants.
   
   **Program Announcement #:** RFA-MH-10-040
   
   **Web link:** [http://grants.nih.gov/grants/guide/rfa-files/RFA-MH-10-040.html#SectionIII1A](http://grants.nih.gov/grants/guide/rfa-files/RFA-MH-10-040.html#SectionIII1A)
Abstract: The National Institute of Mental Health (NIMH) accepts applications for RFA-MH-10-040, *Biosignature Discovery for Personalized Treatment in Depression*. The purpose of this initiative is to support exploratory research to discover panels of promising biomarkers (i.e., biosignatures) that are predictive of treatment outcomes in major depressive disorder. This FOA will utilize the NIH Cooperative Agreement (U01) award mechanism.

3. **Developmental Mechanisms of Human Structural Birth Defects (P01)**

   **Sponsor:** NIH

   **Deadline:** recurring through May 26, 2010 - Jan. 25, May 25

   **Eligibility:** Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the PD/PI is invited to work with his/her organization to develop an application for support

   **Amount:** Amount requested should be fitting of project

   **Program Announcement #:** PA-07-419


   **Abstract:** The purpose of this program announcement is to support innovative, multidisciplinary, interactive, and synergistic program projects that integrate basic, translational, and clinical approaches to understanding the developmental biology and genetic basis of congenital human malformations. Each Program Project application must consist of at least three component projects. At least one project must be clinical or translational in nature. The component projects must share a common central theme, focus, or objective on a specific developmental defect or malformation that is genotypically, mechanistically, biologically, or phenotypically analogous or homologous in both animal models and humans. Any non-mammalian or mammalian animal model may be used, as long as it contributes to the common overall theme or objective of the program project.

4. **Adverse Outcomes of Assisted Reproductive Technologies (R01)**

   **Sponsor:** NIH

   **Deadline:** recurring through June 6, 2011 - Feb. 5, Jun. 5

   **Eligibility:** Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the PD/PI is invited to work with his/her organization to develop an application for support

   **Amount:** Amount requested should be fitting of project

   **Program Announcement #:** PA-08-104

   **Web link:** [http://grants.nih.gov/grants/guide/pa-files/PA-08-104.html](http://grants.nih.gov/grants/guide/pa-files/PA-08-104.html)

   **Abstract:** The propose of this program is to study the ways in which Assisted Reproductive Technologies (ART) may affect eggs, sperm and preimplantation embryos that could, in turn, lead to adverse outcomes during fetal development, the perinatal period, childhood, adulthood or even subsequent generations. While most ART offspring appear to be healthy and developing normally, there are some reports of adverse outcomes and some concerns owing to the variety and type of ART protocols in use.
5. Exploratory Studies in Cancer Detection, Diagnosis, and Prognosis (R21)

Sponsor: NIH

Deadline: recurring through Sept. 2012 – Feb 16, Jun 16

Eligibility: Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the PD/PI is invited to work with his/her organization to develop an application for support.

Amount: up to $275,000 in direct costs over a two year period

Program Announcement #: PA-08-267


Abstract: This program encourages studies of developing and testing innovative methods in cancer detection, diagnosis, and prognosis. The NCI is especially interested in research studies that focus on the development and testing of improved methods for detecting specific characteristics of cancer, which can be subsequently used for the clinical management of cancer patients or individuals who are at risk for (developing) cancer. It is important that research studies focus on the search for molecular and cellular differences between tumors, pre-malignant, or normal tissues. The studies should determine the clinical translational significance of these differences by correlation with clinical parameters, in order to answer clinical problems related to detection, diagnosis, treatment, and prognosis.
Funding Opportunities for the College of Sciences and the Batten College of Engineering and Technology:

1. **Energy for Sustainability**

   **Sponsor:** NSF

   **Deadline:** February 1, 2010 - March 3, 2010

   **Amount:** $100,000

   **Web link:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501026&org=OISE

   **Abstract:** This program supports fundamental research and education in energy production, conversion, and storage and is focused on energy sources that are environmentally friendly and renewable. Most world energy needs are currently met through the combustion of fossil fuels. With projected increases in global energy needs, more sustainable methods for energy production will need to be developed, and production of greenhouse gases will need to be reduced. Sources of sustainable energy include sunlight, wind/wave, biomass, and geothermal.

   Hydrocarbons, alcohols, and hydrogen are potential energy carriers that can be derived from renewable sources. Research that generates enabling science and technologies for more efficient hydrogen generation and storage is supported by the program. Potential sources of hydrogen include conversion from biomass and from electrolysis, photolysis or thermolysis of water. Biomass is available from agricultural crop residues, forest products, aquatic plants, and municipal wastes. In addition to hydrogen, biomass can be a source of liquid and gaseous hydrocarbons and alcohols.

   In the long term, fuel cells have the potential to convert fuels such as hydrogen and alcohols to electricity at high efficiencies and should play an increasing role in energy conversion. Critical components of fuel cells requiring additional research include catalysts and electrolytes. Development of these components also requires fundamental research on the reaction and transport mechanisms at the catalyst and membrane electrolyte interface. Advances in these areas are needed to address key challenges in efficiency, durability, power density, and environmental impacts. The engineering aspects of fuel-cell design and operation also require further study in areas such as water and thermal management.

   Wind power is a growing source of electrical energy. Increased efficiency requires a fundamental knowledge of the interaction of wind with the blade structure. Understanding the fluid flow, and optimizing blade design are important aspects in developing more efficient wind generators. Photovoltaic devices have the potential to supply a significant fraction of electrical energy to the power grid. Although silicon-based materials have been most widely used, other semiconducting, quantum and organic materials also have potential. New materials and novel fabrication techniques for solar energy conversion are supported by the program.
2. Multidisciplinary University Research Initiative (MURI)

Sponsor: Office of Naval Research

Deadline: White Papers: Friday 11 December 2009
         Full Proposals: Tuesday 02 March 2010

Amount: awards are $1.5M per year, with the actual amount contingent on availability of funds, the specific topic, and the scope of the proposed work.

Web link: http://www.onr.navy.mil/02/baa/

Abstract: The MURI program supports basic science and/or engineering research at U.S. institutions of higher education (hereafter referred to as "universities") that is of potential interest to DoD. The program is focused on multidisciplinary research efforts that intersect more than one traditional science and engineering discipline to address issues of critical concern to the DoD. As defined by the DoD, “basic research is systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress.” (www.defenselink.mil/comptroller/fmr/02b/02b_05.pdf). The DoD’s basic research program invests broadly in many specific fields to ensure that it has early cognizance of new scientific knowledge. The FY 2010 MURI competition is for the 30 topics listed below. Detailed descriptions of the topics can be found in Section VIII entitled, “Specific MURI Topics”, of this BAA. The detailed descriptions are intended to provide the proposer a frame of reference and are not meant to be restrictive to the possible approaches to achieving the goals of the topic and the program. Innovative ideas addressing these research topics are highly encouraged. White papers and full proposals addressing the following topics (1) through (10) should be submitted to The Office of Naval Research: (1) Optical Metamaterials (2) Adaptive Cognitive Maps for Autonomous Systems (3) Non-linear Mediums Converting Frequencies of Propagating E/M and Pressure Waves (4) Biofuels: Microbial Communities, Biogeochemistry and Surface Interactions (5) Design, Synthesis, and Characterization of Electro-Active Polymers for Dielectric Energy Storage (6) Reasoning for Image Understanding in Uncertain Environments (7) Fundamental Study of High- and Low-K Dielectrics for III-V Electronic Devices (8) Provably-Safe Perception-Based Control for Autonomous UAS Operations around Complex, Unstructured Terrain (9) Dynamical Systems Theory in 4D Geophysical Fluid Dynamics (10) Hyperspectral, Radar and EO/IR Signatures in the Littorals White papers and Full proposals addressing the following topics (11) through (20) should be submitted to the Air Force Office of Scientific Research (AFOSR): (11) Novel Catalytic Mechanisms for the Chemical Reduction of Carbon Dioxide to Energy-Dense Liquids (12) Third Order Nonlinear Optical Organics (13) Fundamental Processes in High-Temperature Gas-Surface Interactions (14) Propagation of Ultrashort Laser Pulses through Transparent Media (15) Superconducting Semiconductors (16) Human-Machine Adversarial Networks (17) Biologically-Engineering of Adherent / Spectroscopically Interrogated Microstructures (18) Control of Information Collection and Fusion (19) Stable Metrics for Global Inference in Social Networks to Predict Collective Behavior (20) Solid State Cooling White papers and full proposals addressing the following topics (21) through (30) should be submitted to the Army Research Office (ARO): (21) Neuronal Behavior in Primary Blast (22) Identifying and Extracting the Mathematical Signatures of Prokaryotic Activity in DNA; Developing a Theoretical Foundation for Predicting DNA Stability (23) Tomography of Social Networks of Asymmetric Adversaries (24) Adaptive Perception and Agile Autonomy in Severe Environments (25) Structured Modeling for Low-Density Languages (26) Directed Self-Assembly of Reconfigurable Materials
(27) "Atomtronics": A generalized electronics (28) Bio-Electronic Templates for Interfacing to the Nanoscale (29) Ion Transport In Complex Heterogeneous Organic Materials (30) Defect Reduction in Superlattice Materials Proposals from a team of university investigators may be warranted because the necessary expertise in addressing the multiple facets of the topics may reside in different universities, or in different departments in the same university. By supporting multidisciplinary teams, the program is complementary to other DoD basic research programs that support university research through single-investigator awards. Proposals must name one Principal Investigator (PI) as the responsible technical point of contact. Similarly, one institution will be the primary awardee for the purpose of award execution. The PI must come from the primary institution. The relationship among participating institutions and their respective roles, as well as the apportionment of funds including sub-awards, if any, must be described in both the proposal text and the budget.

3. Biosensing

**Sponsor:** National Science Foundation (NSF)

**Deadline:** February 1, 2010 - March 3, 2010

**Amount:** Amount requested should be fitting of project


**Abstract:** The Biosensing program primarily supports innovative fundamental and applied research with applications to the biomedical, food safety, energy, environmental, and security needs:

- New paradigms in the identification and detection of existing or emerging pathogenic micro-organisms, unknown toxins, and viral threat agents
- Highly sensitive and discriminative biosensing
- New approaches in integrated sensor systems, probe development, and actuators
- Novel robust and easy to operate sensor systems with a highly selective response to multiple analytes under variable conditions, with significantly reduced false positives and false negative responses and increased sensitivity
- Original ideas in the development of novel target recognition strategies, including but not limited to: nanoscale structures with variable selectivity, engineered proteins, signaling aptamers, ionophores, natural and artificial ion-channels, bio-designed and molecular-imprinted polymers
- Smart field deployable molecular sentinels for the monitoring of food, water and air quality, environment, community, industrial, and commercial structures
- Cell and tissue-based sensors to monitor environmental, physiological, and genetic responses
- Development of fundamental knowledge for better understanding and processing of multifunctional materials for biosensing applications, with predefined physical, chemical or biological characteristics
- Bio-compatible and Stimuli-responsive materials demonstrating biosensing capabilities
- Novel bio-based cyber approaches
4. **Geotechnical Engineering (GTE)**

**Sponsor:** National Science Foundation (NSF)

**Deadline:** Feb 15, 2010

**Amount:** Amount requested should be fitting of project


**Abstract:** The GTE program supports fundamental research on geotechnical aspects of civil infrastructure, such as foundation engineering, site characterization, underground construction, tunneling, drilling, and mining engineering. Also included is research on geoenvironmental engineering, geotechnical earthquake engineering that does not involve the use of George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) facilities, and geohazards such as tsunamis, landslides, mudslides and debris flows, scour, and erosion. Emphasis is on issues of sustainability and resilience.

5. **Nano and Bio Mechanics (NBM)**

**Sponsor:** National Science Foundation (NSF)

**Deadline:** Annual full proposal windows are January 15 to February 15, and September 1 to October 1.


**Abstract:** This program focuses on the mechanical properties and behavior of biological materials and structures, including cells, tissue, muscles, bones, and prosthetic implants. Research on nanomechanics focuses on the unique properties of nano-scale particles and microstructural features and their effects on the macroscopic mechanics and properties of materials, surfaces, and structures that contain them.

6. **Environmental Engineering**

**Sponsor:** National Science Foundation (NSF)

**Deadline:** February 1, 2010 - March 3, 2010

**Amount:** $100,000


**Abstract:** The goal of this program is to encourage transformative research which applies scientific principles to minimize solid, liquid, and gaseous discharges into land, inland and coastal waters, and air that result from human activity, and to evaluate adverse impacts of these discharges on human health and environmental quality. The program fosters cutting-edge scientific research based on fundamental science for identifying, evaluating, and developing new methods and technologies for assessing the waste assimilative capacity of the natural environment and for removing or reducing conventional and emerging contaminants from polluted air, water and soils. The program is based on four types of engineering tools - - measurement, analysis, synthesis, and design.
7. Fluid Dynamics

**Sponsor:** National Science Foundation (NSF)

**Deadline:** Mar 03, 2010

**Amount:** $90,000 - $100,000


**Abstract:** This program supports experimental as well as combined experiment and theory projects investigating the fundamental physics behind phenomena exhibited by condensed matter systems. Representative research areas in such systems include (1) phenomena at the nano- to macro-scale including transport, magnetic, and optical phenomena; classical and quantum phase transitions; localization; electronic, magnetic, and lattice structure or excitations; superconductivity; and nonlinear dynamics; (2) low-temperature physics: quantum fluids and solids; 1D and 2D electron systems; (3) soft condensed matter: partially ordered fluids, granular and colloid physics; and (4) understanding the fundamental physics of new states of matter as well as the physical behavior of condensed matter under extreme conditions e.g., low temperatures, high pressures, and high magnetic fields. Questions of current interest that span these research areas are as following:

1. How and why do complex macroscopic phenomena emerge from simple interacting microscopic constituents?
2. What new physics occurs far from equilibrium and why?
3. What is the physics behind the behavior of matter confined to the nanoscale in one or more dimensions?
4. What is the physics of spin systems and quantum states of matter that could lead to their coherent manipulation and control?

8. Informal Science Education (ISE)

**Sponsor:** National Science Foundation

Directorate for Education & Human Resources

Research on Learning in Formal and Informal Settings

**Deadline:** Preliminary Proposal Due Date(s) *(required)*: June 24, 2010 except CRPA proposals

Full Proposal Deadline(s): November 18, 2010

**Eligibility:** For Communicating Research to Public Audiences projects ONLY: PI must hold an active NSF-funded research award in any NSF directorate or program.

**Amount:** Anticipated Funding Amount: $25,000,000 in FY 2010; 40 Approximately 6 Research, 6 Pathways, 20 Full-Scale Development, 3 Broad Implementation, and 5 Communicating Research to Public Audiences awards will be made per year.


**Abstract:** Funding is provided for projects that advance understanding of informal STEM learning, that develop and implement innovative strategies and resources for informal STEM education, and that build the national professional capacity for research, development, and practice in the field with five categories of ISE program grants: Research; Pathways; Full-Scale Development; Broad Implementation; and Communicating Research to Public Audiences.
Measurement Science and Engineering (MSE) Research Grants Programs

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

**Deadline:** Rolling. Applications received after June 1, 2009 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds.

**Amount:** $5,000 - $500,000

**Web link:**
http://www.grants.gov/search/search.do;jsessionid=MxrfJvvdCHbnS11LmyvCQGyjkhF6qkTlgsh3kMz4PN4QYPThwP21!448014197?oppId=45413&flag2006=false&mode=VIEW

**Abstract:** The following programs are soliciting applications for financial assistance for FY 2009: (1) the Electronics and Electrical Engineering Laboratory Grants Program; (2) the Manufacturing Engineering Laboratory Grants Program; (3) the Chemical Science and Technology Laboratory Grants Program; (4) the Physics Laboratory Grants Program; (5) the Materials Science and Engineering Laboratory Grants Program; (6) the Building Research Grants and Cooperative Agreements Program; (7) the Fire Research Grants Program; (8) the Information Technology Laboratory Grants Program; (9) the NIST Center for Neutron Research Grants Program; and (10) Center for Nanoscale Science and Technology Grants Program. The funding instruments used in these programs will be grants and cooperative agreements, as appropriate. Where cooperative agreements are used, the nature of NIST’s “substantial involvement” will generally be collaboration with the recipient by working jointly with a recipient scientist in carrying out the scope of work, or specifying direction or redirection of the scope of work due to inter-relationships with other projects requiring such cooperation. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves.) It is strongly suggested to first confirm the program objectives with the Program Manager prior to preparing a detailed proposal.

Instrumentation for Materials Research (IMR) - NSF 07-600

**Sponsor:** National Science Foundation (NSF); Directorate for Mathematical and Physical Sciences (MPS); Division of Materials Research (DMR)

**Deadline:** January 14, 2010

**Amount:** $100,000


**Contact Name:** Charles Bouldin, Program Director; (703) 292-4920; cbouldin@nsf.gov

**Abstract:** The IMR Program supports the acquisition or development of research instruments that will provide new capability or advance current capability to discover fundamental phenomena in materials; synthesize, process, or characterize the composition, structure, properties, and performance of materials; and improve the quality, expand the scope, and foster and enable the integration of research and education in research-intensive environments.
11. Shared Instrumentation Grant Program (S10)

**Sponsor:** Department of Health and Human Services (HHS); National Institutes of Health (NIH); National Center for Research Resources (NCRR)

**Deadline:** March 23, 2010 (Anticipated)

**Amount:** $100,000-$500,000


**Contact Name:** Ms. Jenelle D. Wiggins; (301) 435-0843; JWiggins@mail.nih.gov

**Abstract:** The NCRR Shared Instrumentation Grant (SIG) Program solicits applications from groups of NIH-supported investigators to purchase or upgrade commercially available instruments that cost at least $100,000. Types of instruments supported include confocal and electron microscopes, biomedical imagers, mass spectrometers, DNA sequencers, biosensors, cell sorters, X-ray diffraction systems, and NMR spectrometers among others.


**Sponsor:** National Science Foundation (NSF); Directorate for Mathematical and Physical Sciences (MPS); Division of Chemistry (CHE); Chemistry Research Instrumentation and Facilities (CRIF)

**Deadline:** January 26, 2010 (Anticipated deadline)


**Contact Name:** Carlos A. Murillo, Program Officer; (703) 292-4970; cmurillo@nsf.gov

**Abstract:** The CRIF Program is structured to enable the NSF's Division of Chemistry to respond to a variety of needs for infrastructure - instrumentation and facilities - that promotes basic research and education in areas traditionally supported by the division. The Instrument Development component of CRIF (CRIF: ID) provides funds for the design and construction of instruments that will enable new chemical measurements or will significantly broaden the use of chemical instrumentation.
13. **Centers in Integrated Photonics Engineering Research (CIPhER) — DARPA Microsystems Technology Office**

**Sponsor:** United State Department of Defense

**Deadline:** First Round proposals due December 9, 2009

**Amount:** No fixed limit. *A significant level of cost-sharing by industry and university partners will be required.* Years 1-2 will be funded with the following share requirements: DARPA 75% and Center partners 25%. Years 3-4 will be funded with the following share requirements: DARPA 50% and Center partners 50%. In-kind cost sharing may be included in the proposed efforts, but will be counted toward the cost share only to the extent that there is an explicit and accountable monetary value to the proposed university/industrial collaborative effort.

**Web link:** [http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&oppId=47041](http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&oppId=47041)

**Abstract:** DARPA seeks innovative proposals for focus centers in the following broad integrated photonics fundamental technology application areas:

- Imaging Science and Technology: Novel remote sensing technologies and architectures; chip-scale microscopy; nano-technology for focal plane arrays.
- Energy Conversion and Manipulation: Microsystems that exploit of solar, environmental, and biological energy sources; Technologies for capture, storage, and transport of energy in small platforms.
- Chip-scale Photonic Computing: Novel integrated computing devices and technology; Analog processing and computing architectures that exploit nano/quantum effects; Ultra-high-speed photonic logic and processing circuits.
- Chemical and Biological Sensing and Processing: Sensing at the molecular and cellular level with high parallelism and specificity; Exploiting chip-scale photonic resonance phenomena to detect/classify threats; Photonic/biological interfacing.
- Other Areas: Any fundamental technical issues critical to continuing development of integrated photonics engineering technology that is also strongly mapped to the DARPA mission.