This select compilation of funding opportunities is provided by KUCR Proposal Services as a resource for Kansas University Researchers. We encourage you to utilize the campus subscription to PIVOT to find funding opportunities specifically tailored to your research area based on keywords you provide. PIVOT is easy to use and offers other valuable services that are helpful to researchers. Access is available at this site: [http://www.pivot.cos.com](http://www.pivot.cos.com)
If questions regarding PIVOT, please contact Dan Coonfield at dcoonfie@ku.edu or 864-7404.

**ANNOUNCEMENT:** Based on a recent survey of campus faculty and staff, there will be changes coming soon to the Funding Bulletin. These changes will be geared to make the bulleting more user friendly to our research community.

Click on the links below to go directly to the named section

- [BUSINESS](#)
- [EDUCATION](#)
- [ENGINEERING & COMPUTER SCIENCE](#)
- [FINE ARTS](#)
- [HUMANITIES](#)
- [INTERNATIONAL AREA STUDIES](#)
- [MEDICINE & LIFE SCIENCES](#)
- [PHYSICAL SCIENCES & MATHEMATICS](#)
- [SOCIAL SCIENCES](#)
- [MULTIPLE DISCIPLINES](#)

Please note that many of the opportunities listed are ANTICIPATED to be funded in FY13.

**BUSINESS**

See also opportunities listed under MULTIPLE DISCIPLINES

**Research Stipends**

Center for the Business of Government

**Due date: 01 Oct 2013**

The IBM Center for the Business of Government is solicit proposals to prepare reports with insightful findings and actionable recommendations for government executives and managers. It has chosen to focus on the following six topics that align with the administration's strategies to boost government performance: 1. Performance improvement and analysis 2. Workforce transformation 3. Collaboration and management across boundaries 4. Reforming federal contracting and acquisition 5. Transparency and participatory democracy, using Web 2.0 technology The aim of the IBM Center for The Business of Government is to tap into the best minds in academe and the nonprofit sector who can use rigorous public management research and analytic techniques to help public sector executives and managers improve the effectiveness of government. The center is looking for very practical findings and actionable recommendations - not just theory or concepts - in order to assist executives and managers to more effectively respond to mission and management challenges.

Grants
Nasdaq Educational Foundation
Due date: 02 Aug 2013 (LOI); 14 Oct 2013 (full application)

The mission of The NASDAQ OMX Group Educational Foundation, Inc. is to promote learning about capital formation, financial markets and entrepreneurship through innovative educational programs. Types of grants include the following: 1. Academic study or research, generally awarded to college or university professors 2. Ph.D. dissertation fellowships, awarded to colleges or universities on behalf of the candidate 3. Curriculum development, generally awarded at the university level to develop financial markets curricula 4. Educational projects or programs, including classroom and extracurricular programs at the high school, college and university level; teacher training; and professional development for adults. May also include the creation of new educational materials. All proposals must further financial markets literacy and entrepreneurship in addition to meeting other criteria. The categories above are for guidance only. All proposals compete for a single pool of funds and are subject to selection by the foundation board of directors.

http://www.nasdaqomx.com/services/initiatives/educationalfoundation/

State Fiscal Project Internships
Center on Budget and Policy Priorities
Due date: 15 Oct 2013

The State Fiscal Policy division conducts research and analysis of tax and budget developments at the state and local levels, with a particular focus on how they affect low-income families and individuals. In addition, they work with the Center's network of state-level fiscal policy groups and assess the impact of federal tax and budget policies on state finances. The state fiscal policy intern will research specific subjects in these policy areas, assist the director and staff in preparation of materials for presentations, gather information from state groups in the Center's network, and collect and analyze data from a range of sources to track state economies and finances.

http://www.cbpp.org/jobs/index.cfm?fa=internships

Economics of Retirement (R03)
United States Department of Health and Human Services (HHS)
Due date: 16 Oct 2013

This FOA encourages research on the economic and health-related factors that influence older persons’ choices on labor force participation as they near typical retirement age and throughout the later stages of life. CFDA 93.866

**Binational Business Grants**  
Institute of International Education (IIE)  
**Due date: 17 Oct 2013**

Binational Business Grants to enhance knowledge, expertise, and understanding of post-NAFTA Mexico are available for students interested in combining coursework in international business or law with an internship at a Mexico-based company conducting international or legal business. Grantees will enroll in courses at either the Instituto Tecnologico Autonomo de Mexico (ITAM) or the Instituto Tecnologico de Estudios Superiores de Monterrey (ITESM) at the Santa Fe campus location. While the majority of placements are with for-profit companies, each year there are usually opportunities to work in the non-profit sector, as well. The program starts with an orientation in Mexico City at the end of August 2013 organized by the Fulbright Commission. Attendance at the orientation is mandatory for all grantees.

[http://us.fulbrightonline.org/program_country.html?id=70#binational](http://us.fulbrightonline.org/program_country.html?id=70#binational)

---

**Individual Grants Competition**  
Society of Actuaries (SOA)  
**Due date:19 Oct 2013 (LOI); 04 Jan 2014 (full application)**

The Actuarial Foundation's (TAF) Research Committee, the Actuarial Foundation of Canada (AFC), the Casualty Actuarial Society (CAS) and the Society of Actuaries' (SOA) Committee on Knowledge Extension Research (CKER) announce the 2013 Individual Grants Competition to support the advancement of knowledge in actuarial science. Grants will be funded through TAF, the AFC, the CAS and the SOA. The project may be either theoretical or empirical in nature. A key criterion for each funding organization is that the project should have the potential to contribute significantly to the advancement of knowledge in actuarial science. TAF's AERF Committee gives preference to projects relating to current policy issues or having direct applications, and those that further the basic or continuing education of actuaries. Proposals for innovative developments in actuarial education also are invited for consideration. The end-product of the research is expected to be submitted to the *North American Actuarial Journal* or *Variance* unless another journal has been pre-approved, or in the form of software, monograph, etc.


---

**Bank Internship Program**  
World Bank (WB)  
**Due date: 31 Oct 2013**

The Bank Internship offers highly motivated and successful individuals an opportunity to improve their skills while working in a diverse environment. Interns generally find the experience to be rewarding and interesting. Most positions are located in Washington, DC (some
positions are offered in country offices).

To be eligible for the Internship, candidates must possess an undergraduate degree and already be enrolled in a full-time graduate study program (pursuing a Master's degree or PhD with plans to return to school in a full-time capacity.


EDUCATION

See also opportunities listed under MULTIPLE DISCIPLINES

Teacher Incentive Grants Program
National Art Education Association (NAEA)
Due date: 01 Oct 2013

The National Art Education Foundation (NAEF) invites proposals for scholarship support of projects that promote the improvement of the teaching of art. Funds are awarded to classroom-based action research* projects that facilitate development of teachers' capacities to provide visual art instruction that reflects the vision promulgated by the NAEA in areas such as curriculum; student learning; student assessment; classroom behavior, management, or discipline; or other practices relating to instructional interaction and the achievement of student learning. *Action research is systematic reflective inquiry that is done by art educators working individually, or in collaboration with others, in schools, museums, community arts centers and those other locations in which art education occurs. Action research emphasizes discovering possible responses to problems and questions emerging within the setting in which the researcher is working.

http://www.arteducators.org/grants/national-art-education-foundation

Digital Media and Learning Competition – Research Competition: Student Prize
Gates Foundation, Bill and Melinda
Due date: 01 Oct 2013 (LOI due 27 Aug 2013)

This prize is for the best dissertation or publishable paper for innovative and groundbreaking work on the theme for the competition, "Recognition and Accreditation for Informal and Interest-Driven Learning". The theme for the Fourth Digital Media and Learning Competition focuses on building digital badges for lifelong learning. The Competition is designed to encourage individuals and organizations to create badges - digital tools that support, identify, recognize, measure, and account for new skills, competencies, knowledge, and achievements for 21st century learners regardless of where and when learning takes place. The winner will be expected to attend the Digital Media and Learning Conference and Research Symposium in San Francisco, March 1-3, 2012, where the award will be publicly presented. Awardees are also
required to set aside funds for the winners' event to be held in conjunction with the 2013 Digital Media and Learning Conference. Participation at the event is a requirement of the award.

http://dmlcompetition.net/Competition/4/research-competition-announcement.php

**National Academy of Education/Spencer Dissertation Fellowship Program**  
National Academy of Education  
**Due date: 04 Oct 2013**

The dissertation fellowship aims to strengthen research on education and learning by supporting early career scholars from a wide range of fields. Each year, the program funds a small group of outstanding advanced doctoral candidates so that they can devote themselves full-time to the completion of their dissertation. In addition to the $25,000 stipend, fellows participate in two professional development retreats. While these meetings offer dissertation writing support, they also provide opportunities designed to expand fellows' networks, build research and career skills, and support their transition into professional roles. Through this program, NAEd and Spencer seek to encourage a new generation of outstanding scholars committed to the improvement of education, and productive engagement within the education research community

http://www.naeducation.org/NAED_080200.html

**Geoscience Education (GeoEd)**  
National Science Foundation (NSF)  
**Due date: 12 Oct 2013**

The Geoscience Education (GeoEd) Program is part of a portfolio of programs within the Directorate for Geosciences (GEO) that seeks to increase public understanding of Earth system science and foster recruitment, training and retention of a diverse and skilled geoscience workforce for the future. The program achieves these goals by supporting innovative or transformative projects that improve the quality and effectiveness of formal and informal geoscience education at all educational levels, increase the number of students pursuing geoscience education and career paths, broaden participation of traditionally underrepresented groups in the geosciences, and promote public engagement in Earth system science. In FY 2010 and FY 2012, the GeoEd program invites proposals in four main areas: - advancing public Earth system science literacy, particularly through strengthening geoscience education in grades K-14 and informal education settings; - fostering development and training of the diverse scientific and technical workforce required for 21st century geoscience careers; - utilizing modern technologies to facilitate and increase access to geoscience education and/or develop innovative approaches for using geoscience research activities and data for educational purposes; and - establishing regional networks and alliances that bring together scientists, formal and informal science educators, as well as other stakeholders, in support of improving Earth system science education and broadening participation in the geosciences. Proposals focused on basic research that might catalyze discovery and innovation at the frontiers of geoscience learning, education, and evaluation will be considered by the GeoEd Program, but are not viewed as a priority in this
solicitation. However, the GeoEd Program expects all proposed project activities to be grounded in current understanding of how students learn and effective STEM education practices. Proposals must include an appropriate evaluation or assessment plan that will help to document project effectiveness and/or impact. The GeoEd Program accepts proposals for pilot or proof-of-concept projects (Track 1) and integrative collaborations (Track 2), as well as for conferences or workshops related to the mission of the program. CFDA 47.050

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5505

ENGINEERING & COMPUTER SCIENCE
See also opportunities listed under MULTIPLE DISCIPLINES

Materials Processing and Manufacturing (MPM)
National Science Foundation (NSF)
Due date: 01 Oct 2013

The MPM program supports fundamental, hypothesis-driven research on the interrelationship of materials processing, structure, properties, performance and process control. Analytical, experimental, and numerical studies are supported covering novel processing methods for any materials system (metals, polymers, ceramics, hybrids, composites, etc.). Studies should include the consideration of cost, performance and feasibility of scale-up, as appropriate. Studies that address multi-scale and/or multi-functional materials systems are encouraged as are studies that support environmentally-benign manufacturing. Collaborative proposals with industry (the GOALI program) are encouraged. Micro-scale (and larger) processes are covered by the MPM program; processing at the submicron or nano scale is likely covered by the Nanomanufacturing (NM) program. Solid freeform fabrication process proposals are considered in the Manufacturing Machines and Equipment (MME) program, as are material removal process proposals such as cutting or grinding. Proposals that primarily focus on fundamental material composition-structure-property studies (i.e., neither processing nor manufacturing plays a significant role in the proposed work) should be submitted to the Materials and Surface Engineering (MSE) program or to the appropriate program in the DMR division. CFDA 47.041

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13344

Operations Research (OR)
National Science Foundation (NSF)
Due date: 01 Oct 2013

The OR program supports fundamental research leading to the creation of innovative mathematical models, analysis, and algorithms for optimal or near optimal decision-making, applicable to the design and operation of manufacturing, service and other complex systems. In addition to the traditional areas of Operations Research which includes discrete and continuous optimization as well as stochastic modeling and analysis, new research thrusts include simulation
optimization and self-optimizing systems that can observe, learn, and adapt to changing environments. CFDA 47.041

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13341

**Geotechnical Engineering (GTE)**  
National Science Foundation (NSF)  
Due date: 01 Oct 2013

The GTE program supports fundamental research on geotechnical engineering aspects of civil infrastructure, such as site characterization, foundations, earth retaining systems, underground construction, excavations, tunneling, and drilling. Also included in the program scope is research on geoenvironmental engineering; geotechnical engineering aspects of geothermal energy; life-cycle analysis of geosystems; geotechnical earthquake engineering that does not involve the use of George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) facilities; scour and erosion; and geohazards such as tsunamis, landslides, mudslides and debris flows. The program does not support research related to natural resource exploration or recovery. Emphasis is on issues of sustainability and resilience of civil infrastructure. Cross-disciplinary and international collaborations are encouraged. CFDA 47.041

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13351

**Hazard Mitigation and Structural Engineering (HMSE)**  
National Science Foundation (NSF)  
Due date: 01 Oct 2013

The HMSE program supports fundamental research to mitigate impacts of natural and anthropogenic hazards on civil infrastructure and to advance the reliability, resiliency, and sustainability of buildings and other structures. Hazards considered within the program include earthquake, tsunami, hurricane, tornado and other loads, as well as explosive and impact loading. Resiliency of buildings and other structures include structural and non-structural systems that, in totality, permit continued occupation or operation in case of an impact by a hazard. Research is encouraged that integrates structural and architectural engineering advances with discoveries in other science and engineering fields, such as earth and atmospheric sciences, material science, mechanics of materials, sensor technology, high performance computational modeling and simulation, dynamic system and control, and economics. The program seeks to fund transformative and cost-effective innovations for hazard mitigation of both new and rehabilitated buildings and other structures. Research in structural and architectural engineering is encouraged that extends beyond mature or current construction materials into investigations of smart and sustainable materials and technologies, and considers the structures in their entirety. In addition, the program funds research on structural health monitoring that goes beyond data acquisition to include the holistic system, integrating condition assessment and decision making tools to improve structural performance. CFDA 47.041
**Systems Science (SYS)**  
National Science Foundation (NSF)  
**Due date: 01 Oct 2013**

The SYS program funds fundamental research on engineered systems that will support the creation of a mathematically sound framework for systems engineering. The SYS program invites proposals that address fundamental systems issues including system performance prediction, uncertainty quantification in the systems context, theoretical foundations for aggregation in systems, decision-making in the systems context, and operation and maintenance in the systems context. The SYS program does not fund development projects. Proposals that have system science or system engineering relevance, but for which the predominant research contribution is within an existing program in CMMI, should be submitted to the appropriate disciplinary program, with the SYS program identified as a secondary program.

**Biomechanics and Mechanobiology (BMMB)**  
National Science Foundation (NSF)  
**Due date: 01 Oct 2013**

The BMMB Program supports fundamental research in biomechanics and mechanobiology. An emphasis is placed on multiscale solid and fluid mechanics approaches in the study of organisms that integrate across molecular, cell, tissue, and organ domains. The relationships between mechanical behavior and extracellular matrix composition and organization are of interest. In addition, the influence of *in vivo* mechanical forces on cell and matrix biology in the histomorphogenesis, maintenance, regeneration, and aging of tissues is a primary concern. Funded projects may include theoretical, computational, and experimental approaches. The program encourages the consideration of diverse living tissues as smart materials that are self-designing. CFDA 47.041

**Exploratory Advanced Research (EAR) Program BAA**  
United States Department of Transportation (DOT)  
**Due date: 04 Oct 2013**

This program is intended to spur innovation and focus on high risk and high pay-off research and development projects. Exploratory Advanced Research falls between basic and applied research. In contrast to applied research, a specific application or product is not the goal of the work. Incremental advances and demonstrations or evaluations of existing technologies are not within the scope of this program. Though the overall program scope is intentionally ambitious and
broad to address the wide spectrum of topics and objectives that funded investigations will strategically support, this solicitation is intended to address specific technology and knowledge gaps, identified through scanning and convening activities, that will help the FHWA improve highway safety, reduce congestion on the nation's highways, reduce environmental and health impacts of the nation's highways, and reduce the long term costs and improve the efficiency of the nation's highways. The Federal Highway Administration (FHWA) is soliciting for proposals under its Exploratory Advanced Research (EAR) Program for research and development projects that could lead to transformational changes and truly revolutionary advances in highway engineering and intermodal surface transportation in the United States. This program shall support scientific investigations and studies to advance the current knowledge and state-of-the-art in the sciences and technologies employed in the planning, design, construction, operation, maintenance and management of the nation's highways. Strategically, this research will enable and expedite the development of revolutionary approaches, methodologies, and breakthroughs required to drive innovation and greatly improve the efficiency of highway transportation. The research topics described below are intended to guide potential offerors and are based upon the authorizing legislation, stakeholder input, initial stage research and the strategic needs of the FHWA. Through scanning and convening activities over the past year, FHWA engaged a large number of stakeholders from within and outside the traditional highway research community to identify topics of research that promise transformation and possible breakthroughs in highway technology, processes and policies. Topics found to have strong merit in advancing different fields including engineering, hard sciences, as well as social sciences to support national strategic objectives are included in this solicitation. Given the exploratory and high risk focus of this program, it is anticipated that the results of these investigations will not be methods or technologies that will be immediately implementable and will most likely result in new knowledge and concepts that while proven, will require further development before they would be ready for full implementation. It is envisioned that these results will undergo further development via the other applied research and development programs of the FHWA and others. In submitting proposals, offerors are reminded that the intent of this program is to fund applied research that, while high risk and perhaps longer term, is undertaken with a specific problem or need in mind. Basic research is not within the scope of this program. FHWA may make multiple awards for each of the following topics.

https://www.fbo.gov/?s=opportunity&mode=form&id=b3d82f2321b7dae0ba14150b7d76b8d6&tab=core&cview=0

Computing and Communication Foundations (CCF): Core Programs
National Science Foundation (NSF)
Due date: 09 Oct 2013 (medium projects)

The Division of Computing and Communication Foundations (CCF) supports transformative research and education projects that explore the foundations of computing and communication. The Division seeks advances in computing and communication theory, algorithm design and analysis, and the architecture and design of computers and software. CCF-supported projects also investigate revolutionary computing models and technologies based on emerging scientific ideas and integrate research and education activities to prepare future generations of computer science
and engineering workers. CCF supports three core programs as described below - Algorithmic Foundations (AF), Communications and Information Foundations (CIF), and Software and Hardware Foundations (SHF).


**GeoEye Foundation Award for the Application of High-Resolution Digital Satellite Imagery**  
American Society for Photogrammetry and Remote Sensing (ASPRS)  
**Due date: 17 Oct 2013**

The purpose of the award is to support remote sensing education and stimulate the development of applications of high-resolution digital satellite imagery for applied research by undergraduate or graduate students. The award consists of an area of interest (AOI) of up to 500 square kilometers or separate smaller AOIs consisting of a total area less than or equal to 500 square kilometers. The 500 square kilometers will be limited IKONOS and GeoEye-1 imagery from the GeoEye archive and can be the following product types: - IKONOS (1M Panchromatic, 4M Multispectral, or 1M Pansharpenend Multispectral): Geo; Geo Stereo (U.S. only); and GeoProfessional (Ortho, U.S. only). - GeoEye-1 (0.50-meter Panchromatic, 2-meter Multispectral, or 0.50-meter Pansharpenend Multispectral): Geo; Geo Stereo (U.S. only); and GeoProfessional (Ortho, U.S. only). The area of interest chosen must be imagery that resides outside of GeoEye's Regional Affiliate Communication Cones. A GeoEye Foundation representative can explain these areas.


**FINE ARTS**  
See also opportunities listed under HUMANITES and MULTIPLE DISCIPLINES

**ALISE Research Grant Competition**  
Association for Library and Information Science Education (ALISE)  
**Due date: 01 Oct 2013**

This research grant competition awards grants to support research broadly related to education for library and information science. The award cannot be used to support a doctoral dissertation.

http://www.alise.org/mc/page.do?sitePageId=55548
**Teacher Incentive Grants Program**  
National Art Education Association (NAEA)  
**Due date: 01 Oct 2013**

The National Art Education Foundation (NAEF) invites proposals for scholarship support of projects that promote the improvement of the teaching of art. Funds are awarded to classroom-based action research* projects that facilitate development of teachers' capacities to provide visual art instruction that reflects the vision promulgated by the NAEA in areas such as curriculum; student learning; student assessment; classroom behavior, management, or discipline; or other practices relating to instructional interaction and the achievement of student learning. *Action research is systematic reflective inquiry that is done by art educators working individually, or in collaboration with others, in schools, museums, community arts centers and those other locations in which art education occurs. Action research emphasizes discovering possible responses to problems and questions emerging within the setting in which the researcher is working.


**Spring Internships**  
Museum of Modern Art (MoMA)  
**Due date: 12 Oct 2013**

Internships are offered during the school year, coinciding with the spring semester, as well as during the summer. Internship projects are based on MoMA’s needs and requirements, and are assigned to interns with the appropriate skills and interests. The museum's internships are ideal for registered students who require internship or practicum credits.

[http://www.moma.org/learn/courses/internships](http://www.moma.org/learn/courses/internships)

**Education Grants**  
Shubert Foundation  
**Due date: 15 Oct 2013**

A limited number of grants are made to graduate drama departments of private universities. These departments are evaluated principally in terms of their ability to train and develop theatre artists.

[http://www.shubertfoundation.org/grantapps/default.asp](http://www.shubertfoundation.org/grantapps/default.asp)
HUMANITIES
See also opportunities listed under MULTIPLE DISCIPLINES

Franklin Research Grants
American Philosophical Society (APS)
Due date: 01 Oct 2013

Since 1933 the APS has awarded small grants to scholars in order to support the cost of research leading to publication in all areas of knowledge. The Franklin program is particularly designed to help meet the costs of travel to libraries and archives for research purposes; the purchase of microfilm, photocopies, or equivalent research materials; the costs associated with fieldwork; or laboratory research expenses.

http://www.amphilsoc.org/grants/franklin

Field Research Grants
Tinker Foundation, Inc.
Due date: 01 Oct 2013

The Foundation has a competition open to recognized centers or institutes of Latin American studies with graduate degree programs at U.S. universities. The grants provide graduate students with funds for travel to and within Latin America and to cover limited field research expenses. (A student may travel to Spain or Portugal if resources or scholars relevant to Latin American studies are found there.) These awards allow students to acquire a comprehensive knowledge of language and culture, to familiarize themselves with information sources relevant to their studies; to conduct pilot studies and preliminary investigations, and to develop contacts with scholars and institutions in their fields. They are awarded by the university institutes/centers for brief periods of research in Latin America and should reflect primarily the Foundation's broad areas of interest. The Foundation's selection criteria include the quality of the institute's/center's program in Latin American studies, with particular emphasis on its graduate component; the immediate benefits to the Latin American studies program that will result from the availability of these grants at the university; and the level of general university support for Latin American studies as demonstrated by past commitments and future projects.

http://www.tinker.org/content/field-research-grants-overview

External Faculty Fellowships
Stanford University
Due date: 01 Oct 2013

External fellowships are intended primarily for individuals currently teaching in or affiliated with an academic institution, but independent scholars may apply. Faculty fellowships are awarded across the spectrum of academic ranks (assistant, associate, and full professor) and a goal of the
The selection process is to create a diverse community of scholars. Research projects must be in the humanities. Creative arts projects are not eligible.

http://shc.stanford.edu/fellowships/non-stanford-faculty

**National Endowment for Humanities (NEH) Fellowships**  
American Schools of Oriental Research (ASOR)  
**Due date: 01 Oct 2013**

The AIAR, also known as the Albright, annually provides these research fellowships to post-doctoral scholars in Near Eastern studies from prehistory through the early Islamic period, including the fields of archaeology, anthropology, art history, Bible, epigraphy, historical geography, history, language, literature, philology and religion and related disciplines. The research period should be continuous, without frequent trips outside the country. Residence at the Albright, located in Jerusalem, Israel, is required.

http://www.aiar.org/fellowships.html

**American Research in the Humanities in China**  
American Council of Learned Societies (ACLS)  
**Due date: 02 Oct 2013**

This program is open to scholars in the humanities and related social sciences who have received a Ph.D. or its equivalent by the time of application. Applicants must submit a carefully formulated research proposal that reflects an understanding of the present Chinese academic and research environment. The proposal should include a persuasive statement of the need to conduct the research in China.


**Postdoctoral Fellowships in the Humanities and Arts, Sciences and Professions**  
University of Michigan  
**Due date: 02 Oct 2013**

The Mellon Foundation awarded a grant to add four Mellon Fellows annually in the humanities, expanding the number of fellowships awarded each year from four to eight. The newly appointed Postdoctoral Fellows join a unique interdisciplinary community composed of their peers as well as the Senior Fellows of the society, who include many of the university's leading scholars. Past Fellows of the Society have gone on to become distinguished scholars at institutions around the world. Each fellow will have a three-year appointment as Assistant Professor in an affiliated department of the university and a three-year appointment as a Postdoctoral Scholar in the Society of Fellows. Fellows are expected to be in residence in Ann Arbor during the academic years of appointment (September to May) and to participate in the activities of the Society of
Fellows. Off-campus research leave during academic terms will be permitted only in rare cases, only for brief periods of time, and only upon written approval of the Chair of the Society well in advance of the proposed leave. Any leave granted will count as part of the fellowship tenure. The Society of Fellows is an interdisciplinary intellectual community in which the postdoctoral fellows are joined by Senior Fellows to share their work in progress. Fellows are expected to participate in monthly colloquia, attend dinners of the society, and to engage in conversation with other members about their intellectual concerns. They participate in the annual evaluation of new applicants for the fellowship, serve as evaluators for the Distinguished Dissertations Awards sponsored by the Rackham Graduate School, and act as mentors for graduate students completing their dissertations.

http://www.rackham.umich.edu/faculty_staff/sof/

**CHS Fellowships in Hellenic Studies**  
Harvard University  
**Due date: 08 Oct 2013**

The purpose of the fellowship program is to encourage and support scholarship of the highest quality on ancient Greek civilization. It also aims to develop and support a network of scholars, placing emphasis on the collaborative and interdisciplinary nature of the field of Hellenic Studies. Of vital interest to the Center is the goal of fostering interaction among scholars from diverse backgrounds and regions of the world. To that end, each cohort of fellows will include scholars not only from the United States, but also from abroad. The Center offers fellowships to scholars working on the ancient Greek world in all its varieties. The most eligible fields of research include archaeology, art history, epigraphy, history, literary criticism, philology, philosophy, pedagogical applications, reception, and interdisciplinary studies. The Center encourages proposals that will take full advantage of its unique working environment. In addition to conventional proposals to conduct research on topics for which the collection of resources at the Center is especially well suited, the Center seeks to support proposals that would benefit from the close collaboration of a team of two or more scholars. Such a team could propose to work in residence during the same fellowship year or during consecutive years. (For projects that involve a team of fellows, each member of the team should submit an individual application, with cross-reference to the other members, and describe the collaborative nature of the project in the proposal.) Also, as one of the leading supporters of research on the development and use of digital information in the humanities, the Center is particularly interested in proposals that use and advance information technologies in the study of the ancient Greek world. The Center will fund proposals that (a) show scholarly promise as indicated by the merits of the project, (b) demonstrate the capability of the researchers to achieve the proposed outcomes as reflected in their academic records, prior publications, and supporting letters, and (c) achieve results that will have a broad impact both on the immediate field and on the humanities in general. As members of the scholarly community at the Center, all fellows will regularly document the evolution of their projects and share their work in progress. Fellows will present the outcomes of their research and solicit feedback through (1) online publication and (2) a webcast symposium to be held in the spring.
INTERNATIONAL AREA STUDIES
See also opportunities listed under HUMANITES and MULTIPLE DISCIPLINES

Research Travel Within the USA
Association for Asian Studies, Inc. (AAS)
Due date: 01 Oct 2013

The Northeast Asia Council (NEAC) of the Association for Asian Studies, in conjunction with the Japan-US Friendship Commission, supports a variety of grant programs in Japanese studies designed to facilitate the research of individual scholars, to improve the quality of teaching about Japan on both the college and precollege levels, and to integrate the study of Japan into the major academic disciplines. In the category, financial assistance is available to American citizens and permanent U.S. residents who are engaged in scholarly research on Japan and wish to use museum, library, or other archival materials located in the USA.

http://www.asian-studies.org/grants/main.htm#NEAC-JAPAN

CCK Junior Scholar Grants
Chiang Ching-Kuo Foundation for International Scholarly Exchange American Region
Due date: 15 Oct 2013

The foundation provides grants for time off for research and writing to postdoctoral scholars and assistant professors. The foundation's grants provide support for research on Chinese Studies in the humanities and social sciences.

http://www.cckf.org.tw/e-americaSS.htm

MEDICINE & LIFE SCIENCES
See also opportunities listed under HUMANITES and MULTIPLE DISCIPLINES

Beckman Young Investigators (BYI) Program
Beckman Foundation
Due date: 01 Oct 2013

The BYI Program is intended to provide research support to the most promising young faculty members in the early stages of academic careers in the chemical and life sciences particularly to foster the invention of methods, instruments and materials that will open up new avenues of research in science. Projects should show promise for contributing to significant advances in the research fields of interest to the Foundation. They should represent innovative departures in research rather than extensions or expansions of existing programs. Proposed research that cuts across traditional boundaries of scientific disciplines is encouraged. Proposals that open up new
avenues of research in chemistry and the life sciences by fostering the invention of methods, instruments and materials will be given additional consideration.

http://www.beckman-foundation.com/byi-new2.html

C-DEBI Educatino and Outreach Grants Program – D_DEBI Education and Outreach Grants for Marine Deep Biosphere Topics
Center for Dark Energy Biosphere Investigations
Due date: 01 Oct 2013

C-DEBI's mission is to explore life beneath the seafloor and make transformative discoveries that advance science, benefit society, and inspire people of all ages and origins. Their education and outreach goals toward that mission include creating distinctive, targeted education programs and promoting increased public awareness about life below the seafloor. C-DEBI is offering grants to fund research or education/outreach projects on any area of marine deep biosphere topics. The C-DEBI Education and Outreach Grants Program will fund the development of educational opportunities and materials that are pertinent to deep biosphere research in the sedimentary or igneous ocean basement. Possible proposals topics may include (but are not limited to): Media Development - Develop or update instructional media focusing on deep biosphere research - Develop educational media on specific topics in deep biosphere research - Develop and publish educational products or marketing media for researchers communicating deep biosphere research Interactive Outreach - Conduct participatory training in some aspect of deep biosphere research - Organize mentoring programs or support groups - Support workshops or meetings on relevant topics - Develop training sessions and tools concerning deep biosphere research Target audiences include, but are not limited to policy-makers, organizations in the public, private and not-for-profit sectors, communities of interest, students at all levels (i.e., K-8, high school, colleges, universities), the general public, international audiences. Priority will be given to academic programs aimed at undergraduate and graduate studies.

http://www.darkenergybiosphere.org/education/proposals.html

Osteopathic Research Grants
American Osteopathic Association (AOA)
Due date: 01 Oct 2013

The AOA has funded research within the profession for many years. The major purpose of research programs funded by the AOA is to - generate and support research that develops and promotes an understanding of the philosophy, concepts and efficacy of Osteopathic Manipulative Medicine (OMM); and - to develop and maintain the research capacity of the profession through support and training for researchers. The AOA recognizes the value of all areas of biomedical research. However the resources and facilities of the profession are limited and direct research funding must focus on those areas of research that investigate the unique aspects of osteopathic medicine. The breadth of this research focus may include, but is not limited to, the following: 1. Mechanisms of Action of OMM/OMT 2. Clinical Efficacy of OMM/OMT 3. Inter- and Intra-

http://www.osteopathic.org/inside-aoa/development/quality/research-and-grants/Pages/default.aspx

Focal Cognitive Deficits in CNS Disorders (R21)
National Institutes of Health (NIH)
Due date: 16 Oct 2013

The purpose of this FOA is to invite grant applications to expand basic and translational research, including intervention research, on the types, nature, and functional consequences of focal or specific cognitive deficits experienced by persons with central nervous system disorders. The Office of Behavioral and Social Sciences Research (OBSSR) joins this FOA as part of its efforts to promote research on the behavioral and social aspects of health and illness. However, only participating ICs will provide direct grant support under this FOA. Components of Participating Organizations National Institute of Nursing Research (NINR) Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Office of Behavioral and Social Sciences Research (OBSSR) CFDA 93.361, 93.86


Alcohol Impairment of Immune Function, Host Defense and Tissue Homeostasis (R21)
National Institutes of Health (NIH)
Due date: 16 Oct 2013

This FOA invites applications from researchers with broad ranges of expertise to study the consequences of alcohol consumption on immune function with the ultimate goal of alleviating infection and reversing alcohol-induced organ damage. Susceptibility to infection and organ damage are the two most common causes of alcohol-related morbidity and mortality. These consequences of alcohol abuse are closely associated with profound impairment of the host innate and adaptive immune systems. The mechanisms of these immune alterations and their link with alcohol-related medical problems are, in most cases, poorly understood. The goal of this FOA is to attract applications on basic and translational research: 1) to identify how alcohol alters immune function; 2) to establish functional links between immune alterations and alcohol related infections and organ damage; and 3) to develop means for mitigating immune impairment with the goal of alleviating alcohol-induced pathology. CFDA 93.273

PHYSICAL SCIENCES & MATHEMATICS
See also opportunities listed under MULTIPLE DISCIPLINES

Geomechanics & Geomaterials (GGS)
National Science Foundation (NSF)
Due date: 01 Oct 2013

The program supports fundamental research on the mechanical and engineering properties of geologic materials including natural, mechanically stabilized, and biologically or chemically modified soil and rock. The program also addresses hydraulic, biological, chemical and thermal processes that affect the behavior of geologic materials. Research at the micro-scale on soil-structure interaction and liquefaction are included in the scope of this program. Support is provided for theoretical studies, constitutive and numerical modeling, laboratory, centrifuge, and field testing. CFDA 47.041

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13350

Technology Development for Protein Modeling (R01)
National Institutes of Health (NIH)
Due date: 05 Oct 2013

The number of awards is contingent upon NIH appropriations and the submission of a sufficient number of meritorious applications. Application budgets are not limited, but need to reflect actual needs of the proposed project. The maximum period is 5 years.


Geospace Environment Modeling (GEM)
National Science Foundation (NSF)
Due date: 15 Oct 2013

GEM is a broad-based, community-initiated research program on the physics of the Earth's magnetosphere and the coupling of the magnetosphere to the atmosphere and to the solar wind. The purpose of the GEM program is to support basic research into the dynamical and structural properties of geospace, leading to the construction of a global Geospace General Circulation Model (GGCM) with predictive capability. The exact structure of a GGCM may be modular or may consist of a "spine" such as a global MDH model with links to special modules. The strategy for achieving GEM goals is to create a series of Focus Groups, each of which addresses a specific problem in understanding and modeling the magnetosphere. CFDA 47.050

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5506
Solid State and Materials Chemistry (SSMC)
National Science Foundation (NSF)
Due date: 31 Oct 2013

This multidisciplinary program supports basic research in solid state and materials chemistry comprising the elucidation of the atomic and molecular basis for material development and properties in the solid state from the nanoscale to the bulk. General areas of interest include but are not limited to innovative approaches to design, synthesis, bulk crystal and/or film growth, and characterization of novel organic, inorganic, and hybrid materials, as well as liquid crystal materials and multi-component material systems exhibiting new phenomena and/or providing new scientific insights into structure/composition/property relationships in the solid state. Relevant topics include original material design principles, new approaches to assembly or crystalline material growth, characterization of new material phenomena or superior behavior, investigations of surface and interfacial effects on material system structures and properties, and unraveling the relationships between structure/composition (e.g. self- or program-assembled materials, crystalline material growth, and nanostructured material systems) and properties (e.g. charge, ionic, thermal or spin transport, exciton diffusion, chemical reactivity and selectivity, etc.). Development of new organic solid state materials, environmentally-safe and sustainable materials, and fundamental studies of novel material and material systems for efficient energy harvesting, conversion and storage are encouraged. The SSMC program works closely with other programs within the Division of Materials Research (DMR) and in the Mathematical and Physical Sciences (MPS) and Engineering (ENG) directorates to accommodate the multidisciplinary nature of proposal submissions. CFDA 47.049

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5356

Metals and Metallic Nanostructures (MMN) Program
National Science Foundation (NSF)
Due date: 31 Oct 2013

The MMN Program supports fundamental research and education on the relationships between processing, structure and properties of metals and their alloys. The program focuses on experimental research while strongly encouraging the synergistic use of theory and computational materials science. Structure spanning atomic, nanometer, micrometer and larger length scales controls properties and connects these with processing. The program emphasizes the role of structure across all these length scales, including structural imperfections such as vacancies, solutes, dislocations, boundaries and interfaces. Research should advance fundamental materials science that will enable the design and synthesis of metallic materials to optimize superior behaviors and enable the prediction of properties and performance. The program aims to advance the materials science of metals and alloys through transformative research on a diverse array of topics, including, but not limited to, phase transformations; equilibrium, non-equilibrium and far-from equilibrium structures; thermodynamics; kinetics; diffusion; interfaces; oxidation; performance in extreme environments; recyclability; magnetic behavior; thermal transport; plastic flow; and similar phenomena. Yield strength, flow stress, creep, fatigue and fracture are structural-materials examples. Magnetic energy density, shape-
memory strain and thermoelectric efficiency are examples for functional materials. Broader impacts are expected in education and other areas, such as workforce development, sustainability, environmental impact or critical infrastructure needs. High-quality proposals that integrate research, education, and other broader impacts are invited. CFDA 47.049

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5351

Ceramics (CER)
National Science Foundation (NSF)
Due date: 31 Oct 2013

This program supports fundamental research including combined experiment and theory projects in ceramics (e.g., oxides, carbides, nitrides, and borides), glasses, ceramic-based composites and inorganic carbon-based materials. The objective of the program is to increase fundamental understanding and to develop predictive capabilities for relating synthesis, processing, and microstructure of these materials to their properties and ultimate performance in various environments and applications. Development of new experimental techniques or novel approaches to carry out projects is encouraged. Topics supported include basic processes and mechanisms associated with nucleation and growth of thin films; bulk crystal growth; phase transformations and equilibria; morphology; surface modification; corrosion, interfaces and grain boundary structure; and defects. The microstructures investigated range from crystalline, polycrystalline, and amorphous to composite and nanostructured materials. PIs are encouraged to include all anticipated broader impact activities in their initial proposals, rather than planning on supplemental requests. Most projects include (1) anticipated significance on science, engineering and/or technology including possible benefits to society, (2) plans for the dissemination of results, and (3) broadening participation of underrepresented groups and/or excellence in one or more of these areas: training, mentoring, and teaching. Many successful proposals will include one additional broader impact activity. CFDA 47.049

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5352

SOCIAL SCIENCES
See also opportunities listed under HUMANITIES; INTERNATIONAL AREA STUDIES; and MULTIPLE DISCIPLINES

Scientific Research Projects
GRAMMY Foundation
Due date: 01 Oct 2013 (LOI); Full application upon invitation

The foundation awards grants to organizations and individuals to support research on the impact of music on the human condition. Examples might include the study of the effects of music on mood, cognition and healing, as well as the medical and occupational well-being of music professionals and the creative process underlying music. Priority is given to projects with strong
methodological design as well those addressing an important research question.

http://www.grammy.org/grammy-foundation/grants

**Research on Ethical Issues in Biomedical, Social and Behavioral Research (R01)**
National Institutes of Health (NIH)
**Due date: 05 Oct 2013**

The purpose of this FOA is to support investigator-initiated Research Project Grant (R01) applications that propose to study high priority bioethical challenges and issues associated with the types of biomedical, social, and behavioral research supported by the participating NIH Institutes/Centers. The Office of Behavioral and Social Sciences Research (OBSSR) joins this FOA as part of its efforts to promote research on the behavioral and social aspects of health and illness. However, only participating ICs will provide direct grant support under this FOA. Applications should address bioethical challenges and ethical issues relevant to the research mission area(s) of the participating NIH Institutes and Centers (ICs). The participating ICs have identified specific bioethics topics below as the highest priority for consideration. These are organized into seven categories: 1. Ethical considerations of new and emerging technologies; 2. Research study design issues 3. Issues associated with therapeutic misconception and the interface between treatment and research 4. Research involving vulnerable populations and urgent situations 5. Research with existing specimens, data, and health information 6. Dissemination and translation of research findings 7. Oversight of research Applications that address other bioethical issues directly related to these mission areas will also be considered.


**PBB Mission Awards**
Psychology Beyond Borders (PBB)
**Due date: 12 Oct 2013**

PBB is seeking proposals for projects that support its mission. PBB is an international nonprofit organization focusing on the psychosocial impacts of terror attacks, armed conflicts, and natural disasters. PBB is seeking to fund research and service-oriented projects that support work in this area. PBB has identified a number of specific focus areas requiring significant support to advance this mission, and this annual award program is designed to support research and service projects that fit into these areas. The focus areas for the 2012 awards are as follows: 1. Repetitive and chronic exposure to disaster, including research into the effects of repeated exposure and specific intervention methods for repeatedly exposed populations. 2. The role of economic loss or empowerment in psychosocial issues post-disaster, including research on the role of financial stress in post-disaster recovery and the impact of small or large-scale development programs in recovery. 3. Preparedness and resilience: Including research and service projects designed to teach and evaluate programs to prepare people for disasters and improve resilience, and including resilience-building programs delivered in the aftermath of an event. 4. Prevention, including research and service programs aimed at peace-building and nonviolent conflict.
resolution. Projects will be assessed on their empirical rigor and service impact. PBB is most interested in funding applications that lead the field in research advancement.


**Academic Research Grant Program**  
Borchard Foundation Center on Law & Aging  
**Due date: 15 Oct 2013**

The center underwrites this program to further scholarship about new or improved public policies, laws and/or programs that will enhance the quality of life for the elderly. The research must address issues of law and aging. The center expects grantees to meet the objectives of the grant program through individual or collaborative research projects that (1) analyze and recommend changes in one or more important existing public policies, laws, and/or programs relating to the elderly; or (2) anticipate the need for and recommend new public policies, laws, and/or programs for the elderly necessitated by changes in the number and demographics of the country's and the world's elderly populations, by advances in science and technology, by changes in the health care system, or by other developments. Scholars in the fields of health, law, medicine and sociology have been awarded grants. Topics are demonstrated by past recipients. Each grant recipient is required to publish an article on the subject of their research in a top flight journal.

http://www.borchardcla.org/academic-research-grant-program

**Relation Between Education and Social Opportunity**  
Spencer Foundation  
**Due date: 15 Oct 2013 (proposal under $40,000)**

The Spencer Foundation provides funding for research projects that study education in the United States and abroad. The foundation seeks to shed light on the role education plays in reducing economic and social inequalities - as well as, sometimes, reinforcing them - and to find ways to more fully realize education's potential to promote more equal opportunity. Expanded opportunity is important not only to a society's economic well being but to the character of its civic, cultural, and social life as well. Education enriches and expands people's lives in many ways, including through their employment opportunities, their civic and political involvements, and the quality of their personal lives. The foundation's interests therefore extend to studies that examine the ways in which differences in educational experiences (including quality and character of schooling as well as number of years in school) translate into differences in employment, earnings, and civic and social outcomes. Such work can help identify ways to change schooling investments and outcomes in the interests of a more just and prosperous society.

http://www.spencer.org/content.cfm/education-and-social-opportunity
Sociology Program
National Science Foundation (NSF)
Due date:  15 Oct 2013

This program supports basic research on all forms of human social organization - societies, institutions, groups and demography - and processes of individual and institutional change. The program encourages theoretically focused empirical investigations aimed at improving the explanation of fundamental social processes. Included is research on organizations and organizational behavior, population dynamics, social movements, social groups, labor force participation, stratification and mobility, family, social networks, socialization, gender roles, and the sociology of science and technology. The program supports both original data collections and secondary data analysis that use the full range of quantitative and qualitative methodological tools. Theoretically grounded projects that offer methodological innovations and improvements for data collection and analysis are also welcomed. The program also funds doctoral dissertation research to defray direct costs associated with conducting research, for example, dataset acquisition, additional statistical or methodological training, meeting with scholars associated with original datasets, and fieldwork away from the student's home campus. CFDA 47.075

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5369

Consumption, Drinking Patterns, and Prevention and Treatment of Problem Drinking and Related Problems (R21)
National Institutes of Health (NIH)
Due date: 16 Oct 2013

This FOA encourages Exploratory/Developmental Research Grant (R21) applications from institutions and organizations that propose to investigate the impact of national or local economic fluctuations on alcohol consumption, alcohol drinking patterns, and the prevention and treatment of problem drinking. CFDA 93.273


MULTIPLE DISCIPLINES

Title VIII Research Scholar Program
American Councils for International Education – ACTR/ACCELS
Due date: 01 Oct 2013

Funded by the U.S. Department of State's Program for Research and Training on Eastern Europe and the Independent States of the Former Soviet Union (Title VIII), this research program provides full support for graduate students, faculty, and independent scholars seeking to conduct in-country, independent research for three consecutive months to nine consecutive months in Central Asia, Moldova, Russia, the South Caucasus, Southeast Europe, and Ukraine. While a
wide range of topics receive support each year, all funded research must contribute to a body of knowledge enabling the U.S. to better understand the region and formulate effective policies within it. All applicants should clearly describe the policy-relevance of their work, be it in anthropology, history, international relations, political science, or some other field.

http://researchfellowships.americancouncils.org/researchscholar#Application

AFRL Scholars Program  
US Dept. of Defense  
Due date: 02 Oct 2013

Each year, the Air Force Research Laboratory (AFRL) Directorates provide internships for hundreds of high school and college students interested in science, engineering and other related academic specialties. The primary purpose of this program is to encourage interest in Science, Technology, Engineering, and Mathematics (STEM) to help meet long-term national defense needs of the United States for personnel proficient in STEM areas, specifically: (1) to encourage high school students to pursue education in STEM related disciplines; (2) to provide hands-on laboratory research experience for undergraduate and graduate level students who are pursuing a STEM type degree; and (3) to identify potential future AFRL scientists and engineers. The objective of this effort is for the recipient to assist AFRL in administering the AFRL Scholars Program. The recipient will arrange for high school, college undergraduate, and graduate students to be provided summer internships to conduct research and development at multiple AFRL locations across the country. CFDA 12.560

http://www.grants.gov/search/search.do;jsessionid=JFtWQ1yB0JJVDwpGJ15RnThVnp4QhcTCJFtDCpRmLLTNhpqpXZg7!-2126388778?oppId=196813&mode=VIEW

Visiting Scholars Program (VSP)  
American Academy of Arts and Sciences  
Due date: 15 Oct 2013

The VSP is an interdisciplinary research fellowship housed at the headquarters of the academy in Cambridge, Massachusetts. Its purpose is to stimulate and support scholarly work by promising scholars and practitioners in the early stages of their careers and to foster exchange between an emerging generation of scholars and Academy members with shared interests. To accomplish this goal, the academy offers scholars the opportunity to combine independent research and writing with active involvement in its programs and activities. Visiting scholars are invited to participate in academy-sponsored conferences, seminars, and informal gatherings. They also benefit from institutional partnerships with local universities, libraries, and research institutes in the Boston area. The academy conducts the VSP in association with the Harvard Humanities Center, which provides access to the university's research facilities and works with the academy to plan joint lectures, seminars, and informal discussions. The Academy seeks proposals that relate to its primary research areas: humanities and culture; science, technology, and global security; social policy and American institutions; and education. Projects that address American
cultural, social, or political issues from the founding period to the present are welcome, as are studies on the history of science.

http://www.amacad.org/visiting.aspx

**Ph.D. Fellowship Program**
International Business Machines Corporation (IBM)
**Due date: 30 Oct 2013**

The IBM Ph.D. Fellowship Awards Program is an intensely competitive worldwide program, which honors exceptional Ph.D. students who have an interest in solving problems that are important to IBM and fundamental to innovation in many academic disciplines and areas of study. These include computer science and engineering (including cyber security and cloud computing), electrical and mechanical engineering, physical sciences (including chemistry, material sciences, and physics), mathematical sciences (including analytics of massive scale data with uncertainty, operations research, and optimization), public sector and business sciences (including urban policy and analytics, social technologies, learning systems and natural language understanding), and service science, management, and engineering (SSME). Additionally, IBM pays special attention to an array of focus areas, such as: - Technology that creates new business or social value: tools to build smarter cities and a smarter planet, modeling and data analysis, optimization, risk and compliance, cyber security, urban policy and analytics, tools for globalization, information-based medicine and health care management, service science, management and engineering (SSME). - Innovative software: HCI, massive scale data and analytics with uncertainty, new expressive ways of manipulating computers, programming models and tools, natural language understanding, learning systems, social and mobile computing, Internet of things. - New types of computers: use of massive parallelism for non-scientific/engineering applications, multi-core and hybrid systems, green computing, and nanotechnology. - Interdisciplinary projects that create social and business value: smart cities, water and energy modeling and management, and cloud computing.