Digest of Items of Interest to the Caucus of Academic Reps – January 10, 2014

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**Funding**

**DMREF proposals of special interest to the Division of Mathematical Sciences in fiscal year 2014**

Dear Colleague:

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) strongly encourages mathematicians and statisticians to participate in the 2014 NSF activity Designing Materials to Revolutionize and Engineer our Future (DMREF).

DMREF is the main program by which NSF participates in the Materials Genome Initiative (MGI) for Global Competitiveness [1], a national materials initiative. MGI recognizes the importance of materials science to the well-being and advancement of society and aims to "deploy advanced materials at least twice as fast as possible today, at a fraction of the cost." It integrates all aspects of materials design, including materials discovery, development, property optimization, systems design and optimization, certification, manufacturing, and deployment, with each employing the toolset that is being developed within the materials innovation infrastructure. The toolset will integrate synergistically advanced computational methods and visual analytics with data-enabled scientific discovery and innovative experimental techniques, aiming to revolutionize the approach to materials research and engineering.

DMREF comprises well-coordinated activities involving the Directorates of Mathematical and Physical Sciences (MPS), Engineering (ENG), and Computer & Information Science & Engineering (CISE). For further details and participating divisions please see NSF 14-020, the broadly aimed Dear Colleague Letter about DMREF in fiscal year 2014 [2]. As described in that Letter, success in the initiative requires a collaborative, synergistic, iterative approach that shows interactions among theory, computation, and experiments. This approach is the central principle of MGI. DMREF proposals will be reviewed jointly by the appropriate participating divisions. Adherence to the aims and principles of MGI will facilitate this joint review.
DMREF proposals of specific interest to the Division of Mathematical Sciences must:

* seek new mathematical or statistical results that will advance the DMREF agenda;
* describe a research plan that meets the central Materials Genome Initiative principle of closely coupled, iterative interplay among theory, computation, and experiment;
* deal with problems in the range of issues described in the DMREF Dear Colleague letter NSF 14-020;
* be submitted within the window 15 January - 18 February 2014, inclusive; and

In addition,

* the title of a DMREF proposal should begin with the characters “DMREF.”

Proposals that do not seek new mathematical or statistical results may nevertheless fit well within DMREF, and mathematical scientists are strongly encouraged to join any DMREF proposal that makes good use of their expertise. DMREF proposals may come from single investigators or from teams of investigators. However, successful proposals will offer evidence of that close, iterative collaboration among experts from different disciplines that is necessary to meet the central MGI principle on which DMREF is based. Letters of collaboration, which say what the collaborators will do for the proposed project and that affirm the collaborators' participation in the iterative interplay required for DMREF, are appropriate evidence.

In addition to the mathematical and statistical modeling and analysis that occur in the interactions among experiments, models, and simulations, DMREF topics of special interest to DMS include, but are not limited to:

* optimization of design in complicated, high-dimensional state spaces;
* effective data mining methods to uncover relationships important for predictive modeling and design (e.g. between microstructure and bulk properties, or among composition, processing, and bulk properties);
* first-principles understanding of materials;
* data-analytic tools and the interplay between data and predictive modeling;
* challenges presented not only by multiscale issues, but also by the problem of rapidly resolving differences between theory and simulation in the face of experimental data.

The last example is similar to data assimilation and data fusion problems encountered elsewhere, but here the possibilities offered by better data and closely coupled iteration create new opportunities for theoretical and algorithmic advances, on both the mathematical and statistical sides.

Participants interested in submitting proposals are strongly encouraged to first contact any of the program officers listed in the main DMREF Letter. For DMS, please confer with Michael Steuerwalt (msteuerw@nsf.gov).

Henry Warchall
Acting Division Director
Division of Mathematical Sciences
NSF DMS Dear Colleague Letter: Sequestration Effects on the Mathematical and Physical Science Directorate (MPS)

(This was sent out to the DMS listserv Thursday morning. To subscribe, send the text "subscribe DMSNEWS" to listserv@listserv.nsf.gov)

Dear Colleagues:

I know that many of you are curious about the consequences for the Mathematical and Physical Science Directorate (MPS) of the sequestration of funds during FY 2013 and the lapse in funding ("shutdown") during the first 16 days of FY 2014. Now that we have closed the books on FY 2013, we can assess these effects quantitatively and give you some idea about their impact.

The Research and Related Activities (R&RA) budget, through which we fund research awards and facilities, decreased by about 3.5% for the Foundation and by about 4.5% for MPS. The Divisions in MPS did not share the decrease uniformly, and individual investigator awards suffered the largest reduction. This differential arose from a Foundation-wide policy of protecting existing awards, such as those supporting facilities infrastructure, centers, and early-career programs. I expect that any future budget restrictions will affect these previously protected programs.

Sequestration strongly affected our competitive research awards program. MPS made 13% (258) fewer competitive research awards in FY 2013 than in FY 2012, and those awards were 9% smaller on average. The funding rate for competitive research proposals in MPS fell to 22% from 25% in FY 2012, continuing a trend of more than a decade. The future budget picture remains uncertain, but we are committed to supporting excellent research. MPS continues to provide over a billion dollars each year to fund exciting and important fundamental science.

We were delighted to get back in action after the 16-day government shutdown that ended on October 17. Our primary focus has been on our core functions of receiving, reviewing, and acting on proposals along with oversight and management of existing awards. The consequences of the interruption will last much longer than the interruption itself, and we have established priorities for the most important tasks, concentrating on the merit review process. MPS has rescheduled the nine review panels that fell during the shutdown. The hard work and careful planning of our Program Officers and Administrative Staff also allowed us to conduct 15 of the 17 panels scheduled during the first two weeks after our return. This accomplishment was no mean feat and kept us from losing even more ground. I greatly
appreciate the dedication and foresight that made it possible. Like all Directorates in the Foundation, we had to cancel our Fall Advisory Committee meeting, but we will resume the regular schedule with a virtual meeting in January, 2014.

Interaction with the scientific community is one of the keys for MPS in dealing with challenging times. I appreciate your participation in the work of the Foundation as you send us your excellent ideas, provide insightful reviews of proposals, and serve on advisory bodies. My colleagues and I are eager to hear your thoughts and suggestions, and we welcome continued communication in these challenging times. With your help, MPS will continue to support excellent, fundamental research across the physical and mathematical sciences.

Sincerely,

F. Fleming Crim
Assistant Director, National Science Foundation Directorate for Mathematical and Physical Sciences

NIJ: Policing and Crime Research: Dear Colleague Letter From Greg Ridgeway
Policing Research: Dear Colleague Letter From Greg Ridgeway

Dear Colleague:

This letter alerts all social and behavioral science researchers about the National Institute of Justice's (NIJ) interest in receiving proposals related to policing and crime that can strengthen our knowledge base and enhance criminal justice practices. NIJ has been building its policing research portfolio for many years and will continue to do so in its pursuit of improving the administration of justice in this country.

NIJ's policing research portfolio runs the gamut from police organization and management to the effectiveness of crime prevention and control strategies to police accountability. In the early years, NIJ's research focused on evaluating the standard strategies of policing such as response time, problem-oriented policing and police response to domestic violence. As community policing gained traction as a critical strategy for policing throughout the United States, NIJ shifted its focus to testing, measuring and reporting on its success and on examining effective and ineffective implementation strategies.

Recently, NIJ's police portfolio has focused on such issues as building researcher-practitioner relationships, police organization and management, use of technology on police practices (e.g., license plate recognition, CCTV, and less lethal technologies), hot spot policing, police integrity, use of conducted energy devices, health and safety, use of force, reducing false convictions, early intervention systems, police legitimacy, and use of evidence-based knowledge.

As new research topics evolve, many of the topics covered in initial research remain of significant interest to NIJ and the field. In its efforts to prevent and reduce crime and violence, NIJ's Office of Research and Evaluation strives to address the questions raised by police practitioners and academics and to stay abreast of the latest developments in policing practices. NIJ's Office of Research and Evaluation's particular interest in the policing research area for fiscal year 2014 involves such topics as:
Evaluations of technologies implemented by police agencies, including the impact of technology on police organizations and cost-benefit analyses of implementing such technology.

Evaluations that examine the impact of internal and external procedural justice training mechanisms to promote police integrity.

Randomized controlled trials of interventions or programs of interest to address criminal justice issues confronting law enforcement.

Research on the use of intelligence-led policing.

Research and evaluation on science-based approaches, policies or interventions designed and implemented to promote officer safety and wellness.

Research on police investigations.

Other topics of research on policing are valuable as well. As with police organizations across the country, NIJ is interested in building sound, evidence-based knowledge of interventions and programs that work and can be tested in a variety of organizations under varied circumstances.

Search past awards for illustrative examples of current and prior projects.

Interested prospective applicants are highly encouraged to consult with relevant project officers prior to submission. In the case of policing, Dr. Brett Chapman at Brett.Chapman@ojp.usdoj.gov and Mr. Eric Martin at Eric.D.Martin@ojp.usdoj.gov are the appropriate project officers.

This is not a special competition or new program. Proposals in response to this Dear Colleague Letter must meet the requirements and deadlines of the solicitation to which they are submitted.

The appropriate vehicle for responding to topics covered in this letter will be NIJ's "Research and Evaluation on Justice Systems." To receive an e-mail when NIJ issues a solicitation, subscribe to http://NIJ.gov

You can also follow us on Twitter https://twitter.com/OJPNIJ and Facebook https://www.facebook.com/OJPNIJ

The "Research and Evaluation on Justice Systems" solicitation should be available on the NIJ website in February 2014.

Sincerely,

Greg Ridgeway, Ph.D.
Acting Director
National Institute of Justice
Workshop

FDA-Industry Workshop: Roundtable Submission Open

The 2014 FDA-Industry Workshop will be held September 22–24, 2014, at the Washington Marriott Wardman Park, Washington, DC.

Proposals for Roundtable Luncheon discussion topics are now being accepted via the online web at: http://www.amstat.org/meetings/fdaworkshop/2014/index.cfm?fuseaction=roundtables through March 11th, 2014 11:59pm EST. Leading a roundtable luncheon discussion is a great way to exchange ideas and meet new people. For additional information about roundtables and the submission process, visit the 2014 ASA Biopharmaceutical Section-FDA Industry Statistics Workshop website.

Please submit your roundtable discussion proposal online before March 11, 2014 11:59pm EST.

NEW for 2014!- connect with others on twitter! Follow @ASABiopharm and use the workshop associated hashtag: #ASABiopharm.

We look forward to receiving your proposal!

Sincerely,

The 2014 Roundtable Committee Coordinators:

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Novartis
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Joseph Gardiner
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