



GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE  
Policy and Global Affairs

THE NATIONAL  
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**2011 ANNUAL REPORT  
GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE  
(GUIRR)**

NATIONAL ACADEMY OF SCIENCES  
NATIONAL ACADEMY OF ENGINEERING  
INSTITUTE OF MEDICINE  
500 FIFTH STREET, N.W., WASHINGTON, DC 20001

# **2011 ANNUAL REPORT OF THE GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE (GUIRR)**

## **Mission**

The Government-University-Industry Research Roundtable (GUIRR) was created in 1984 in response to the report of the National Commission on Research, which called for an institutionalized forum to enhance communication among the top leaders of government and non-government research organizations. Its formal mission, revised in 1995, is “to convene senior-most representatives from government, universities, and industry to define and explore critical issues related to the national and global science and technology agenda that are of shared interest; to frame the next critical question stemming from current debate and analysis; and to incubate activities of on-going value to the stakeholders. This forum will be designed to facilitate candid dialogue among participants, to foster self-implementing activities, and, where appropriate, to carry awareness of consequences to the wider public.” [[www.nas.edu/guiirr](http://www.nas.edu/guiirr)]

## **GUIRR Member Meetings**

Council Members, Council Associates, and University-Industry Partners (20 pairs; 40 organizations) met three times in 2011 for timely discussion on technology research advancements and associated challenges that cut across all three sectors – government, universities, and industry – and that can benefit from greater cross-sector collaboration. Meeting topics are proposed by the membership and reviewed/selected by the Executive Committee. Meeting attendance is of members and invited guests. The number of attendees at each meeting has steadily grown, with 80 or more participants now expected.

On February 8-9, 2011, GUIRR members came together for a discussion on “Cybersecurity in the Coming Decade: Using Security to Support the Value of Intellectual Property.” With this particular meeting, we asked: How might we best develop a reliable, resilient, and trusted digital infrastructure? Discussion revolved around ways to reduce or mitigate the damaging effect that IP theft has on American jobs and our economy. The group further considered the challenges associated with a lack of internationally accepted standards that help enterprises (businesses, universities, government agencies) identify and curb cybersecurity risks. Although total protection is impossible, meaningful levels of security appear achievable, so we heard – as long as cybersecurity remains an ongoing, proactive response to a continuously evolving threat.

The title of the June 14-15, 2011 meeting was “Charting a Return to ‘Way Out There’ Research and Risk-Taking at the Edges.” Here GUIRR members focused on high-risk, transformative research with potential high payoff results – “mad science”, if you will. The overarching question was: How do we allow for the creation of more disruptive, revolutionary technologies from our government agencies, government labs, universities, and companies, and where do opportunities for cross-sector collaboration exist? A slate of innovative thinkers/doers shared their views and engendered impassioned group discussion on how the U.S. might best, in tight fiscal times, encourage – and reward – greater risk-taking in areas of research so as to maintain its competitive standing in a global arena. We spoke of ‘neck snapping’ advances as contrasted with incremental contributions, and ways in which we, as a nation, might move from risk-adverse to more risk-accepting. In every case, with every speaker, the importance of public-private partnerships and the need, or “nerve”, to risk was emphasized. “Succeed by and don’t be afraid to fail.” [Dr. Regina Dugan, Director, DARPA]

The topic of the fall meeting (October 4-5, 2011; “The Impact of Social Networking and Crowdsourcing on Research, the Enterprise, and the Workforce”) was suggested by representatives of GUIRR member organizations who noted that social media have found application at all points of the research lifecycle and, while tremendously powerful, its rapid adoption and use open up questions too – like whether social media can influence research priorities. The Roundtable considered the broad societal implications of social networking – how people will make use of the developing technology to relate to each other and get things done in the future, for example. Members also looked at social networking as a means to address national priorities, conceptual approaches for better design of collaboration software, and what crowdsourcing means for innovation. According to one expert, we are “at the beginning of a far-reaching

mind-machine interface” – one that may well prompt a paradigm shift in science education and the conduct of many kinds of research.

## **GUIRR Support**

In 2011, GUIRR activity (program and administration) was supported by federal grant awards from NIH, DOD, NIST, and USDA, totaling roughly \$267,000. University-Industry Partner dues accounted for an additional \$570,000 in core funding. [NOTE: Additional public/private funds were secured to support two distinct, semi-autonomous programs under GUIRR’s purview, namely the Federal Demonstration Partnership (FDP) and the University-Industry Demonstration Partnership (UIDP).]

## **Projects**

***International Research Collaborations.*** This energetic GUIRR working group, known as the “I-Group”, organized and hosted a dynamic workshop July 26-27, 2010 entitled “Examining Core Elements of International Research Collaboration.” The written summary report of the workshop, published by the National Academies Press, was unveiled in a formal release event and reception held October 5, 2011 at the Koshland Science Museum of the National Academy of Sciences in Washington, DC. Since the release event, the report has been further disseminated to members of the FDP and UIDP as well as to others in the international community. In addition to the print copy, the report is available for free download at [http://www.nap.edu/catalog.php?record\\_id=13192#toc](http://www.nap.edu/catalog.php?record_id=13192#toc). The I-Group is currently developing plans for a follow-on workshop focused on the importance of *culture* when engaging in international research collaboration. The USAID and the State Department have expressed particular interest.

***Managing University Intellectual Property Webinar.*** On June 21, 2011, GUIRR organized and hosted a special webinar reviewing the impetus and findings of a newly published National Academies report entitled *Managing University Intellectual Property in the Public Interest*. During the webinar, presenters reviewed 15 recommendations made in the report for improving the system of university IP management. Eighty (80) webinar “attendees” were confirmed online, but reports back to us later indicated that several groups of people consolidated around a single computer, thereby increasing our reach. The webinar was offered for free, with very positive feedback received.

***Here or There? Revisited.*** In 2006 an important report to GUIRR was published entitled: *Here or There? A Survey of Factors in Multinational R&D Location*. GUIRR members have asked for an updated survey – this time with an expanded global survey population – to see how, or whether, globalization and the economic downturn in the U.S. have affected earlier predictions. The goal is to include Asian (Chinese, Japanese, Korean) firms, as well as other Asian, European and U.S. firms; such information, it is believed, will greatly increase our understanding of the factors that determine where firms locate their research. The authors of the initial report, Drs. Jerry and Marie Thursby of the Georgia Institute of Technology, have confirmed their interest in a follow-on project. The group is talking with industry associations now in the hope of identifying and engaging appropriate survey populations (possibly by specific industry sectors).

***Food Safety and National Defense.*** This working group is focused on the role of inter-sector partnerships in helping accelerate the path to solutions in safeguarding the nation’s food supply. The group has retrenched somewhat, postponing a planned workshop with the idea that it should get a better handle on what other projects in the food security space are currently being pursued. The working group is interested in exploring mechanisms (current and new) for getting newer technology (e.g., detection, processing, etc.) into the food safeguard system and, moreover, examining how new technologies are validated.

***University-Industry Demonstration Partnership (UIDP).*** The UIDP is a semi-autonomous activity that falls under GUIRR’s administrative oversight and programmatic umbrella. UIDP members devote their energies and resources to the identification and implementation of projects that will advance university-industry research collaborations in the United States and ultimately promote U.S. competitiveness. Two general meetings are held each year. In 2011, the meetings were held in La Jolla, CA in April (Pfizer, host) and in St. Louis, MO (Monsanto, host) in August. A special Project Summit was also held in Washington, DC in December.

The Partnership has pursued a number of dedicated projects, including:

- **Contract Accords/TurboNegotiator.** An update to the UIDP's Contract Accords booklet is being prepared that will add four new contracts to the initial five approved previously.
- **Government Funding Webinar Series.** The UIDP, in conjunction with the National Center for Entrepreneurial Technology Transfer (NCET2), has sponsored a webinar series on funding opportunities from select government agencies and specifically those that support or catalyze university-industry partnerships. The last held was on August 2011 where ARPA-E presented. This series is being modified from a monthly series to an infrequent one where new initiatives are highlighted.
- **Building University-Industry Collaborations Webinar Series.** The UIDP and NCET2 sponsor a monthly webinar series where companies (typically UIDP members) describe their current R&D program and specific interests in partnering with external parties such as universities, national labs and research institutes. John Deere and Novartis sponsored the last two webinars of 2011 with over 200 registrants in attendance.
- **University Showcase Webinar Series.** New in 2011, the UIDP and NCET2 began this series where universities can promote their current R&D program and initiatives. Penn State sponsored the December 2011 webinar with 177 attendees.
- **Researcher Handbook.** UIDP members are developing a primer for faculty who are interested in working with industry and, vice-versa, industrial scientists who seek to work with universities on research projects.

The UIDP has its own membership structure and fees. The group is in Phase II with over 90 organizational members. [[www.uidp.org](http://www.uidp.org)]

**Federal Demonstration Partnership (FDP)** – The FDP, currently in Phase V, is a unique forum for individuals from 119 universities and nonprofits to work collaboratively with 10 federal agency officials to improve the national research enterprise and reduce administrative burden. GUIRR provides the management support for FDP through an agreement with a consortium of federal agencies.

The FDP hosts three meetings per year in Washington, DC. Over 300 people attend. Meetings in 2011 were held January 24-26, May 4-6, and September 14-16. All past meeting agendas may be viewed online at [www.thefdp.org](http://www.thefdp.org).

The FDP is and has been pursuing a number of important projects, as follows:

- **Faculty Workload Survey** (*newly renamed; previously called the Faculty Burden Survey*). The FDP continues its efforts to implement the recommendations arising from the original survey done in 2005 (report issued in 2007). A follow-up survey #2 launched January 23, 2012 and closed March 16, 2012, with 17,000 respondents; an impressive 32% response rate! (7,000 faculty members responded to the first survey.) The purpose of the survey is to determine if any inroads have been established or new barriers erected since the previous/initial survey. Findings from the initial survey continue to be cited; indeed, Dr. Alan Leshner (CEO of the American Association for the Advancement of Science and executive publisher of *Science*) referenced FDP and its survey findings in an editorial titled "Rethinking the Science System" (November 11, 2011, *Science*, Vol. 334).
- **STAR Metrics.** The Star METRICS project has continued to grow, with >70 signed MOUs in hand from participating academic institutions. This project (level I) is analyzing data from various sources to determine the economic effect of federal investment in the American research enterprise. Work on level II – looking at the impact of science funding – is underway. A complementary piece is a researcher profile project spearheaded by NIH and NSF.
- **Parental and Family Leave for Research Trainees.** This project, incited by the National Academies' Committee on Women in Science, Engineering, and Medicine (CWSEM), was initiated and completed in 2011, with a formal report now in print. The working group is currently considering a possible follow-on demo or 'best-practices' document of some kind. It is also seeking placement opportunities for journal articles about the work.

- **ARRA Task Force.** The FDP serves as a clearinghouse for information gathering and sharing, frequently asked questions and good practices to assist universities in responding to the American Recovery and Reinvestment Act of 2009 (ARRA) reporting requirements, thereby providing greater consistency in data submitted from member institutions. The FDP joined forces with the Council on Governmental Relations to leverage resources in providing a single portal for information on the ARRA. Additionally, the FDP has analyzed data from a survey conducted of its members that looked at how resources were allocated to perform the work required by ARRA, and has issued an executive summary. A full report is pending.
- **Streamlining A-133 Audit Compliance.** The A-133 audit system is still being used to store audit information and streamline reporting.
- **Established the Joint Application Design (JAD) Team.** This working group assists Grants.gov staff in improving systems and processes associated with the submission of applications for federal assistance funding. The JAD team is testing forms and system changes before changes go into production. JAD is working directly with NIH on electronic submission of complex applications.
- **Research Compliance.** New in Phase V, this committee is dedicated to exploring ways of streamlining compliance processes. There are four subcommittees: Conflict of Interest, Human Subjects, Animal Subjects and Export Controls. Work is ongoing on an online practical guide pertaining to Institutional Review Boards (IRBs).
- **Project Certification.** The FDP is working with the Office of Naval Research and the Department of Health and Human Services in exploring alternate mechanisms for certifying researcher's effort on federally funded research grants. Four FDP member universities are presently participating in the demonstration.
- **IRB Exemption Wizard.** The FDP is developing an online wizard to help researchers determine whether their research is exempt for Institutional Review Board (IRB) review.
- **IRB Practical Guide for Reducing Regulatory Burden.** The FDP is developing an online guide for institutions to use as a best practices document to help them understand the policies that guide the use of human subjects in research.
- **Troublesome Clauses.** The troublesome clauses system is still being used to identify clauses inserted into research awards that are problematic for institutions to accept.

### **Members of GUIRR Council**

C.D. (Dan) Mote, Jr., Co-Chair [NAE], Former President and the Glenn L. Martin Institute  
Professor of Engineering, University of Maryland at College Park – **GUIRR Co-chair**

Lydia Waters Thomas, President and Chief Executive Officer, retired, Noblis – **GUIRR Co-chair**

Lt. Gen. Sam Armstrong, U.S. Air Force, retired

Roger Beachy, Director, National Institute for Food and Agriculture, U.S. Department of Agriculture  
(*ex officio*)

Susan Butts, Senior Director of External Science and Technology Programs, The Dow Chemical  
Company, retired

Ashton Carter, Under Secretary for Defense for Acquisition, Technology and Logistics (*ex  
officio*)

Ralph Cicerone [NAS], President, National Academy of Sciences (*ex officio*)

Francis S. Collins [NAS, IOM], Director, National Institutes of Health (*ex officio*)

Harvey V. Fineberg [IOM], President, Institute of Medicine (*ex officio*)

Patrick Gallagher, Director, National Institute of Standards and Technology (*ex officio*)

Jesse L. Goodman [IOM], chief Scientist and Deputy Commissioner for Science and Public  
Health (*ex officio*)

Paul Hertz, Chief Scientist, Science Mission Directorate, National Aeronautics and Space Administration  
(*ex officio*)

John Holdren, [NAS/NAE], Director, White House Office of Science and Technology Policy (*ex officio*)

Lisa Jackson, Administrator, Environmental Protection Agency (*ex officio*)

Steven Koonin, Undersecretary for Science, U.S. Department of Energy (*ex-officio*)

Ralph Kuncel, Provost and Executive Vice President, University of Rochester

Jane Lubchenco [NAS], Under Secretary of Commerce for Oceans and Atmosphere, National  
Oceanic and Atmospheric Administration (*ex officio*)

Alan Merten, President, George Mason University

Craig Mundie, Chief Research and Strategy Officer, Microsoft Corporation  
Tara O'Toole, Under Secretary for Science and Technology, U.S. Department of Homeland Security  
Steven M. Paul [IOM], Director, Appel Alzheimer Research Institute, Weill Cornell Medical College  
Luis M. Proenza, President, The University of Akron  
James Rosser, President, California State University, Los Angeles  
David B. Spencer, Founder, Chairman and Chief Technology Officer, wTe Corporation  
Subra Suresh [NAE], Director, National Science Foundation (*ex officio*)  
Charles M. Vest [NAE], President, National Academy of Engineering (*ex officio*)  
Mark Wrighton, Chancellor, Washington University in St. Louis

**Staff**

Susan Sauer Sloan, Director, GUIRR  
Anthony Boccanfuso, Executive Director, UIDP  
David Wright, Executive Director, FDP  
Claudette Baylor-Fleming, Administrative Coordinator, FDP  
Laurena Mostella, Administrative Assistant, GUIRR and UIDP  
Chris Verhoff, Financial Associate