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# GUIRR UPDATE

Meeting of the Federal Demonstration Partnership (FDP)

**Susan Sloan**  
Director, GUIRR  
January 10, 2017



Government | University | Industry

RESEARCH ROUNDTABLE

Policy and Global Affairs Division

# Government-University-Industry Research Roundtable

- Convening body of the National Academies of Sciences, Engineering, and Medicine (and 'secretariat' for the FDP)
- Created in 1984 "to convene senior-most representatives from government, university, and industry to define and explore critical issues related to the national and global science and technology agenda"
- Roundtable convenes 3 times yearly in Washington, DC
- Meetings designed around topics that are often newly emerging at the leadership level in one sector but impact/involve/affect other sectors

GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE

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# Executive Committee

- **Laurie Leshin**, President, Worcester Polytechnic Institute; former Deputy Associate Administrator for NASA's Exploration Systems Mission Directorate and former Deputy Director for S&T at NASA's Goddard Space Flight Center **[UNIVERSITY CO-CHAIR]**
- **Gordon England**, Chairman, V1 Analytical Solutions, Inc.; former U.S. Deputy Secretary of Defense and (twice) Secretary of the Navy **[INDUSTRY CO-CHAIR]**
- **C. D. (Dan) Mote, Jr.**, President, National Academy of Engineering
- **France Córdova**, Director, National Science Foundation (NSF)
- **Catherine Woteki**, Under Secretary for Research, Education, and Economics and Chief Scientist, U.S. Department of Agriculture (USDA)
- **Christopher Austin**, Director, National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health (NIH)
- **Erik Antonsson**, Corporate Director of Technology, Northrop Grumman
- **Stephen Cross**, Executive Vice President for Research, Georgia Institute of Technology
- **Susan Sloan**, Director, GUIRR

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# Meetings held in 2016



FEBRUARY

**Critical Infrastructure Security: The Role of Public-Private Partnerships**



JUNE

**Building Smart Communities for the Future**



OCTOBER

**The Fourth Industrial Revolution**

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# Workshop held in 2016



MARCH

## **T-Summit 2016: Transformational Approaches to Creating T-Shaped Professionals**

Hosted by: GUIRR, UIDP, Virginia Tech

Founding sponsors: IBM, Michigan State University

Co-Sponsors: CannonDesign, CISCO, Purdue

University, AAU, UNC Charlotte, Elsevier, International Society of Service Innovation Professionals

<http://tsummit.org/>

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# Coming Up!

The image is a collage of scientific and mathematical content. At the top, there are several matrices and equations. One matrix is  $(a) = \begin{pmatrix} 0 & 0 & \sqrt{2} & 0 \\ 0 & 0 & 0 & \sqrt{5} \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{pmatrix}$ . Another is  $(a') = \begin{pmatrix} 0 & \sqrt{2} & 0 & 0 \\ 0 & 0 & \sqrt{5} & 0 \\ 0 & 0 & 0 & \sqrt{6} \\ 0 & 0 & 0 & 0 \end{pmatrix}$ . There are also equations like  $\int_0^{\theta} \frac{d\theta}{(0 - \theta)^{3/2}} = \left(\frac{2}{L}\right)^{1/2} \int dt$  and  $W(\phi) = \frac{1}{r(\phi)}$ . The central part of the image features the title "Examining the Mistrust of Science" in large, bold, black letters. Below the title, the text "February 28 - March 1, 2017 | National Academy of Sciences Building, Washington, DC 20418" is written in a smaller font. The bottom part of the image contains various physics and mathematics formulas and graphs. On the left, there are equations like  $\frac{1}{2}(\hat{x} - i\hat{p})(\hat{x} + i\hat{p}) + \frac{1}{2}$  and  $E = mc^2$ . In the center, there are three graphs showing wave-like functions. On the right, there are equations like  $\ddot{x} + \frac{g}{L} \sin \theta = 0$ ,  $F_n = -Cx$ ,  $\ddot{x} + \frac{c}{m}x = 0$ ,  $x = A \sin(\omega t + \phi)$ ,  $\ddot{x} = \omega^2 A \cos(\omega t + \phi)$ ,  $\ddot{x} = -\omega^2 A \sin(\omega t + \phi)$ ,  $x = A \sin(\omega t + \frac{1}{2}\pi) = A \cos(\omega t)$ ,  $K = \frac{1}{2} M \dot{x}^2 = \frac{1}{2} M \left[ \omega A \cos(\omega t + \phi) \right]^2$ , and  $\Delta = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2}$ . There are also some quantum mechanics related terms like  $|\varphi_{n+1}\rangle$  and  $|\varphi_{n-1}\rangle$ .

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# With this next meeting we will consider:

- (1) the trends in public opinion of science
- (2) potential sources of mistrust both internal and external to the science community
- (3) ways in which cross-sector collaboration between government, universities, and industry may improve public trust in science and scientific institutions in the future

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# Upcoming Webinar

FREE \* ONLINE REGISTRATION REQUIRED \* 1 pm ET/10 am PT

January 24, 2017

## Making and Makerspaces in Education: Resources for Innovative Learning

With an emphasis on creating, designing, iterating, and sharing, makerspaces in educational settings have garnered acclaim for being antithetical to traditional models. Guest presenters **Jessica Parker, Director of Community and Learning**, and **Stephanie Chang, Director of Programs**, both with the **Maker Education Initiative**, will provide important resources for thinking through the design, organization, and management of an educational makerspace.

Webinar Moderator: Megan Nicholson, GUIRR Associate Program Officer

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# International Research Collaborations

- Planning an international workshop for Fall 2017
- FOCUS: The role of data and ethics in the context of international research agreements
- Will address such topics as how local and regional attitudes, cultures, and legal systems view data, data ownership, use and control of data as well as issues of privacy and confidentiality

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# Thank you. Questions?

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