

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

GUIRR UPDATE

Meeting of the Federal Demonstration Partnership (FDP)

Susan Sloan
Director, GUIRR
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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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First Meeting of 2017

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 $\int_0^{\theta} \frac{d\theta}{(0^2 - \theta^2)^{1/2}} = \left(\frac{2}{L}\right)^{1/2} \int dt$ 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 reads "February 28 - March 1, 2017 | National Academy of Sciences Building, Washington, DC 20418". The bottom section 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 $\ddot{x} + \frac{g}{L} \sin \theta = 0$, $F_n = -Cx$, $\ddot{x} + \frac{c}{m}x = 0$, $x = A \sin(\omega t + \phi)$, $\ddot{x} = -\omega^2 A \sin(\omega t + \phi)$, $\ddot{x} + \omega_0^2 x = 0 \rightarrow \omega_0 = \left(\frac{c}{m}\right)^{1/2}$, $x = A \sin(\omega t + \frac{1}{2}\pi) = A \cos(\omega t)$, $K = \frac{1}{2} M \dot{x}^2 = \frac{1}{2} M \left[\omega_0 A \cos(\omega t + \phi) \right]^2$, $\Delta = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2}$, $i\hbar \frac{\partial}{\partial t} \Psi(\vec{r}, t) = -\frac{\hbar^2}{2m} \Delta \Psi(\vec{r}, t) + V(\vec{r}, t) \Psi(\vec{r}, t)$, $\int |\Psi(\vec{r}, t)|^2 d^3r = 1$, and $E^2 = p^2 c^2 + m^2 c^4$.

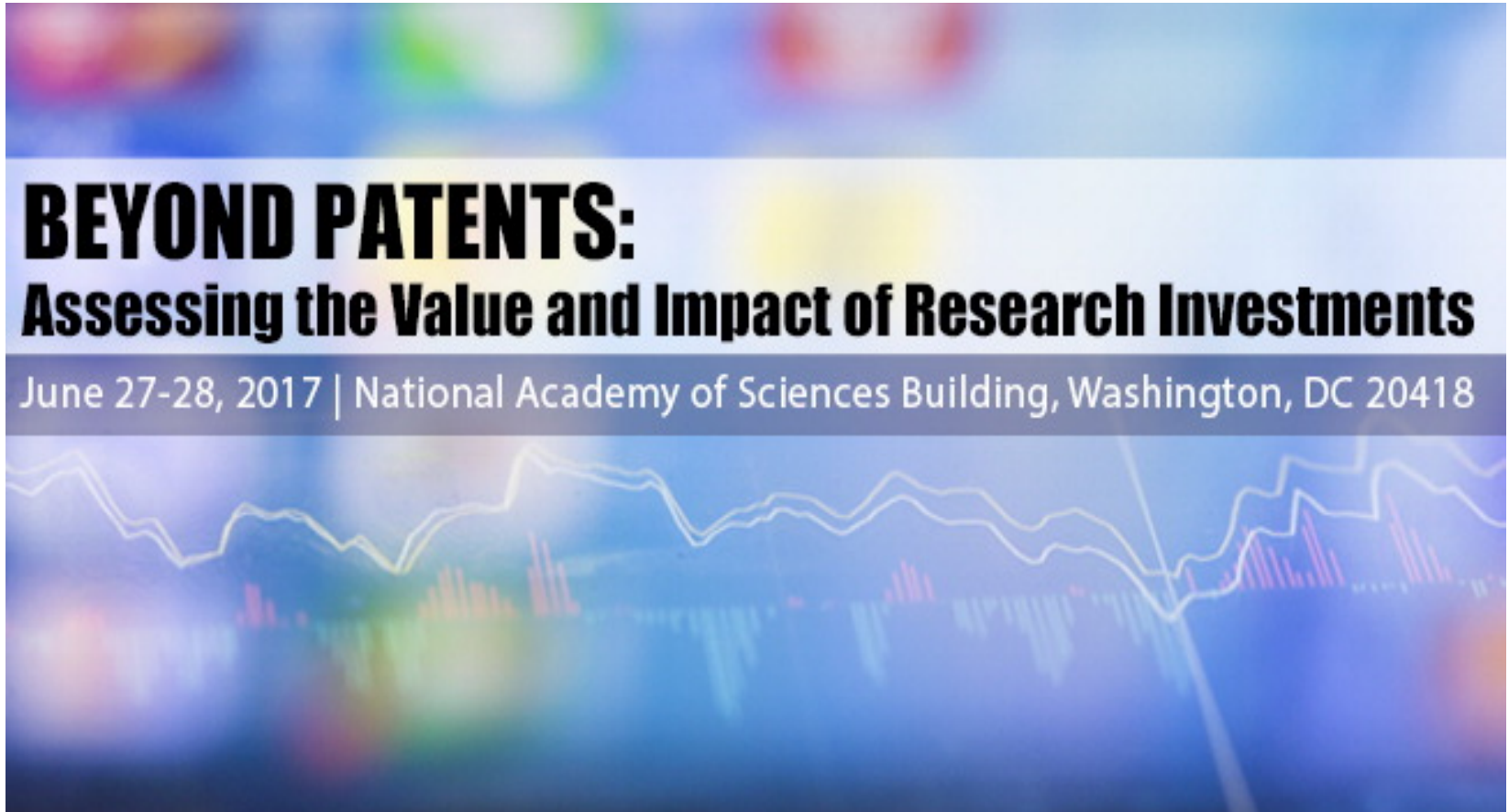
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We considered:

- (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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Second Meeting of 2017



BEYOND PATENTS: Assessing the Value and Impact of Research Investments

June 27-28, 2017 | National Academy of Sciences Building, Washington, DC 20418

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We considered:

- (1) Why patents alone are not an accurate measure of innovation
- (2) What other measures of translational and transition impact are available
- (3) What metrics best serve to highlight the value of research investments
- (4) What mechanisms are needed to determine the right amount, the proper balance, and the overall effectiveness of research investments

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Third/Final Meeting of 2017

The Role of State Governments in ECONOMIC DEVELOPMENT and R&D COMPETITIVENESS

October 17-18, 2017

National Academy of Sciences Building
Washington, DC 20418



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We will consider:

- (1) How states implement policies to support innovation under budget constraints
- (2) How regional cluster development can drive innovation and economic growth
- (3) How a coordinated effort between state governments can influence the federal R&D agenda and national innovation competitiveness
- (4) Ways in which states react to federal policies to stimulate innovation at the state level

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GUIRR Monthly Webinar Series

Webinars held since the last FDP meeting include:

- Summer Recess; no webinar held in August
- July 20, 2017 – **Gender in the Global Research Landscape**
- June 15, 2017 – **Addressing Global Challenges through Partnership: The Mars, Incorporated and UC Davis Relationship**
- May 22, 2017 – **Highly Integrative Basic and Responsive Research (HIBAR): Partnerships for Discovery and Innovation**

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Next Webinar

The September webinar is not yet scheduled, but do please stay tuned.

We expect it will be a review of
ARPA-E.

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International Research Collaborations

- Planning an international workshop to be held March 14-16, 2018 at the NAS building in Washington, DC (*postponed from October 2017 due to concerns about guests obtaining foreign travel visas*)
- FOCUS: Ethics of data usage in international research collaboration
- 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?

ssloan@nas.edu

mnicholson@nas.edu

cbaylor@nas.edu

www.nas.edu/guirr

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