

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

“FLYING OVER THE VALLEY OF DEATH: ACCELERATING FROM DISCOVERY TO PRODUCT”

Agenda

Government-University-Industry Research Roundtable Meeting

February 12, 2008 (dinner)
One Washington Circle Hotel
The Crescent Room
1 Washington Circle., NW
Washington, D.C. 20037

February 13, 2008 (meeting)
National Academy of Sciences
2101 Constitution Avenue, NW
The Lecture Room
Washington, D.C. 20016

DAY 1 (Evening only)

**February 12, 2008 One Washington Circle Hotel, 1 Washington Circle, NW,
Washington, DC, 20037**

6:00–6:30pm **Cocktails – The Circle Bistro Lounge**

6:30–8:00pm **Dinner – The Crescent Room**

Speaker: Gary Pisano, Harvard Business School

Moderator: Lydia W. Thomas, President/CEO, Retired, Noblis

Gary Pisano is the Harry E. Figgie, Jr. Professor of Business Administration at the Harvard Business School. Since joining the Harvard faculty in 1988, he has taught both MBA and executive level courses on technology and operations management, operations strategy, competitive strategy, product development, the management of innovation, and health care. He currently serves as chair of the Technology and Operations Management Unit.

Professor Pisano's research has examined technology strategy, the management of product and process development, organizational learning, and vertical integration and outsourcing strategies. For the past 20 years, Pisano's research has also focused on strategy, R&D, and competition in biotechnology and pharmaceuticals. Professor Pisano has served as an advisor to senior managers at such companies as Amgen, Biogen, Becton Dickinson, Eli Lilly, Johnson & Johnson, Merck, Millennium Pharmaceuticals, Novartis, Pfizer, Roche, Siegfried Pharmaceuticals, State Street Bank, and Teradyne, assisting them in creating business and operating strategies and in improving product development performance. Professor Pisano holds a Ph.D. from the University of California, Berkeley and B.A. in economics from Yale University. Dr. Pisano's presentation is titled "Can Science Be a Business? Lessons from Biotech for the 21st Century Science Economy."

**“FLYING OVER THE VALLEY OF DEATH:
ACCELERATING FROM DISCOVERY TO PRODUCT”**

DAY 2 (8am- 3pm)

**February 13, 2008 National Academy of Sciences, 2101 Constitution Avenue, NW,
Washington, DC, 20016 – The Lecture Room**

7:30–8:00 Continental Breakfast

8:00–8:15 Welcome: Lydia W. Thomas, President/CEO, Retired, Noblis

8:15-8:45 **Greg Simon, President, FasterCures**

FasterCures is an “action tank” committed to saving lives by saving time. The nonprofit, nonpartisan organization examines the medical research and development process to discover and promote ways to accelerate the discovery, development, and deployment of new medical treatment for today’s deadly diseases. Mr. Simon’s presentation is titled “Top Ten Priorities for Accelerating Disease Research”.

8:45-8:50 Discussion

8:50-9:20 **A. Stephen Dahms, President/CEO, Alfred E. Mann Foundation
for Biomedical Engineering**

A. Stephen Dahms is President and CEO of the Alfred. E. Mann Foundation for Biomedical Engineering and oversees the creation of an initial 12-15 new biomedical product commercialization institutes at elite U.S. universities with start-up funding at \$150-200 m each. Dr. Dahms is a member of the NRC’s Roundtable on Biomedical Engineering Materials and Applications (BEMA) and serves on a number of national and international committees and commissions addressing the academic-bio/pharm/med device industry interfaces and the facilitation of interdisciplinary research, translational research, and translational development. Dr. Dahms’ presentation is titled “Impact of Onsite Development Centers at Universities”.

9:20-9:25 Discussion

9:25-9:55 **Yongmin Kim, Professor, University of Washington**

Kim founded the UW Image Computing Systems Laboratory, which focuses on hardware and software innovations in multimedia, image processing, computer graphics, medical imaging and advanced workstation design. He also started the Program on Technology Commercialization, aimed at educating students (undergraduate and graduate) on different aspects of commercialization with a goal of 'bridging the commercialization gap'. The course is co-taught with a Seattle-area venture capitalist and mainly involved guest lecturers from start-up companies. Dr. Kim’s presentation is titled "Educating the Next Generation of Innovators".

9:55-10:00 Discussion

10:00-10:20 Break

10:20-10:50 **Alpheus Bingham, Founder, InnoCentive**

InnoCentive cofounder Alpheus Bingham is bringing scientists together online to solve R&D challenges and succeeding where many others have failed. The business model requires that organizations pay to post research problems, which can be accessed by the site's registered scientists, who offer solutions. Dr. Bingham's presentation is titled "Crowdsourcing: Lessons from InnoCentive and other Experiments".

10:50-10:55 Discussion

10:55-11:25 **Frank Douglas, Senior Fellow, Ewing Marion Kauffman Foundation**

Frank Douglas is a Senior Fellow at the Ewing Marion Kauffman Foundation, Partner of Pure Tech Ventures and founder and first Executive Director of the MIT Center for Biomedical Innovation. He held several appointments at MIT including Professor of the Practice in the MIT Sloan School of Management, in the Departments of Biology, Biological Engineering, and the Harvard-MIT Division of Health Sciences and Technology. He is recipient of the 2007 Black History Makers Award in recognition of his contributions to the research and development of more than 20 medicines on the market and his many innovations in research and development methodology. These achievements were also recognized by his being awarded the Global Pharmaceutical R&D Director of the Year Award in 2001 and 2004. Dr. Douglas' presentation is titled "Breaking out of the Silo Mentality."

11:25-11:30 Discussion

11:30-12:00 Round Robin Discussion of GUIRR members' **Flying over the Valley of Death**

Moderator: Lydia W. Thomas, President/CEO, Retired, Noblis

12:15-1:30 Working Lunch – The Members Room

Louis Lanzerotti, Member, National Science Board

Arthur K. Reilly, Senior Director, Cisco Systems

"Is Basic Research Disappearing? Or Is It Just Hidden?"

Louis J. Lanzerotti, a member of the National Science Board since 2004, received a B.S. degree in engineering physics from the University of Illinois in 1960 and A.M. and Ph.D. degrees in physics in 1963 and 1965 from Harvard University. Lanzerotti joined the technical staff of Bell Laboratories in 1967.

Lanzerotti's principal research interests have included space plasmas, geophysics, and engineering problems related to the impacts of atmospheric and space processes and the space environment on space and terrestrial technologies. He has served as principal investigator or co-investigator on several United States NASA interplanetary and planetary missions including Voyager, Ulysses, Galileo, and Cassini. Currently, he is principal investigator on

the NASA Radiation Belts Storm Probes mission scheduled for a January 2012 launch.

Arthur K. Reilly, Senior Director, Strategic Technology Policy at Cisco Systems, has been a leader in improving interoperability and quality in networks through telecommunications standards for more than 20 years. As Cisco's principal representative to the International Telecommunications Union (ITU) and other UN activities on policy matters, he provides leadership in Cisco's global technology policy and standards management activities. He is currently a member of the Board of the US ITU Association.

Updates and Discussions on Current GUIRR Projects

1:45-2:00 Summary Update of Data Overload, Partnerships for Emerging Research Institutions, Federal Demonstration Partnership and University-Industry Demonstration Partnership

Moderator: Lydia W. Thomas, President/CEO, Retired, Noblis

In an effort to minimize time spent on project updates, these projects' activities since February will be summarized by the GUIRR co-chair.

2:00-2:10 Q&A between Membership and Working Group Leaders

- Data Overload: Tilak Agerwala
- Partnerships for Emerging Research Institutions: Vijaya Melnick/Juliet Garcia
- Federal Demonstration Partnership: David Wright
- University-Industry Demonstration Partnership: Susan Butts/Anthony Boccanfuso

2:10-2:40 A New Image of Computing

Thea Sahr, Associate Director, Educational Outreach, WGBH and Jill Ross, Director, Image of Computing Task Force, University of Colorado at Boulder

Thea Sahr is the Associate Director, Educational Outreach, for WGBH. Ms. Sahr has extensive experience producing national outreach campaigns and working with project teams to develop multimedia educational materials (e.g., activity guides, curricula for after-school providers, online training resources for professionals, web sites, etc.) Building relationships with national partners representing teachers, museums, engineers, scientists, and after-school providers, has resulted in tens of thousands of children exploring science and engineering with WGBH resources.

Jill Ross is the Associate Director for the National Image of Computing Task Force, housed at the University of Colorado at Boulder. The overarching goal is to inspire people to pursue educational and career opportunities in the computing-related disciplines. The task force consists of representatives from top global high-technology corporations and influential math and computer science associations.

Thea Sahr and Jill Ross will discuss ongoing and planned efforts related to the image of S&E careers, with a specific focus on computer science. As currently framed, the project seeks to determine whether a professional marketing approach to attracting students in S&E can make a difference in career choice.

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| 2:40-2:55 | Discussion |
| 2:55-3:00 | Proposal of New Topics or Projects for GUIRR |
| 3:00 | Adjourn |