

**DIVERSIFYING THE SCIENCE & ENGINEERING WORKFORCE:  
WOMEN, UNDERREPRESENTED MINORITIES, AND THEIR S&E CAREERS**

**The Science and Engineering Workforce Project**  
of the National Bureau of Economic Research

**Sponsored by the Alfred P. Sloan Foundation**  
January 14-15, 2005  
Richard B. Freeman and Daniel L. Goroff: Organizers

**The National Bureau of Economic Research**  
1050 Massachusetts Avenue, 3<sup>rd</sup> floor, Cambridge, MA

**Purpose:** Women and underrepresented minorities have increased their share of S&E degrees in the past two decades. What forces have facilitated/impeded this process? How has the labor market adjusted? What challenges do women and underrepresented groups face in the S&E job market and how can these be alleviated? What programs and policies can further the process of diversifying the science workforce?

**FRIDAY, JANUARY 14** (Shuttle buses depart front door of Sonesta Hotel, 5 Cambridge Pkway at 8:00am & 8:20am)

**Breakfast:** 8:15am (NBER, 1050 Mass. Ave, go to 3<sup>rd</sup> floor receptionist, then proceed to 2<sup>nd</sup> floor conference room)

**Opening Statement**

8:45am Richard B. Freeman, Greetings

**Panel 1: Introduction: The Current Situation**

9:00–10:30am Richard B. Freeman, Tanwin Chang, Hanley Chiang; Harvard University and NBER  
"Recent Progress in S&E Developments"

Mary Frase, NSF  
"Highlights of the NSF Women and Minorities Report"

Denice D. Denton, University of Washington  
"Diversifying Science and Engineering"

**Break:** 10:30am

**Panel 2: Research University Experiences**

Chair and first discussant: Daniel L. Goroff, Harvard University and NBER

10:45-12:15 Barbara J. Grosz, Harvard  
"Women in Science and Engineering at Harvard"

Nancy Hopkins, MIT  
"Women in Science and Engineering at MIT"

Linda Hamilton Krieger, UC Berkeley  
"Women in Science: Equal Employment and Educational Opportunity Law"

12:15 Linda Hamilton Krieger, UC Berkeley  
"Implicit Bias & the Female/Science Disassociation"

**Lunch:** 12:30 pm

Lawrence Summers, President, Harvard University  
"Faculty Diversity: Research Agenda"

Shirley Malcom, American Association for the Advancement of Science  
"Standing Our Ground in the Post-Michigan Era"

**Panel 3: Psychological and Sociological Aspects of Occupation Choice**

Chair and first discussant: Paula Stephan, Georgia State University

2:00-3:30pm Catherine D. Good, Columbia University  
"Closing Achievement Gaps"

Daniel B. Berch, National Institutes of Health  
"Quantitative and Scientific Reasoning: Perspectives from Cognitive Science"

Yu Xie, University of Michigan and Kimberlee Shauman, University of California, Davis  
"Sociological Aspects of S&E Career Participation"

**Break:** 3:30

#### **Panel 4: Learning from Successful Programs**

Chair and first discussant: Geoff Davis, Sigma Xi, The Scientific Research Society

3:45-5:30pm Sue Rosser, Georgia Institute of Technology  
"POWRE and ADVANCE Programs for Women"

David Manderscheid, University of Iowa  
"Minorities in the Iowa Mathematics PhD Program"

Sheila Tobias, Sloan Foundation, Science Masters Initiative  
"The Newest Master's: Professional Studies in the Sciences and Mathematics"

Wanda E. Ward, NSF  
"Optimizing America's Scientific Talent: Opening Doors to Success and Broadening Participation in Science and Engineering Careers"

**Break:** 5:30pm

**Informal Reception:** 6:00pm - The Harvard Faculty Club, 20 Quincy Street, Cambridge

**Dinner:** 6:30pm (after dinner, shuttle buses will return to Sonesta Hotel at 8:45pm and ~9:10pm)

Chairperson: Nila Bhakuni, Harvard University

Jaline Gerardin, Harvard Univ and Saundra Quinlan, MIT and Natl Society of Black Engineers  
"Science and Diversity: Student Views"

Anne C. Petersen, WK Kellogg Foundation  
"Hybrid Vigor: Strengthening the Science and Engineering Workforces with Women and Underrepresented Minorities"

**SATURDAY, January 15** (Shuttle buses depart front door of Sonesta Hotel at 7:45am and 8:15am for NBER)

**Breakfast:** 8:00am (NBER, 1050 Mass. Ave, entry instructions will be posted in the street level foyer)

#### **Panel 5: Academic Employment Issues**

Chair and first discussant: Charles Brown, University of Michigan and NBER

8:30-10:15am Catherine Weinberger, UC Santa Barbara  
"Is the Science and Engineering Workforce Drawn from the Far Upper Tail of the Math Ability Distribution?"

Donna J. Nelson, University of Oklahoma  
"National Analysis of Science and Engineering Diversity at Research Universities"

Cathy Trower, Harvard University  
"Portrait of an Intractable Problem"

Ronald Oaxaca, University of Arizona  
"Faculty Salary Determination at a Research I University"

**Break:** 10:15am

#### **Panel 6: Non-Academic Employment Issues**

Chair and first discussant: Sarah Turner, University of Virginia and NBER

10:30-12:15am Kristen Roby, Microsoft  
"Recruiting Scientists and Engineers"

William Berry, U.S. Department of Defense  
"National Security Needs for Scientists and Engineers"

Kjersten Bunker Whittington, Stanford University  
"Employment Sectors as Opportunity Structures: The Effects of Location on Male and Female Commercial Dissemination"

Sharon Levin, U of Missouri, St. Louis and Paula Stephan, Georgia State University  
"Leaving Careers in IT: Differences in Retention by Gender and Minority"

**Lunch: 12:15pm**

David Goldston, House Committee on Science  
"Congressional Viewpoints on S&E Representation"

**Adjourn:** 2:00pm

# DIVERSIFYING THE SCIENCE & ENGINEERING WORKFORCE: WOMEN, UNDERREPRESENTED MINORITIES, AND THEIR S&E CAREERS

## The Science and Engineering Workforce Project of the National Bureau of Economic Research

### Sponsored by the Alfred P. Sloan Foundation

January 14-15, 2005

Richard B. Freeman and Daniel L. Goroff: Organizers

### The National Bureau of Economic Research

1050 Massachusetts Avenue, 3<sup>rd</sup> floor

Daniel Berch	National Institutes of Health, NICHD, Program in Mathematics & Science Cognition, Director
Elaine Bernard	Harvard Law School, Labor & Worklife Program, Executive Director
William Berry	Dept of Defense, Acting Deputy Under Secretary of Defense, Laboratories & Basic Sciences
Nila Bhakuni	Harvard University, Office of Technology & Trademark Licensing, Technology Transfer Officer
John Bound	University of Michigan, Department of Economics and NBER
Charles Brown	University of Michigan, Department of Economics and NBER
Tanwin Chang	Harvard Law School, Labor & Worklife Program and NBER, Policy Analyst
Hanley Chiang	Harvard University and NBER, Researcher
Geoff Davis	Sigma Xi, The Scientific Research Society, Visiting Scholar
Denice D. Denton	University of Washington, College of Engineering, Dean
Catherine Didion	Intl Network for Women in Engineering & Science, INWES, Director, and The Didion Group, VP
Mary J. Frase	National Science Foundation, Science Resource Statistics SBE/SRS, Deputy Division Director
Richard B. Freeman	Harvard University, Department of Economics and NBER
Jaline Gerardin	Harvard University, Degree candidate, Physics & Chemistry
David Goldston	House Committee on Science, Chief of Staff
Catherine D. Good	Columbia University, Department of Psychology, Postdoctoral Research Fellow
Daniel L. Goroff	Harvard University, Department of Mathematics and NBER
Barbara J. Grosz	Harvard University, Department of Natural Sciences
Alice Hogan	National Science Foundation, ADVANCE Program Director
Nancy Hopkins	MIT, Department of Biology
Shulamit Kahn	Boston University, Department of Finance and Economics
Linda Hamilton Krieger	UC, Berkeley, School of Law
Sharon Levin	University of Missouri, St. Louis, Department of Economics
Shirley Malcom	AAAS, Head of the Directorate for Education and Human Resources
David Manderscheid	University of Iowa, Department of Mathematics
Donna J. Nelson	University of Oklahoma, Department of Chemistry and Biochemistry
Ronald Oaxaca	University of Arizona, Department of Economics
Anne C. Petersen	W.K. Kellogg Foundation, Senior Vice President for Programs
Sandra Quinlan	MIT and National Society of Black Engineers, New England Zone Chairperson
Kristen Roby Dimlow	Microsoft, Microsoft College/MBA Recruiting, Senior Director
Sue Rosser	Georgia Institute of Technology, Ivan Allen College, Dean
Kimberlee Shauman	UC Davis, Department of Sociology
Paula Stephan	Georgia State University, Andrew Young School of Policy Studies
Lawrence Summers	Harvard University, President, and NBER
Michael Teitelbaum	Alfred P. Sloan Foundation, Program Director
Sheila Tobias	Sloan Foundation Science Masters Initiative, Outreach Coordinator
Cathy Trower	Harvard University Grad Sch of Education, The Study of New Scholars, Research Associate
Jack Trumbour	Harvard Law School, Labor & Worklife Program, Research Director
Sarah Turner	University of Virginia, Department of Education and Economics, and NBER
Wanda E. Ward	National Science Foundation, Social Behavioral & Economic Sciences, Acting Asst Director
Bruce A. Weinberg	Ohio State University, Department of Economics
Catherine Weinberger	UC, Santa Barbara, Institute for Social, Behavioral and Economic Research
Kjersten Bunker Whittington	Stanford University, PhD candidate, NBER-SEWP Fellowship recipient
Heidi Williams	Harvard University, PhD candidate
Yu Xie	University of Michigan, Institute for Social Research, Senior Research Scientist
John Yochelson	BEST - Building Engineering and Science Talent, President
Nina Zipser	Harvard University, Budget and Finance Office, Director, Institutional Research