Internationalizing Graduate Education:
Benefits, Challenges and Questions

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NSF Objectives for International Activities

- **Discovery**
- **Globally engaged U.S. workforce**

International cooperation in science is not a luxury; it is a necessity – and the foundation for the future.

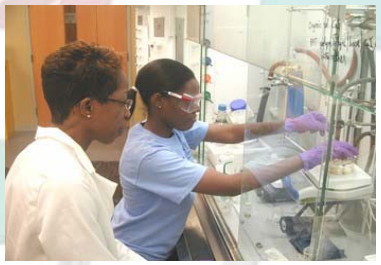
Arden L. Bement, Jr., NSF Director, NSF Beijing Office Opening, 2006

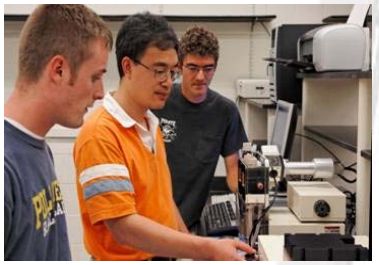
About OISE

Mission: Ensure that NSF and the U.S. research and education community thrive in the changing landscape of global science and engineering through international collaboration

Priorities:

- Develop a globally engaged U.S. workforce
- Advance U.S. research excellence through new collaborations
- Scale up partnerships & international networks





Contexts for Discussion

Knowledge Environment Level

- Quality of Science

Institutional Level

- University
- Research Group

Individual Level

- Career Trajectory
- Skill Development

Knowledge Environment Level

Quality of Science

Benefits:

- **Access to best expertise**
- **Previously unavailable resources**
- **Different approaches**

Challenges:

- **Varying nature of international engagement**

Questions:

- **Different impacts by discipline**
- **Perceived value of international collaboration**
- **NSF's role in promoting international involvement**

Institutional Level

University

Benefits:

- **Vehicle for world-class faculty/researchers**
- **Number and quality of student applicants**
- **Public relations and fundraising**

Challenges:

- **Variation in degree requirements**

Questions:

- **Structure of international experience**
- **Working with international funding agencies**
- **Evolving nature of institutions**
- **Benefits to students who do not travel**

Institutional Level

Research Group

Benefits:

- **Expansion of graduate student's collaboration**

Challenges:

- **Time/resource costs of graduate student's absence**

Questions:

- **Value of new vs. existing collaborations**
- **Appropriateness of scaling up partnerships**

Individual Level

Career Trajectory

Benefits:

- Generate and sustain engagement in STEM
- Additional mentoring and career guidance

Challenges:

- Impact on degree trajectory
- Family/financial commitments

Questions:

- Optimal timing for international experience
- Attractiveness to potential employers
- Perspective of graduate student community

Individual Level

Skill Development

Benefits:

- **Diverse tools, flexibility, cultural understanding**
- **Move beyond simple appreciation of differences**
- **Communication across boundaries, cultures, languages**

Challenges:

- **Language and cultural barriers**
- **Transferability of skills**

Questions:

- **Evaluating impact of international experience**
- **Benefits of cyber-enabled collaborations**