

**The Globalizing Engineers Workshop:  
Personal Geographies of Engineering Educators**

**September 5-6, 2008  
National Academy of Engineering, Washington, DC**

**Hosted by the  
Center for the Advancement of Scholarship in Engineering Education  
National Academy of Engineering**

**Gary Downey, Virginia Tech, Organizer  
Brent Jesiek, Purdue University, Co-Organizer  
Juan Lucena, Colorado School of Mines, Co-Organizer  
Kacey Beddoes, Virginia Tech, Graduate Student Organizer**

**Sponsored by  
U.S. National Science Foundation  
and  
Virginia Tech**

**In cooperation and affiliation with the  
International Network for Engineering Studies (INES)**

**Project summary**

The purpose of this project is to produce a book collection mapping the emergence of global education practices for U.S. engineering students through the individual experiences of committed educators. The core of the volume consists of individual “personal geographies” written by project participants. These personal geographies provide detailed accounts of the unique trajectories participants have followed in formulating and enacting visions for global engineering education. An introduction and two background chapters place these geographies in broader contexts. As a whole, the collection documents for readers the struggles, accomplishments, and continuing challenges that have constituted the emergence of global education for engineers to date as well as maps the contemporary situation and possible future trajectories. The expected readers of the volume include educators, administrative officials, and students interested in global education for engineers, as well as engineering education researchers.

## Workshop Schedule

<b>Friday Sept 5</b> 8:35am		<b>Welcome/ Overview</b>	<b>Gary Downey Norman Fortenberry</b>	
		<u><b>Paper</b></u>	<u><b>Primary</b></u>	<u><b>Secondary</b></u>
1 9:00-9:30am	Group 1, Paper 1	McKnight	Downey	Nugent
2 9:35-10:05am	Group 1, Paper 2	Widdig	McKnight	Mook
3 10:10-10:40am	Group 2, Paper 10	Vaz	Lucena	Pinnell
4 10:45-11:15am	Group 2, Paper 11	Mihelcic	Vaz	Elliott
5 11:20-11:50am	Group 1, Paper 3	Ramaswami	Mook	Hirleman
6 11:55am-12:25pm	Group 1, Paper 4	Mook	Conger	Downey
12:25-1:00pm	Lunch			
7 1:00-1:30pm	Group 2, Paper 12	Pinnell	Grandin	Gerhardt
8 1:35-2:05pm	Group 2, Paper 13	Elliott	Mihelcic	Grandin
9 2:10-2:40pm	Group 1, Paper 5	Downey	Nugent	Ramaswami
10 2:45-3:15pm	Group 1, Paper 6	Phillips	Widdig	Conger
11 3:20-3:50pm	Group 2, Paper 14	Lucena	Pinnell	Mihelcic
12 3:55-4:25pm	Group 2, Paper 15	Gerhardt	Jesiek	Vaz
4:30-5:30pm	<b>Plenary discussion I: Emerging themes</b>			
7:00pm-?	Dinner at Levante's (Dupont Circle, 1320 19th Street NW)			
<b>Saturday Sept 6</b>				
13 8:35-9:05am	Group 1, Paper 7	Nugent	Hirleman	Phillips
14 9:10-9:40am	Group 1, Paper 8	Hirleman	Ramaswami	McKnight
15 9:45-10:15am	Group 2, Paper 16	Grandin	Elliott	Lucena
16 10:20-10:50am	Group 2, Paper 17	Parkinson	Gerhardt	Jesiek
17 10:55-11:25am	Group 1, Paper 9	Conger	Phillips	Widdig
11:05am-12:05pm	<b>Plenary discussion II: Publication plans and implications for scaling up</b>			

## Workshop Format

*Overview:* The Globalizing Engineers Workshop brings together the authors of personal geographies and background chapters for the proposed volume, as well as several observers.

The 1½ day Workshop employs a unique format of focused discussion around sixteen previously-drafted manuscripts, as well as two plenary sessions.

*Groups:* We have divided participants into two groups to keep discussions of manageable size and better allow themes to emerge over the course of the Workshop. We encourage you to attend and contribute to sessions beyond those of your group.

*Paper Discussions:* Each 30-minute Discussion is conducted by a group of 8-9 readers, led by Primary and Secondary Respondents. All group members must be prepared to discuss every paper. The discussion time for each paper is only 30 minutes. Please keep to time. If a given session begins late, it should still end at the scheduled time. The schedule has no flexibility. We are audio-recording sessions for the sole use of editors and any authors who could not attend.

*Authors:* Authors are free to give a 1-minute introduction to the manuscript and where it is going. You then have to sit quietly and listen for the rest of the session. The purpose is to replace the typical Author-Meets-Critics exchange with a discussion in which respondents assume both roles. You get 30 minutes in which 8-9 colleagues are trying to help you.

*Primary Respondent:* Your job is to begin the session on time, allow the author a 1-minute introduction, and then spend about 5 minutes summarizing the manuscript and the written comments. Describe what the author is seeking to accomplish and provide a brief overview of major strengths and possible areas for further work. Remember you are engaging unfinished work as a colleague rather than drafting a review for an editor. After the Secondary Respondent is finished, you are responsible for calling on other participants for their comments. Please end the session on time.

*Secondary Respondent:* After the primary respondent speaks, you have 2 minutes to address points not raised by the Primary Respondent or offer additional emphasis in one or more areas. The conversation established between the Secondary and Primary Respondent prompts others to join the discussion.

*Plenary Discussions:* These are open discussions designed to highlight emerging themes. They also produce topics and text for the volume's introduction and background chapters.

### **Workshop Draft Manuscripts**

Conger, Amy (University of Michigan), “From Outsider to Insider: My Professional Transition to Global Engineering Education”

Downey, Gary (Virginia Tech), “Uncertain Participation: Problem Definition and the Global Engineer”

Elliott, Gayle G. (University of Cincinnati), “International (Engineering) Co-op Program”

Gerhardt, Lester (Rensselaer Polytechnic Institute), “A Personal Journey”

Grandin, John M. (University of Rhode Island), “The International Engineering Program at the University of Rhode Island: Two Decades of Achievement.”

Hirleman, E. Dan (Purdue University), “Towards Education of Global Engineers and Global Citizens”

Lucena, Juan (Colorado School of Mines), “What is Engineering For? A Personal Geography from Engineering Student to Academic Activist”

McKnight, Phil (Georgia Tech), “Developing Global Competency for Engineers (and everyone else): Pathways to the Foreign Language Perspective for Intercultural Competency and the International Practice of the Discipline”

Mihelcic, James R. (University of South Florida), “The Right Thing to Do: Development of the Master’s International Program”

Mook, D. Joseph (SUNY Buffalo), “A Brief Accounting of My World: My Personal Trajectory in International Engineering Education”

Nugent, Michael (The Language Flagship, National Security Education Program, U.S. Department of Defense), “Integrating International Study and the Professions: A case of the FIPSE International Consortia Programs”

Parkinson, Alan (Brigham Young University), “Global Exposure: The Development of Engineering Study Abroad Programs at Brigham Young University”

Phillips, Linda (Michigan Technological University), “Requests and Responses: The Development of ISD”

Pinnell, Margaret F. (University of Dayton), “Global Education through International Service-Learning”

Ramaswami, Anu (University of Colorado Denver), “Finding (and Educating) Self and Others in Two Worlds”

Vaz, Rick (Worcester Polytechnic Institute), “Reflections on Fifteen Years in International Engineering Education”

Widdig, Bernd (Boston College), “Communicating Across Cultures: Humanities in the Global Education of Engineers”

### **Background Chapters**

Jesiek, Brent and Kacey Beddoes (Purdue University and Virginia Tech), “Development, Competitiveness, and Globalization: Historical Perspectives on the International Dimensions of American Engineering Education”

Lucena, Juan (Colorado School of Mines), “Immigrant Engineers in the US: Histories, Experiences, Contributions”

### **Additional Participant Observers**

Norman Fortenberry, Director, Center for the Advancement of Scholarship on Engineering Education (CASEE), National Academy of Engineering

Russell Pimmel, Program Director, Course, Curriculum and Laboratory Improvement (CCLI) Program and Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP), Division of, National Science Foundation

Lesia Crumpton-Young, Program Director, NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM), Division, National Science Foundation

Lance Davis, Executive Office, National Academy of Engineering

Catherine Didion, Senior Program Officer, Diversity in the Engineering Workforce, National Academy of Engineering

Rachelle Hollander, Director, Center for Engineering, Ethics, and Society, National Academy of Engineering

Janet Hunziker, Senior Program Officer, Frontiers of Engineering, National Academy of Engineering

Greg Pearson, Senior Program Officer, Public Understanding of Engineering and K-12 Engineering, National Academy of Engineering

Proctor Reid, Director, Program Office, National Academy of Engineering

Sheryl Sorby, Program Director, National Science, Technology, Engineering, and Mathematics Education Digital Library (NSDL), Division of , National Science Foundation

Allen Soyster, Director, Engineering Education and Centers Division (EEC), National Science Foundation

Richard Taber, Program Officer, Committee on Engineering Education, National Academy of Engineering

### **What is the International Network for Engineering Studies?**

The field of engineering studies is a diverse, interdisciplinary arena of scholarly research built around the question: What are the relationships among the technical and the nontechnical dimensions of engineering practices, and how do these relationships change over time and from place to place? Addressing and responding to this question can sometimes involve researchers as critical participants in the practices they study, including, for example, engineering formation, engineering work, engineering design, equity in engineering (gender, racial, ethnic, class, geopolitical), and engineering service to society.

The International Network for Engineering Studies (INES; [www.inesweb.org](http://www.inesweb.org)) was born in 2004 in Paris, France with a threefold mission:

- (1) to advance research in historical, social, cultural, political, philosophical, rhetorical, and organizational studies of engineers and engineering;
- (2) to help build and serve diverse communities of researchers interested in engineering studies;
- (3) to link scholarly work in engineering studies to broader discussions and debates about engineering education, research, practice, policy, and representation.

*Engineering Studies: Journal of the International Network for Engineering Studies* is published three times yearly by Routledge, an imprint of the Taylor & Francis Group, beginning in 2009 ([www.informaworld.com/engineeringstudies](http://www.informaworld.com/engineeringstudies))