



CURRICULUM VITAE

Gary Lee Downey
Alumni Distinguished Professor of Science and Technology Studies
www.downey.sts.vt.edu

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EDUCATION

- Ph.D. 1981 The University of Chicago (Cultural Anthropology).
Dissertation: Liberation Ideology and the Anti-Nuclear Movement.
- M.A. 1977 The University of Chicago (Cultural Anthropology).
Thesis: Technology, Society, and Values: An Anthropological Study of the Nuclear Controversy.
- B.S. 1974 Lehigh University (Mechanical Engineering).
- B.A. 1974 Lehigh University (Social Relations).

PROFESSIONAL EMPLOYMENT

- 2007-present Alumni Distinguished Professor, Science and Technology Studies, Department of Science and Technology in Society, Virginia Tech, Blacksburg, Virginia.
- 1999-2007 Professor, Science and Technology Studies, Department of Science and Technology in Society, Virginia Tech, Blacksburg, Virginia.
- 2004-present Affiliated Faculty Member, Department of Engineering Education, College of Engineering, Virginia Tech, Blacksburg, Virginia.
- 2004-present Faculty Affiliate, Center for the Advancement of Scholarship in Engineering Education, National Academy of Engineering.
- 2004-2007 Senior Fellow, Center for the Advancement of Scholarship in Engineering Education, National Academy of Engineering
- 1996-present Contributing Faculty Member, Women's and Gender Studies, Virginia Tech, Blacksburg, Virginia.
- 1989-present Adjunct Professor, Department of Sociology, Virginia Tech, Blacksburg, Virginia.
- 1997-2000 Director, Center for Science and Technology Studies and Graduate Program in Science and Technology Studies, Virginia Tech, Blacksburg and Falls Church, Virginia
- 1989-1999 Associate Professor of Science and Technology Studies, Center for Science and Technology Studies/Center for Interdisciplinary Studies, Virginia Tech, Blacksburg, Virginia.
- 1983-1989 Assistant Professor of Technology Studies, Center for the Study of Science in Society, Virginia Tech, Blacksburg, Virginia.
- 1981-1983 Assistant Professor of Science, Technology, and Society, Department of Social Sciences, Michigan Technological University, Houghton, Michigan.
- 1980-1981 Mellon Foundation Fellow, Committee on Radioactive Waste Management, National Academy of Sciences/National Research Council, Washington, D.C.
- 1977-1978 Instructor, Department of Sociology and Anthropology, Chicago State University, Chicago, Illinois.
- Summer 1977 Fellow, Center for the Interdisciplinary Study of Science and Technology, Northwestern University, Evanston, Illinois.
- 1974 Environmental Engineer, Glenshaw Glass Company, Glenshaw, Pennsylvania.
- Summer 1972 Design Engineer Trainee, Eastman Kodak Company, Rochester, New York.

HONORS AND AWARDS

Award for Faculty Excellence

Recipient, 2011 Outstanding Faculty Award, Virginia State Council of Higher Education (for excellence in research, teaching, and public service; highest-rated of 106 nominees from 12 institutions).

Distinguished/Keynote Lectures

Keynote lecture, "The (Professional) Formation of Engineers," Engineering Education Awardees Conference, NSF Division of Engineering Education and Centers, Engineering Directorate, Arlington, Virginia: September 2014

Opening Keynote, "Big STS: Critical Analysis for Critical Participation," joint congress of the Brazilian Association for Social Studies of Science and Technology (ESOCITE.BR) and National Symposium on Technology and Society at the Federal Technological University of Paraná, Curitiba, Brazil: October 2013 (<https://www.youtube.com/watch?v=-hGPRAcemXw>)

Keynote lecture, "Engineers and Sustainability: Achieving Technological Transitions," International Network for Engineering Studies (INES)/Norwegian University of Science and Technology conference Trondheim, Norway: June 2013.

Air Products Distinguished Lecture, Department of Mechanical and Nuclear Engineering, Pennsylvania State University: 2010

Distinguished Lecture, American Society of Engineering Education Annual Meeting, Chicago, Illinois: 2006.

Keynote Lecture, Engineering Research Centers Annual Meeting, National Science Foundation, Washington, D.C.: 2006.

Keynote Lecture, Engineering Education Leadership Institute, National Academy of Engineering, Chicago, Illinois: 2006.

Keynote Lecture, 7th World Congress of Chemical Engineering, Glasgow, Scotland: 2005.

Keynote Lecture, Aviation Communication and Culture Conference, Embry-Riddle Aeronautical University, Prescott, Arizona: 1997.

Keynote Address, Conference for the National Software Exchange, National Aeronautics and Space Administration, Ames Research Center, Moffett Field, California, "Cultural Tensions in the National Software Exchange": April 1991.

Keynote Address, Aircraft Design Conference, Ames Research Laboratory, National Aeronautical and Space Administration, California: April 1990.

Awards for Teaching Excellence

Anchor Teacher, 28th Annual International Summer School, 2014 National Graduate Program in Science, Technology, and Modern Culture (WTMC), Ravenstein, The Netherlands.

Nominee, 2014 U.S. Professor of the Year, Council for Advancement and Support of Education (CASE) and Carnegie Foundation for the Advancement of Education; nominated by Virginia Tech.

Recipient, 2008 Sterling Olmsted Award, Liberal Education Division, American Society for Engineering Education (for distinguished contributions in the teaching and administering of liberal arts in engineering education).

Recipient, 2007 Outstanding Dissertation Advisor Award in Humanities and Social Sciences, Graduate School, Virginia Tech.

Awarded Boeing Company Senior Fellowship in Engineering Education, National Academy of Engineering: 2004-2007.

Recipient, William E. Wine Award, Virginia Tech (for career excellence in teaching): 2004.

Member, Academy of Teaching Excellence, Virginia Tech: 2004.

Co-Recipient, XCaliber Award, Virginia Tech (team leader, for innovative scholarship in teaching with technology): 2003.

3 Certificates of Teaching Excellence, Virginia Tech: 2003, 1992, 1987.

Certificate of Excellence, XCaliber Award Program, Virginia Tech (for innovative scholarship in teaching with technology): 2002

Diggs Teaching Scholar Award, Virginia Tech (for innovative scholarship in teaching): 1997.

Other Honors for Teaching Excellence

Featured interview, *VTMag*, “When Worlds Collide”: Spring 2012

Invited Member, “Life of the Mind for Practice Seminar,” Carnegie Foundation for the Advancement of Teaching, Menlo Park, California: 2002-2007.

Featured interview, *Professional Engineer Magazine*, “Students Get a Dose of Global Culture”: Spring 2007.

Featured interview, *Mechanical Engineering Magazine*, “Engineer as Nation Builder”: April 2006.

Featured interview, *SWE Magazine* [Society of Women Engineers], “Jobs Beyond Borders”: November 2005 (one of four interviewees).

Featured interview, *tce* [*The Chemical Engineer*, London, U.K.], “Downey to Business: Cillian O’Neill speaks with Gary Downey about the Interface between Engineering and Anthropology”: August 2005.

Featured interview, *CEUT Newsletter*, Center for Excellence in Undergraduate Teaching, Virginia Tech, “What Works for Faculty: Terry Wildman Interviews Gary Downey”: Spring 2005.

Virginia Tech nominee, National Professor of the Year, awarded by Council for the Advancement and Support of Education and Carnegie Foundation for the Advancement of Teaching: May 2004.

Virginia Tech nominee, Distinguished Teaching Scholar Award, National Science Foundation: October 2004.

Honors/Awards for Research Excellence

Elected President, Society for Social Studies of Science (1,500 members; 60% non-U.S.): 2013-2015.

Invited Member, Action Forum for Diversity in the Engineering Workforce, National Academy of Engineering, Washington, D.C.: 1999-2002.

Elected Fellow of the American Anthropological Association: "Fellowship recognizes those making significant scholarly contributions to the field of anthropology": 1993.

Other Honors/Awards

Wilson Prize, Department of Mechanical Engineering, Lehigh University, top student (Rank: #2/420 College of Engineering, #3/360 College of Arts and Sciences; GPA=3.90): 1974.

5 Honorary Fraternities: Phi Beta Kappa (Liberal Arts), Tau Beta Pi (Engineering), Sigma Xi (Sciences), Pi Tau Sigma (Mechanical Engineering), Phi Eta Sigma (Freshman)

Valedictorian, Shaler High School, Pittsburgh, Pennsylvania, (#1/510, GPA=4.00): 1969.

PUBLICATIONS AND GRANTS

PUBLICATIONS

Books

Han, Kyonghee and Downey, Gary Lee. 2014. *Engineers for Korea*. San Rafael, California: Morgan & Claypool Publishers (note: Korean translation forthcoming, Humanity Press).

Downey, Gary Lee and Kacey Beddoes, eds. 2011. *What Is Global Engineering Education For?: The Making of International Educators*. San Rafael, California: Morgan & Claypool Publishers.

Downey, Gary Lee. 2003. *Engineering Cultures* (video textbook; 520pp transcript, www.globalhub.org). Blacksburg, Virginia: Virginia Polytechnic Institute and State University.

Downey, Gary Lee. 1998. *The Machine in Me: An Anthropologist Sits Among Computer Engineers*. New York: Routledge.

Downey, Gary Lee and Joseph Dumit, eds. 1998. *Cyborgs and Citadels: Anthropological Interventions in Emerging Sciences and Technologies*. Santa Fe, NM: The SAR Press.

Journal (Special Issue)

Brown, John, Gary Downey, and Maria Paula Diogo, eds. 2009. "Engineering Education." *Technology and Culture* 50(October)4 (Special 50th Anniversary Issue).

Lucena, Juan C. and Gary Lee Downey, eds. 2006. "From Region to Countries: Engineers and Engineering Education in Bahrain, Egypt, and Turkey," *IEEE Technology and Society* 25(Summer)2 (Special Issue).

Hogle, Linda and Gary Lee Downey, eds. 1999. "Working for Them: Essays in Honor of Diana Forsythe," *Anthropology of Work Review*, 20(September)1 (Special Issue).

Articles in Refereed Journals

Brown, John K., Gary Lee Downey, and Maria Paula Diogo. 2009. "Engineering Education and History of Technology." *Technology & Culture* 50(October)4:737-752.

Downey, Gary Lee. 2009. "What is Engineering Studies For?: Dominant Practices and Scalable Scholarship." *Engineering Studies: Journal of the International Network for Engineering Studies* 1(1):55-76.

Downey, Gary Lee. 2009. "International Engineering Education as a Knowledge Problem" *Online Journal of Global Engineering Education* 4(1).

Downey, Gary Lee. 2008. "The Engineering Cultures Syllabus as Formation Narrative: Critical Participation in Engineering Education through Problem Definition," *St. Thomas Law Journal* (special symposium issue on professional identity in law, medicine, and engineering) 5(2):101-130.

- Lucena, Juan C., Gary Lee Downey, Brent Jesiek, Sharon Elber. 2008. "Competencies Beyond Countries: The Re-Organization of Engineering Education in the United States, Europe, and Latin America," *Journal of Engineering Education* 96(October)4:433-447.
- Parkhurst, Rosamond, Barbara M. Moskal, Gary Lee Downey, Juan C. Lucena, Thomas Bigley, Sharon Elber. 2008. "Engineering Cultures: Online versus In-class." MERLOT: Journal of Online Learning and Teaching 4(December)4:438-444.
- Parkhurst, Rosamond, Barbara M. Moskal, Juan C. Lucena, Gary Lee Downey, Thomas Bigley, Sharon Elber. 2008. "Engineering Cultures: Comparing Student Learning in Online and Classroom-Based Implementations." *International Journal of Engineering Education* 24(5):955-965.
- Downey, Gary Lee, Juan C. Lucena, and Carl Mitcham. 2007. "Engineering Ethics and Identity: Emerging Initiatives in Comparative Perspective." *Science and Engineering Ethics* 13(December)4: 463-487.
- Downey, Gary Lee. 2007. "Low Cost, Mass Use: American Engineers and the Metrics of Progress." *History and Technology* 22(September)3: 289-308.
- Lucena, Juan C., Gary Lee Downey, and Hussein A. Amery. 2006. "From Region to Countries: Engineers and Engineering Education in Bahrain, Egypt, and Turkey." *IEEE Technology and Society* 25(Summer)2:3-10
- El-Sayed, Osman Lotfy, Juan C. Lucena, and Gary Lee Downey. 2006. Engineering and Engineering Education in Egypt. *IEEE Technology and Society* 25(Summer)2:17-24.
- Downey, Gary Lee, Juan C. Lucena, Barbara M. Moskal, Thomas Bigley, Chris Hays, Brent K. Jesiek, Liam Kelly, Jane L. Lehr, Jonson Miller, Amy Nichols-Belo, Sharon Ruff, and Rosamond Parkhurst. 2006. "The Globally Competent Engineer: Working Effectively with People Who Define Problems Differently." *Journal of Engineering Education* 95(April)2:107-122.
- Downey, Gary Lee. 2005. "Keynote Lecture: Are Engineers Losing Control of Technology?: From "Problem Solving" to "Problem Definition and Solution" in Engineering Education. *Chemical Engineering Research and Design* 83(A8):1-12.
- Downey, Gary Lee and Juan C. Lucena. 2005. "National Identities in Multinational Worlds: Engineers and 'Engineering Cultures.'" *International Journal for Continuing Engineering Education and Lifelong Learning* 15(3/4):252-260.
- Downey, Gary Lee and Juan C. Lucena. 2004. "Knowledge and Professional Identity in Engineering." *History and Technology* 20(December)4:393-420.
- Downey, Gary Lee and Juan C. Lucena. 2003. "When Students Resist: Ethnography of a Senior Design Experience in Engineering." *International Journal of Engineering Education* 19(1): 168-176.
- Hogle, Linda and Gary Lee Downey. 1999. "Working for Them." *Anthropology of Work Review*, 20(September)1:1-5.
- Downey, Gary Lee and Juan D. Rogers. 1995. "On the Politics of Theorizing in a Postmodern Academy." *American Anthropologist* 97(2):269-281.
- Downey, Gary Lee, Joseph Dumit, and Sarah Williams. 1995. "Cyborg Anthropology." *Cultural Anthropology* 10(2):264-69.
- Reprinted in *The Cyborg Handbook*, 1995, edited by Crystal Gray. New York: Routledge.

- Lucena, Juan and Gary Lee Downey. 1995. "Haciendo Científicos e Ingenieros para Propósitos Nacionales en USA: Desde la Guerra Fría hasta la Competitividad Económica" [Making Scientists and Engineers for National Purposes in the United States: From the Cold War to Economic Competitiveness]. *Historia Critica* 10(Enero-Junio):29-36.
- Riordan, Diane A., Michael P. Riordan, and Gary L. Downey. 1994. "The Impact of Technology on the Evolution of the Tax Code." *Tax Notes* 64(8):1093-1097. [journal also includes invited articles and opinions].
- Reprinted in *Insights: Readings in Federal Taxation*, 1995, edited by Kevin E. Murphy. Minneapolis/St. Paul: West Publishing Company, pp. 179-183.
- Downey, Gary Lee. 1992. "CAD/CAM Saves the Nation?: Toward an Anthropology of Technology." *Knowledge and Society* 9:143-168.
- Downey, Gary Lee. 1992. "Agency in CAD/CAM Technology." *Anthropology Today* (October):6-10.
- Downey, Gary L., Arthur Donovan, and Timothy J. Elliott. 1989. "The Invisible Engineer: How Engineering Ceased to Be a Problem in Science and Technology Studies." *Knowledge and Society* 8: 189-216.
- Downey, Gary L. 1988. "Reproducing Cultural Identity in Negotiating Nuclear Power: The Union of Concerned Scientists and Emergency Core-Cooling." *Social Studies of Science* 18(2): 231-64.
- Downey, Gary L. 1988. "Structure and Practice in the Cultural Identities of Scientists: Negotiating Nuclear Wastes in New Mexico." *Anthropological Quarterly* 61(1): 26-38.
- Downey, Gary L. 1986. "Risk in Culture: The American Conflict over Nuclear Power." *Cultural Anthropology* 1(4): 388-412.
- Downey, Gary L. 1986. "Ideology and the Clamshell Identity: Organizational Dilemmas in the Anti-Nuclear Power Movement." *Social Problems* 33(5):357-373.
- Downey, Gary L. 1985. "Politics and Technology in Repository Siting: Military Versus Commercial Nuclear Wastes at WIPP 1972-1985." *Technology in Society* 7(1):47-75.
- Downey, Gary L. 1985. "Federalism and Nuclear Waste Disposal: The Struggle over Shared Decision Making." *Journal of Policy Analysis and Management* 5(1):74-99.

Chapters in Books

- Downey, Gary Lee. PDS: Engineering as Problem Definition and Solution. In Steen Hyldgaard Christensen, Christelle Didier, Andrew Jamison, Martin Meganck Carl Mitcham, Byron Newberry (Ed.), *Engineering in Context, Volume 1*. Springer Publishers. (in press).
- Downey, Gary Lee, Juan C. Lucena, and Carl Mitchm. Engineering Ethics and Engineering Identities: Crossing National Borders. In Steen Hyldgaard Christensen, Christelle Didier, Andrew Jamison, Martin Meganck Carl Mitcham, Byron Newberry (Ed.), *Engineering in Context, Volume 2*. Springer Publishers. (in press).
- Downey, Gary Lee. Engineering Studies. *International Encyclopedia of the Behavioral and Social Sciences*. Oxford: Oxford University Press. (in press)
- Downey, Gary Lee. 2014. "The Normative Contents of Engineering Formation: Engineering Studies." Pp. 673-711 in *Cambridge Handbook on Engineering Education Research*, edited by Aditya Johri and Barbara Olds. Cambridge: Cambridge University Press.

- Downey, G. 2012. Normative Holism in Engineering Formation. Pp. 233-252 in Steen Hyldgaard Christensen, Carl Mitcham, Li Bocong, and Yanming An, eds., *Engineering, Development and Philosophy: Chinese, American, and European Perspectives*. Springer Publishers.
- Downey, Gary Lee. 2011. "The Border Crossers: Personal Geographies of International and Global Engineering Educators." Pp. 3-44 in *What Is Global Engineering Education For?: The Making of International Educators*, edited by Gary Lee Downey and Kacey Beddoes. San Rafael, California: Morgan & Claypool Publishers.
- Downey, Gary Lee. 2011. "Location, Knowledge, and Desire: From My Two Conservatism to Engineering Cultures and Countries." Pp. 385-413 in *What Is Global Engineering Education For?: The Making of International Educators*, edited by Gary Lee Downey and Kacey Beddoes. San Rafael, California: Morgan & Claypool Publishers.
- Downey, Gary Lee. 2011. "Beyond Global Competence: Implications for Engineering Pedagogy." Pp. 415-432 in *What Is Global Engineering Education For?: The Making of International Educators*, edited by Gary Lee Downey and Kacey Beddoes. San Rafael, California: Morgan & Claypool Publishers.
- Downey, Gary Lee and Juan C. Lucena. 2010. "Engineering Studies" Pp. 167-171 in *Engineering: Issues and Challenges for Development*, edited by Tony Marjoram. Paris: United Nations Educational, Scientific, and Cultural Organization.
- Downey, Gary Lee. 2006. "It's Not about Us." Pp. 69-77 in *Teaching Excellence at a Research-Centered University: Energy, Empathy, and Engagement in the Classroom*, edited by E. Scott Geller and Phillip K. Lehman. Boston, MA: Pearson Custom Publishing.
- Downey, Gary Lee and Juan C. Lucena. 2005. "Engineering Cultures." Pp. 124-129 in *Science, Technology, and Society*, edited by Sal Restivo. New York and Oxford: Oxford University Press.
- Downey, Gary Lee and Juan C. Lucena. 2001. "When Students Resist: An Ethnography of Engineering Senior Design Education." Pp. 281-292 in *Mudd Design Workshop III: Social Dimensions of Engineering Design*, edited by Clive L. Dym and Langdon Winner, Claremont, CA: Harvey Mudd College.
- Downey, Gary Lee. 2001. "Anthropology of Science and Technology." *International Encyclopedia of the Behavioral and Social Sciences*, 3rd Edition, Elsevier Ltd. (15pp ms.)
- Downey, Gary Lee and Joseph Dumit. 1997. "Locating and Intervening." Pp. 5-30 in *Cyborgs and Citadels: Anthropological Interventions in Emerging Sciences and Technologies*, edited by Gary Lee Downey and Joseph Dumit. Santa Fe, NM: The SAR Press.
- Downey, Gary Lee and Juan C. Lucena. 1997. "Engineering Selves: Hiring Into a Contested Field of Education." Pp. 117-142 in *Cyborgs and Citadels: Anthropological Interventions in Emerging Sciences and Technologies*, edited by Gary Lee Downey and Joseph Dumit. Santa Fe, NM: The SAR Press.
- Downey, Gary Lee. 1995. "Steering Technology through Computer-aided Design." Pp. 83-110 in *Constructive Technology Assessment*, edited by Arie Rip, Thomas Misa, and John Schot. Academic Press.
- Downey, Gary Lee. 1995. "The World of Industry-University-Government: Reimagining R&D as America." Pp 197-226 in *Technoscientific Imaginaries*, edited by George Marcus. Chicago: The University of Chicago Press.
- Downey, Gary Lee and Juan C. Lucena. 1994. "Engineering Studies." Pp. 167-188 in *Handbook of Science, Technology, and Society*, edited by Sheila Jasanoff, Gerry Markle, James Petersen, and Trevor Pinch. Newbury Park, CA: SAGE.

Downey, Gary Lee. 1992. "Agency and Structure in Negotiating Knowledge." Pp. 69-98 in *How Classification Works: Nelson Goodman Among the Social Scientists*, edited by Mary Douglas and David Hull. Edinburgh: Edinburgh University Press.

Downey, Gary L. 1985. "State Decision Making on High-Level Wastes: Critical Uncertainties in the Repository Siting Process." Pp. 119-124 in *Waste Management: Waste Policies and Programs, High-Level Waste*, edited by Roy G. Post and Morton E. Wacks. Tuscon: American Nuclear Society.

Articles in Refereed Conference Proceedings

Downey, Gary Lee and Masanori Wada. "Avoiding Inferiority: Global Engineering Education in Japan. 2011. Proceedings of the Annual Meeting of the American Society for Engineering Education, Vancouver, June.

Downey, Gary Lee. "What Is Global Engineering Education For?: The Making of International Educators." 2010. Proceedings of the Annual Meeting of the American Society for Engineering Education, Louisville, June.

Downey, Gary Lee and Juan C. Lucena, "Are Globalization, Diversity, and Leadership Variations of the Same Curricular Problem?" 2007. Proceedings of the First International Conference on Research in Engineering Education, Honolulu, Hawaii.

Lucena, Juan C. and Gary Lee Downey. "A Systemic Approach to Global Competency for Engineers." 2006. Proceedings of the Annual Meeting of the American Society for Engineering Education, Chicago, Illinois, June.

Rosamond Parkhurst, Barbara M. Moskal, Gary Lee Downey, Juan C. Lucena, Thomas Bigley, and Sharon Ruff. 2006. "A Comparative Analysis of Online and In-class Versions of Engineering Cultures." Proceedings of the Annual Meeting of the American Society for Engineering Education, Chicago, Illinois, June.

Downey, Gary Lee, Juan C. Lucena, Barbara Moskal, Thomas Bigley, Chris Hays, Brent Jesiek, Liam Kelly, Jane Lehr, Jonson Miller, and Amy Nichols-Belo. 2005. "Engineering Cultures: Expanding the Engineering Method for Global Problem Solvers" Proceedings of the ASEE/AaeE 4th International Colloquium on Engineering Education, Sydney, Australia, September.

Downey, Gary Lee and Juan C. Lucena. 2004. "National Identities in Multinational Worlds: Engineers and 'Engineering Cultures.'" Proceedings of the 9th annual World Conference on Continuing Education for Engineers, Tokyo, Japan, May.

Lucena, Juan C. and Gary Lee Downey. 1999. "Engineering Cultures: Better Problem Solving through Human and Global Perspectives." Proceedings of the Annual Meeting of the American Society for Engineering Education, Charlotte, North Carolina, June.

Downey, Gary Lee. 1997. "Challenging the Dominant Image: Culture, Communication, Technology." Proceedings of Aviation Communication: A Multi-Cultural Forum, Embry-Riddle Aeronautical University, Prescott, Arizona.

Other Articles

Downey, Gary Lee. 2010. "What Is Global Engineering Education For?" *Engineering Education Magazine (Korea)*, July:

Lucena, Juan C. and Gary Lee Downey. 2006 "Engineering Leadership: Problem Definition and Solution." *Mines: The Magazine of Colorado School of Mines* 96(Fall)4: 20-21.

Downey, Gary L. 1988. "The Invisible Engineer." *The California Engineer*, 67(1): 30-31.

Downey, Gary L. 1985. "The States' Role in HLW Decisionmaking: Who is the 'State' in the Federal/State Repository Siting Process?" *The Radioactive Exchange* 2(14):7-9.

Downey, Gary L. 1979. "The Quantification of Cultural Values and the Regulation of Capitalist Enterprise." *Cultural Anthropology Exchange* 12(1):1-13, (national journal blind refereed by advanced graduate students and one University of Chicago faculty member).

Reports, Published

Ad Hoc Committee on U.S. Immigration Policy and Scholarly Work. 2003. "U.S. Immigration Policy and Scholarly Work." Society for Social Studies of Science (<http://4sonline.org/reports.htm>). (served as committee chair).

Downey, Gary. 2002. "Recruitment, Retention, Advancement: What Works?: Group Report," pp. 45-47 in *Diversity in Engineering: Managing the Workforce of the Future* (Washington, D.C.: National Academy Press).

Downey, Gary L. 1981. *Citizen Action Groups and WIPP*. Report to the National Research Council Panel on Social and Economic Aspects of Radioactive Waste Management. Washington: National Academy of Sciences/National Research Council, (51 pages).

Book Reviews

Downey, Gary L. 1985. Review of *Energy for Developed and Developing Countries*, edited by Behram N. Kursunoglu, Jean Couture, Andrew C. Millunzi, Arnold Permuter, and Linda Scott, Lexington, MA: Lexington Books; and *A Global View of Energy*, edited by Behram N. Kursunoglu, Andrew C. Millunzi, and Arnold Permuter, Lexington, MA: Lexington Books. Published in *Technology and Culture* 26(1):110-112.

Downey, Gary L. 1985. Review of *The Politics of Nuclear Waste*, edited by E. William Colglazier, Jr., Elmsford, NY: Pergamon Press. Published in *Technology and Culture* 25(1):158-59.

Downey, Gary L. 1984. Review of *Nuclear Waste: Socioeconomic Dimensions of Long-Term Storage*, edited by Steve H. Murdock, F. Larry Leistritz, and Rita R. Hamm, Boulder, CO: Westview Press. Published in *Technology in Culture* 25(3):891-93.

GRANTS

External (18 grants; \$1,330,000)

National Science Foundation grant, 2010-2015, Engineering Cultures: Expanding Global Competency (\$167,800).

National Science Foundation grant 2012-2014, REE Proposal (Senior personnel/adviser; PI Brent Jesiek, Purdue University) (\$2,000).

National Science Foundation grant, 2007-2010, Global Competency in Engineering Education: Personal Geographies of International Engineering Educators (\$14,365).

Boeing Company, 2009, Global Competency as Critical Self-Analysis (\$5,000).

National Science Foundation grant, 2007-2009, "Global Competency in Engineering Education: Emergence, Strategies, and the Problem of Scale" (\$71,890; with Brent Jesiek and Juan Lucena, co-PIs).

National Science Foundation, 2006-2008, "Engineering Leadership through Problem Definition and Solution" (\$199,000).

National Science Foundation, 2005-2008, "Engineers and the Metrics of Progress" (\$172,000; with Juan C. Lucena, co-PI).

National Science Foundation, 2005-2008, "INES Workshop #1: Locating Engineers: Education, Knowledge, and Desire" (\$18,000; with Hayden Griffin and Joseph Pitt, co-PIs).

National Science Foundation, 2005-2008, "INES Workshop #1: Locating Engineers: Education, Knowledge, and Desire" (\$9,873; with Hayden Griffin and Joseph Pitt, co-PIs).

National Academy of Engineering, 2004-2005, "Engineering Cultures: International Diversity and Problem Definition" (\$30,000 fellowship; with Juan C. Lucena, co-PI).

National Science Foundation, Program in Engineering Education, 2003-2005, "Engineering Cultures: Building Global Engineers through Multimedia Technology" (\$330,000; with Juan C. Lucena, co-PI).

National Science Foundation, 2003-2005, "Engineers and Engineering Education in the Middle East" (\$49,000; with Juan C. Lucena, co-PI).

National Science Foundation Grant, Program on Computer Science, 1994-1996, Co-Principal Investigator. Project Title: "History and Ethnography of the Blacksburg Electronic Village." (\$25,000)

National Science Foundation Grant, Doctoral Dissertation Improvement Award, 1994-1996. Student: Juan D. Rogers. Project Title: "Science and the Market in the Implementation of the National Information Infrastructure." (\$5,000)

National Science Foundation Grant, Research Experience for Undergraduates, September 1993-September 1995. Project title: "Constructing Engineers. (\$4,600).

National Science Foundation Research Grant, Program in Ethics and Values in Science and Technology, September 1992-September 1995. Project title: "Constructing Engineers: A Participant-Observation Study of Undergraduate Engineering Education." (\$208,000).

National Science Foundation Research Grant, Program in Ethics and Values in Science and Technology, June 1988-November 1990. Project title: "Cognitive and Social Values in Computer-Aided Engineering Design," (\$38,000).

National Science Foundation Grant for Improving Doctoral Dissertations, 1979-80. Project Title: "Ideology and the Anti-Nuclear Movement," (\$4,200).

Internal (16 grants; \$186,000)

Supplemental Grant, August 2014. To lead joint 2014 ESOCITE/4S meeting in Buenos Aires, Argentina (\$1,200).

Supplemental Grant, June 2013. To plan for joint 2014 ESOCITE/4S meeting in Buenos Aires, Argentina, Florianopolis, Brazil (\$1,200).

Supplemental Grant, November 2012. To deliver papers at conferences of the International Network for Engineering Studies and Society for Social Studies of Science, Copenhagen, Denmark (\$1,200).

Supplemental Grant, November 2011. To deliver paper at Engineering and Sociology Conference, Graduate University of the Chinese Academy of Sciences, Beijing, China (\$1,200).

Supplemental Grant, August 2010. To deliver paper at Society for Social Studies of Science, Tokyo,

Japan (\$1,450).

Supplemental Grant, February 2008. To deliver invited plenary presentation at the International Conference on Integrating Engineering and the Humanities in Higher Education, Technical University, Darmstadt, Germany (\$1,400).

Center for Excellence in Undergraduate Teaching, July 2002-June 2003, "Extending Engineering Cultures to Asia and Latin America" (\$7,250).

Center for Innovation in Learning, Virginia Tech, 4 annual grants, July 1, 1999-June 30, 2003, "Engineering Cultures Online: Helping Students Achieve Personal and Global Understanding through the Web and CD Rom" (\$82,745).

Center for Innovation in Learning, Virginia Tech, April 1998-June 1999, "Gender and Race in Science and Technology." Collaboration between Women's Studies and Center for Science and Technology Studies, to develop an undergraduate and a graduate concentration (\$35,000)

Center for Innovation in Learning, Virginia Tech, September 1997-June 1999, "Computers in Society." To develop new graduate, web-based course. (\$17,000).

Cyberschool Grant, Virginia Tech, February 1997, "Alumni Instructors in the Classroom: Web Strategies for HST/HIST 2054 Engineering Cultures." To establish educational links between students in the classroom and alumni working in other countries. (\$7,500)

Supplemental Grant, Virginia Tech, September 1991. To present paper at the Workshop on Constructive Technology Assessment, University of Twente, Enschede, Netherlands. Project title: "Steering Technology through Computer-Aided Design" (\$1,600).

Supplemental Grant, Virginia Tech, September 1988. To present paper at the Society for the Social Study of Science/European Association for the Study of Science and Technology, Amsterdam, Netherlands. Project title: "Change and Continuity in Negotiating Knowledge," (\$1,400).

Supplemental Grant, Virginia Tech, February 1988. To deliver invited presentation at the International Conference on the History of Telecommunications, Paris, France. Project title: "Theory and Society in Fiber Optics R&D," (\$1,400).

Pilot Project Grant, College of Arts and Sciences, Virginia Tech, December 1987. Project title: "The Standardization of Technologies in Fiber and Electro-Optics," (\$2,500).

Humanities Summer Faculty Research Grant, Virginia Tech, 1987. Project title: "Beyond Internalism and Externalism: Cultural Identity and Technological Change," (\$2,750).

Humanities Summer Faculty Research Grant, Virginia Tech, 1985. Project title: "A Comparative History of the Anti-Nuclear Alliances," (\$2,750).

Supplemental Grant, Virginia Tech, September 1984. To present paper at the George Sarton Centennial Conference, Ghent, Belgium. Project title: "Ideological Identity Models and the Nuclear Power Dispute," (\$850).

Faculty Research Grant, Michigan Technological University. Project Title: "Decline of the Anti-Nuclear Movement," (\$3,800).

LECTURES AND PRESENTATIONS

ENGINEERING STUDIES/SCIENCE AND TECHNOLOGY STUDIES (STS)

Keynote Addresses

Brazilian Society for Science and Technology Studies (ESOCITE.BR), Curitiba, Brazil, Keynote lecture: "Big STS: Critical Analysis for Critical Participation": October 2013.

Norwegian University of Science and Technology conference "Engineers and Sustainability: Achieving Technological Transitions," Trondheim, Norway, Keynote lecture: "What is Sustainable Engineering For?": June 2013.

Sixth Latin American Conference on Social Studies of Science and Technology (VI Jornadas Latinoamericanas de Estudios Sociales de la Ciencia y la Tecnología), Bogotá, Colombia, Subplenary Lecture: "Engineering as Problem Definition and Solution?: Scalable Theory and Engineering Education": April 2006.

Invited Lectures

International Conferences

Issues in Engineering Studies, International Workshop, MIT, Cambridge, MA: "Issues in Engineering Studies."

Engineering and Sociology, International workshop, Graduate University of the Chinese Academy of Sciences, Beijing, China, "What is engineering for? What are engineers for? An overview of engineering studies": October 2011

International Conference on National Identities of Engineers, Syros, Greece, National Technical University of Athens and École Nationale des Ponts et Chaussées (France), "Transitive Nationalists: Knowledge, Progress, and Professional Identity in American Engineering": July 2004.

International Conference on Current Trends in Science and Technology Studies, Syros, Greece, National Technical University of Athens and École Nationale des Ponts et Chaussées (France), "Knowledge and Professional Identity in Engineering": July 2003.

11th biannual meeting of the Society for Cultural Anthropology, Montreal, Canada, "Infotechnics and the Horizon of Virtuality": June 2001.

Conference on the Formation of Professional Identities in Engineering, University of Evora, Evora, Portugal, "An International Society for Engineering Studies?": September 2003.

4th Latin American Congress of History of Science and Technology, Cali, Colombia, "Haciendo Científicos e Ingenieros para Propósitos Nacionales en Estados Unidos: Desde la Guerra Fría hasta la Competitividad Económica": January 1995. (with Juan Lucena)

International Conference on Constructive Technology Assessment, University of Twente, Enschede, The Netherlands, "Steering Technology through Computer-Aided Design": September 1991.

National Conferences

Conference on Formation of Professional Identity, The Holloran Center for Ethical Leadership in the Professions and The University of St. Thomas School of Law Journal, Minneapolis, Minnesota, "The Engineering Cultures Syllabus as Formation Narrative: Scaling Up Problem Definition in Engineering Education": February 2008.

Conference on Technology and the African-American Experience, Howard University, Washington, D.C., "The Pipeline Industry and Engineering Education": May 1994 (with Juan Lucena)

Waste Management '84, University of Arizona, Tuscon, Arizona, "State Decision Making on High-Level Wasters: Critical Uncertainties in the Repository Siting Process": March 1984.

Non-U.S. Universities

National Taiwan University, Taipei, Taiwan, "Code-Switching and the Cultural Project of Science and Technology Studies": March 2003.

National Tsing Hua University, Hsinchu, Taiwan, "On Why the French Have No Engineering Ethics: Code-switching, Progress, and Engineering Cultures": February 2003.

Swiss Federal Institute of Technology, Collegium Helveticum, Zurich, Switzerland, "Strangers Estranged: Ethnography of Science and Technology": December 2001. [with Arvid Myklebust]

University of Amsterdam, Department of Science Dynamics, Amsterdam, The Netherlands, "Symbolic Anthropology and Science Studies": April 1989

University of Groningen, Faculty of Philosophy, Groningen, The Netherlands, "Symbolic Anthropology and Science Studies": April 1989

University of Twente, Center for Science, Technology and Society, Enschede, The Netherlands, "Symbolic Anthropology and Science Studies": April 1989

Maastricht University, Faculty of Philosophy, Maastricht, The Netherlands, "Symbolic Anthropology and Science Studies": April 1989

U.S. Universities

Stanford University, Program in Science, Technology, and Society, "Technicians of Progress: Engineering Formation and the Politics of Professional Identity": January 2008.

University of Virginia, Department of Science, Technology, and Society, Charlottesville, Virginia, "Anxious by Definition: American Engineers and Low Cost, Mass Use": February 2006.

Cornell University, Department of Science and Technology Studies, Ithaca, New York, "Engineers and the Metrics of Progress": October 2004.

Massachusetts Institute of Technology, Program in Science, Technology, and Society, Cambridge, Massachusetts, "Code-switching, Progress, and Professional Identity in Engineering": February 2004.

Massachusetts Institute of Technology, Program in Science, Technology, and Society, Cambridge, Massachusetts, "Ideology and the Controversy over Nuclear Power": February 1981.

Princeton University, Department of Anthropology, Princeton, New Jersey, "The Politics of Nuclear Waste": March 1981.

Michigan Technological University, Department of Social Sciences, Houghton, Michigan, "Ideology and the Controversy over Nuclear Power": March 1981

Virginia Tech

Science and Technology Studies Program, Blacksburg, Virginia, "Meet and Greet: My Research in Engineering Studies": October 2008.

Women's Studies Program, Faculty Development Seminar, Blacksburg, Virginia, "Knowledge and Personhood in Engineering": March 2006.

Science and Technology Studies Program, Blacksburg, Virginia, "Engineers and the Metrics of Progress": November 2004.

Science and Technology Studies Program, Blacksburg, Virginia, "Code-Switching and the Cultural Project of Science and Technology Studies": January 2003.

Women's Studies Program, Blacksburg, Virginia, "Is Feminism for Men Too?": October 1999.

Center for the Study of Science in Society, Blacksburg, Virginia, "How Using Anthropology Can Help STS Move Beyond the Science Wars": September 1996.

Center for the Study of Science in Society, Blacksburg, Virginia, "On the Politics of Theorizing in a Postmodern Academy": January 1994. (with Juan Rogers)

Center for the Study of Science in Society, Blacksburg, Virginia, "Women, Minorities, and Engineering Education": January 1992 (with Juan Lucena).

Center for the Study of Science in Society, Blacksburg, Virginia, "Empowering Engineering Design": April 1991.

Center for the Study of Science in Society, Blacksburg, Virginia, "Advising a Partnership in Computer-Aided Aircraft Design": January 1991.

Program in Technology Education, Blacksburg, Virginia, "STS Research and Education": October 1989.

Center for Public Administration and Policy, Blacksburg, Virginia, "Cognitive and Social Values in Nuclear Waste Policy-Making": August 1987.

Center for the Study of Science in Society, Blacksburg, Virginia, "Cultural Identity and Emergency Core Cooling": October 1986.

Center for the Study of Science in Society, Blacksburg, Virginia, "Communicating Identity in Public Controversy: The Union of Concerned Scientists and Nuclear Power": May 1986.

Center for the Study of Science in Society, Blacksburg, Virginia, "The Invisible Profession: Disciplinary Studies of Engineering": May 1986.

National Endowment for the Humanities Summer Seminar, Blacksburg, Virginia, "Agreement and Disagreement in the Nuclear Power Controversy": June 1985.

Center for the Study of Science in Society, Blacksburg, Virginia, "Engineering Studies and the Science Studies Center": July 1984.

Center for the Study of Science in Society, Blacksburg, Virginia, "Anthropology and STS": December 1980.

Volunteered Presentations/Sessions Organized

International Network for Engineering Studies

INES Cleveland Workshop, "Who Gets to Be an Engineer?: Engineering Formation and the Country": October 2011.

INES Blacksburg Workshop, "Engineering as Problem Definition and Solution: An STS Reality Project in Engineering Education": August 2006.

Society for Social Studies of Science

37th Annual Meeting, San Diego, California, "Critical Participation in STS": October 2013.

36th Annual Meeting, Copenhagen, Denmark, "Big STS: What is STS for? What are STS scholars

- for?,”: October 2012.
- 36th Annual Meeting, Copenhagen, Denmark, “What is STS for? What are STS scholars for?,” session organized: October 2012.
- 35th Annual Meeting, Cleveland, Ohio, “Know-For: Normative Holism in Engineering Formation”: October 2011.
- 35th Annual Meeting, Cleveland, Ohio, “Engineering Normativities I” and “Engineering Normativities II,” sessions organized: October 2011.
- 35th Annual Meeting, Cleveland, Ohio, Commentary on “Engineering Normativities II” (5 presentations): October 2011.
- 34th Annual Meeting, Tokyo, Japan, “The First Normativity: Engineering Formation in Japan” (with Masanoria Wada): August 2010.
- 34th Annual Meeting, Tokyo, Japan, Commentary on “Envisioning New Futures for Engineering”: (5 presentations): August 2010.
- 33rd Annual Meeting, Crystal City, Virginia, “What Is Engineering Studies For?”: October 2009.
- 33rd Annual Meeting, Crystal City, Virginia, “What Is Engineering Studies For?: Volume 1, session organized and chaired: October 2009.
- 33rd Annual Meeting, Crystal City, Virginia, “Identities and Normativities,” Commentary on “Technological Knowledge at the Junction of Competing Identities I” (5 presentations): October 2009.
- 33rd Annual Meeting, Crystal City, Virginia, “Engineering Identity and the Scholarship of Scale”, Commentary on “Technological Knowledge at the Junction of Competing Identities II” (5 presentations): October 2009.
- 31st Annual Meeting, Montreal, Canada, “Distance from Manual Labor: British Improvement, English Character, and Engineering Formation”: October 2007.
- 31st Annual Meeting, Montreal, Canada. “Engineering Studies”, session chaired: October 2007.
- 30th Annual Meeting, Vancouver, Canada, “Engineering as Problem Definition and Solution: Critical Participation in Engineering Education”: October 2006.
- 30th Annual Meeting, Vancouver, Canada, “Intervention and Panel Geography, or Juxtaposition on a Maximally Diverse Panel: A Commentary”: October 2006.
- 30th Annual Meeting, Vancouver, Canada, “Engineering Studies I” (with Atsushi Akera, RPI, and Michele Jackson, University of Colorado) and “Engineering Studies II” (with Knut Sørensen, Norwegian University of Science and Technology), sessions organized on behalf of the International Network for Engineering Studies: October 2006.
- 29th Annual Meeting, Pasadena, California, “STS Reality Projects in Engineering Education: Code-switching, Theory, and Intervention”: October 2005.
- 29th Annual Meeting, Pasadena, California, “Current Issues in Engineering Studies I: Design and Work,” “Current Issues in Engineering Studies II: Engineering Epistemology and Ethics,” and “Cultural Dynamics of Engineering and New Technology,” sessions organized on behalf of the International Network for Engineering Studies: October 2005.
- 29th Annual Meeting, Pasadena, California, “Author Meets Critics,” Rachel Carson prize session organized and chaired: October 2005.
- 29th Annual Meeting, Pasadena, California, “Troubling ‘Development,’ ‘Hybridity,’ and ‘Culture,’”

- commentary on “Unearthing Histories and Representations of Technologies and Technologists in Brazil and Colombia”: October 2005
- 28th Annual Meeting, Paris, France, “Code-switching, Metrics of Progress, and the Education of American Engineers”: August 2004.
- 28th Annual Meeting, Paris, France, Organized two sessions, “Engineering Identities: Knowledge, Person, Nation I” and “Engineering Identities: Knowledge, Person, Nation II”: August 2004 (with Maria Paula Diogo and Irina Gouzevitch).
- 28th Annual Meeting, Paris, France, “Authenticity and National Identity in Jean Langford’s *Fluent Bodies: Ayurvedic Remedies for Postcolonial Imbalance*,” commentary in Rachel Carson Prize session: August 2004.
- 27th Annual Meeting, Atlanta, Georgia, “Engineering as Cultural Project: Nation, Progress, and Professional Identity”: October 2003.
- 26th Annual Meeting, Milwaukee, Wisconsin, “Code-Switching and the Cultural Project of Science and Technology Studies: October 2002.
- 26th Annual Meeting, Milwaukee, Wisconsin, Co-organized 4 sessions, “Sciences and Selves I: Impacts Within?”; “Sciences and Selves II: Boundaries Around and Through?”; “Sciences and Selves III: Repositioning Researchers; Sciences” and “Selves IV: Scientific and Other Identities”: October 2002.
- 25th Annual Meeting, Cambridge, Massachusetts, “Making the Self Invisible”: October, 2001.
- 25th Annual Meeting, Cambridge, Massachusetts, “Accepting Invisibility: Engineering Sciences and Engineers’ Selves”: October 2001.
- 25th Annual Meeting, Cambridge, Massachusetts, “Scientists and Selves,” session co-organized with Susan Leigh Star: October 2001
- 24th Annual Meeting, Vienna Austria “Just Tell Me What the Problem Is: An Ethnography of (Senior) Design Education”: September 2000.
- 22nd Annual Meeting, Halifax, Nova Scotia, “Ethics and Engineering Problem Solving: The Disciplining of Engineers”: October 1998.
- 21st Annual Meeting, Tucson, Arizona, “Fashioning Selves in Engineering Education”: October 1997.
- 20th Annual Meeting, Charlottesville, Virginia, "Locating and Intervening": October 1995.
- 19th Annual Meeting, New Orleans, Louisiana, "Gender, Race, and Class in the Engineering Curriculum": October 1994.
- 19th Annual Meeting, New Orleans, Louisiana, "Cyborg Theorizing": October 1994.
- 16th Annual Meeting, Cambridge, Massachusetts, "CAD/CAM Technology and the American Nation": November 1991.
- 15th Annual Meeting, Minneapolis, Minnesota, "CAD Persons and Culture Dopes": October 1990.
- 14th Annual Meeting, Irvine, California, "Follow the Actors and Look for Presuppositions": November 1989.
- 14th Annual Meeting, Irvine, California, "Continuity and Change: Approaches to Trans-situational Phenomena": November 1989.
- 6 presentations, 3 sessions organized prior to 1989

Society for History of Technology

50th Annual Meeting, Washington, D.C., "Distance from Manual Labor: British Improvement, English Character, and Engineering Formation": October 2007.

50th Annual Meeting, Washington, D.C., "Engineering SHOT: The Past and Present Relationship between Historians of Technology and Engineers: A Commentary": October 2007.

American Anthropological Association

100th Annual Meeting, New Orleans, Louisiana, "Emotion and the Engineering Self": November 2002.

100th Annual Meeting, New Orleans, Louisiana, co-organized 2 invited sessions, "Sciences and Selves I: Bodies, Position, and Identities Emerging through Medicine and Medical Technology"; and "Sciences and Selves II: Emotion, Politics, and Identities Emerging through Technoscience": November 2002.

97th Annual Meeting, Chicago, Illinois, co-organized invited session, "Pedagogy as Theory and Intervention: Anthropology of Science and Technology and Its Audiences": November 1999.

97th Annual Meeting, Chicago, Illinois, "Pedagogy as Cultural Project: Theory, Intervention, and the Anthropology of Science and Technology": November 1999.

95th Annual Meeting, Washington, D.C., "Making Visible What Gets Hidden": November 1997.

94th Annual Meeting, San Francisco, California, "Contesting Competitiveness through Cultural Studies: A Different Humanism": December 1996.

94th Annual Meeting, Washington, D.C., "Outside the Hotel": December 1995.

93rd annual Meeting, Atlanta, Georgia, co-organized three invited sessions, "Cultural Studies of Science, Technology, and Medicine I: Feminist Perspectives on Work in High Technology and Cyberspace; II: Fashioning Bodies, Selves, Medicine, Technoscience; III: Theorizing Intervention, (Re)Imagining Technoscience": November 1994

93rd Annual Meeting, Atlanta, Georgia, "Engineering Selves": November 1994. (with Juan Lucena)

93rd Annual Meeting, Atlanta, Georgia, "On the Politics of Theorizing in a Postmodern Academy": November 1994 (with Juan Rogers)

92nd Annual Meeting, Washington, D.C., co-organized and co-chaired two invited sessions, "Humanity at Its Boundaries I: Gender, Culture, Technoscience and Humanity at Its Boundaries II: Cyborg Anthropology," co-sponsored by the American Ethnological Society, Society for Cultural Anthropology, Association for Feminist Anthropology, and General Anthropology Division: November 1993.

92nd Annual Meeting, Washington, D.C., "'We Treat Everyone the Same': Gender, Race, and Class in the Engineering Curriculum": November 1993. (with Shannon Hegg and Juan Lucena)

92nd Annual Meeting, Washington, D.C., "Introduction to Cyborg Anthropology": November 1993 (with Joseph Dumit and Sharon Traweck)

91st Annual Meeting, San Francisco, California, co-organized and co-chaired two invited sessions, "Cyborg Anthropology I and II": November 1992.

91st Annual Meeting, San Francisco, California, "Cyborg Anthropology": November 1992 (with Joseph Dumit and Sarah Williams)

91st Annual Meeting, San Francisco, California, "Building Engineers Between Humans and Machines": November 1992.

90th Annual Meeting, Chicago, Illinois, "Empowering Engineering Design through National Chauvinism": November 1991.

90th Annual Meeting, Chicago, Illinois, organized session, "Nation, Culture, and Power in Science and Technology": November 1991.

5 presentations, 3 sessions organized prior to 1989

American Association for the Advancement of Science

Annual Meeting, San Francisco, California, "The Invisible Engineer: How Engineering Ceased to Be a Problem in Sociology": January 1989.

Southern Sociological Society

Annual Meeting, Atlanta, Georgia, "How Interests and Ideologies Select Public Claims about Technology: The Identity of the Union of Concerned Scientists": March 1988.

Rural Sociological Society

Annual Meeting, Blacksburg, Virginia, "Nuclear Power and the Social Sciences": August 1985.

Professional Research Workshops Organized

INES/Prometheans Cleveland Workshop, "My Current Work and Its Possible Implications: A PechaKucha 20X20 Event Workshop," Cleveland State University: October 2011 (16 scholars from 4 countries; 32 attendees from 7 countries) (with Peter Meiksins, Cleveland State University)

INES Blacksburg Workshop, "Locating Engineers: Education, Knowledge, Desire," Virginia Tech: September 2006 (37 scholars from 11 countries)

EDUCATION: TEACHING AND LEARNING

Distinguished/Keynote/Commencement Lectures

University Commencement, Virginia Tech, "Commencement Address: The Answer Is: My Mother, Angela Tincher, and Your Transcript": December 2008 ([video](#)).

Commencement, Graduate Program in Science and Technology Studies, Virginia Tech, "Research in the Doorway": May 2008.

11th Annual Colloquium on International Engineering Education, Newport, Rhode Island, "Keynote Address: What Is Global Engineering Education For?": November 2008.

Conference on Integrating Engineering and Humanities in Higher Education, Technical University, Darmstadt, Germany, Plenary Lecture: "Is Engineering at Risk of Declining into Technical Support?": March 2008.

113th Annual Meeting, American Society for Engineering Education, Chicago, Illinois, "Distinguished Lecture: Are Globalization, Diversity, and Leadership Variations of the Same Problem?: Moving Problem Definition to the Core": June 2006.

7th World Congress of Chemical Engineering, Glasgow, Scotland, "Keynote Address: Are Engineers Losing Control of Technology: From 'Problem Solving' to 'Problem Definition and Solution' in Engineering Education": July 2005.

Invited Lectures

Institute for International Education/American Society for Engineering Education

Book launch of *What Is Global Engineering Education For?: The Making of International Educators*, Washington, D.C., “The Border Crossers: Personal Geographies of International and Global Engineering Educators”: June 2011.

National Science Foundation

NSF Engineering Research Centers Annual Meeting, Washington, D.C., “The Global Engineer as Problem Definer I: A Curricular Vision”: November 2006.

NSF Engineering Research Centers Annual Meeting, Washington, D.C., “The Global Engineer as Problem Definer II: Materializing a Curricular Vision”: November 2006.

NSF/Sigma Xi, The Scientific Research Society, National Workshop: Assuring a Globally Engaged Science and Engineering Workforce, Arlington, Virginia, “On Global Competency for Engineers and Scientists”: September 2006.

National Academy of Engineering

NAE Engineering Deans Leadership Institute, Chicago, Illinois, “Is Engineering at Risk of Declining into Technical Support?: How Globalization, Diversity, and Leadership Are Variations of the Same Problem”: July 2006.

NAE Miller Symposium, Indianapolis, Indiana, “Teaching for Global Competency: The Engineer as Problem Definer”: October 2005

Carnegie Foundation for the Advancement of Teaching

Carnegie Foundation and Wabash Center, Wabash College, Phase II: A Life of the Mind for Practice, Crawfordsville, Indiana, “Practical Reason in ‘Engineering Cultures’”: October 2004.

Carnegie Foundation, Palo Alto, California, “When Students Resist: An Ethnography of Engineering Senior Design Education”: May 2001

Association of American Colleges and Universities

94th Annual Meeting, Washington, D.C., “Engineering Cultures: Liberal Education through Practical Reasoning,” in “Featured Session: A New Agenda for Higher Education: Shaping a Life of the Mind for Practice” (organized by Carnegie Foundation for the Advancement of Teaching): January 2008.

International Conferences

International Design School, Michelin Americas Research Center, Greenville, South Carolina, “The Globally Competent Engineer: Working Effectively with People Who Define Problems Differently”: December 2007

1st International Conference on Research in Engineering Education (ICREE), Honolulu, Hawaii, “Globalization, Leadership, and Diversity in Engineering Education”: June 2007 (workshop format, with Juan Lucena).

8th Annual Symposium on International Engineering Education, Atlanta, Georgia, “Teaching for Global Competency: The Engineer as Problem Definer”: November 2005.

4th Annual Symposium on International Engineering Education, University of Rhode Island, Kingston, Rhode Island, “Engineering Cultures: Knowledge for the Global Engineer.” “Teaching for Global Competency: The Engineer as Problem Definer”: November 2005.

Harvey Mudd College, Mudd Design Workshop III: Social Dimensions of Engineering Design, Claremont, California, “When Students Resist: An Ethnography of Engineering Senior Design Education”: June 2001.

Embry-Riddle Aeronautical University, Conference on Aviation Communication and Culture, Prescott, Arizona, “Keynote Address: Challenging the Dominant Image: Culture, Communication, Technology”: April 1997

National Conferences

National Science Foundation Awardees Conference, Reston, Virginia, “Engineering Formation and the Metrics of Progress: A Comparison of Emergence in Five Countries”: February 2009.

The Globalizing Engineers Workshop: Personal Geographies of Engineering Educators, National Academy of Engineering, Washington, D.C., “What are Engineers For?: Between Self-Limiting and Self-Critical Identities”: September 2008

Notre Dame University, College of Engineering, National Conference on the First Year in Engineering Education, South Bend, Indiana, “The Place of Humanities (and Social Sciences) in the Engineering Curriculum”: July 2006.

National Science Foundation, Program in Course, Curriculum, and Laboratory Improvement, Arlington, Virginia, “Engineering Cultures: Building the Global Engineer” (poster): February 2004 (with Juan Lucena).

National Association of Minority Engineering Program Administrators, New Orleans, Louisiana, “Pipeline Politics at the NSF: From Cold War to Systemic Reform”: January 1995 (with Juan Lucena).

National Aeronautics and Space Administration, Ames Research Center, National Software Exchange Conference, Moffett Field, California, “Cultural Tensions in the National Software Exchange”: April 1991.

National Aeronautics and Space Administration, Ames Research Center, National Aircraft Design Conference, Moffett Field, “Converging the ACSYNT Institute”: November 1990.

Non-U.S. Universities

Technical University of Darmstadt, Darmstadt Germany, “Engineering Countries, Adding the Global?”: December 2014.

Yun Lin University of Science and Technology, Touliu, Taiwan, “Just Tell Me What the Problem Is: The Making of Engineers and Engineering”: March 2003.

U.S. Universities

Purdue University, College of Engineering, West Lafayette, Indiana, “‘Global’ Knowledge and Its Agents”: September 2008.

Florida State University, College of Engineering, Tallahassee, Florida, “Is Engineering at Risk of Declining into Technical Support”: September 2007.

University of Illinois at Urbana-Champaign, College of Engineering, Lecture Series on Engineering and Technology Studies, “Are Globalization, Diversity, and Leadership Variations of the Same Curricular Problem?”: February 2007.

University of Virginia, School of Engineering, Charlottesville, Virginia, “Are Engineers Losing Control of Technology?”: February 2006.

Iowa State University, College of Engineering, Globalization, Technology, and Culture Lecture Series, Ames, Iowa “Engineering Ethics in Comparative Perspective”: January 2006. [with Juan Lucena]

Cornell University, College of Engineering, Ithaca, New York, “On Why the French Have No Engineering Ethics”: October 2004.

NSF Workshop on Liberal Arts and Engineering Education, University of Virginia, “Engineering Cultures Multimedia Courseware,” Workshop on April 2002.

Duke University, Pratt School of Engineering, Durham, North Carolina, “Engineering Cultures: Building the International Engineer”: February 2002.

Smith College, Picker Engineering Program, Executive Lecture Series, “Engineering Cultures: Locating Engineering in the Liberal Arts”: February 2001.

Virginia Military Institute, Department of Civil Engineering, “Globalization in Engineering Education”: October 1999.

Virginia Tech

Alumni Association, Annual Meeting of Virginia Tech Alumni Association Board, “Being of Virginia Tech”: May 2008.

Alumni Association, Greenville South Carolina, “Working in a Global World: How What Happens in College Matters”: December 2007.

College of Engineering, Retired Faculty Luncheon, Blacksburg, Virginia, “Is Engineering at Risk of Declining into Technical Support?”: November 2007.

College of Engineering, Tau Beta Pi Honorary Fraternity, Blacksburg, Virginia, “What Does It Mean to Be a Global Engineer?": March 2006.

College of Engineering, Annual Awards Banquet, Blacksburg, Virginia, “Are You Prepared to Work with People Who Define Problems Differently than You Do?": April 2005.

Center for Science and Technology Studies, Blacksburg, Virginia, "STS and HST at Virginia Tech": December 1996.

Center for the Study of Science in Society, Blacksburg, Virginia, "How to Get an STS Grant from NSF": February 1994.

Professional Workshops Organized

The Globalizing Engineers Workshop: Personal Geographies of International Engineering Educators, Center for the Advancement of Scholarship in Engineering Education, National Academy of Engineering, Washington, D.C.: September 2008, with Kacey Beddoes, Brent Jesiek, and Juan Lucena.

Michelin America Research Center, Greenville South Carolina, “Engineers in France”: December 2007.

American Society for Engineering Education, Chicago Illinois, “Engineering Cultures: First Step toward Global Competency”: July 2006, with Juan Lucena, Brent Jesiek, Sharon Ruff.

American Society for Engineering Education, Industry/University Conference, Biloxi, Mississippi, “Building Engineers for International Spaces”: February 2004, with Juan Lucena.

European Association for Engineering Education, Porto, Portugal, “Engineering Cultures in Contemporary Europe”: September 2003, with Juan Lucena.

American Society for Civil Engineers, Washington, D.C. "Building International Engineers: Engineering Cultures": October 2002, with Juan Lucena.

Society for Cultural Anthropology, Washington, D.C., "Agency in Scallops, Machines, and Other Things": May 1993.

American Anthropological Association, Washington, D.C., "Academic and Popular Theorizing on Science, Technology, and the Environment": November 1993.

Volunteered Presentations/Sessions Organized

Frontiers in Education

Annual Meeting, Rapid City, South Dakota, session organized: "What is Global Engineering Education For?: The Making of International Educators" (with Kacey Beddoes): October 2011.

Annual Meeting, Rapid City, South Dakota, "The Border Crossers: Personal Geographies of International Engineering Educators": October 2011.

American Society for Engineering Education

Annual Meeting, Louisville, Kentucky, "What is Global Engineering Education For?: The Making of International Educators: June 2010.

Annual Meeting, Salt Lake City, Utah, "Engineers and Engineering Education in Egypt, Iran, Bahrain, and Turkey": June 2004 (with Juan Lucena).

Annual Conference on Industry and Educational Collaboration, "Engineering Cultures and Continuing Education": January 2003 (with Juan Lucena, presented by Lucena).

Annual Meeting, Quebec, Montreal, "When Students Resist: Ethnography of a Senior Design Experience": June 2002.

International Association for Continuing Engineering Education

9th Annual Meeting, Tokyo, Japan, "National Identities in Multinational Worlds: Engineers and 'Engineering Cultures": May 2004. (with Juan Lucena)

Global Engineering Education Exchange

Annual Meeting, Golden, Colorado, "Engineering Cultures and Globalization": March 2003. (with Juan Lucena, presented by Lucena)

TEACHING AND ADVISING

COURSES TAUGHT

1983-present Virginia Tech

Graduate

What is STS for? What are STS scholars for? (1)

Introduction to Social Studies of Science and Technology (6)

Introduction to Cultural and Feminist Studies of Science and Technology (3)

Engineering Studies (1)

Science and Technology in Everyday Life (1)

Research Designs and Practices for STS (1)

Cultural Studies of Science, Technology, and Medicine (1)

Knowledge and Power in Technology (1)
Ethnographic Studies of Science and Technology (1)
Visual Representation in Science and Technology (1)
Approaches to Science and Technology Policy (1)
The Normative Structuring of Science (1)
Activism, Intervention, and Knowledge for Its Own Sake (1)

Undergraduate

Engineering Cultures (18; both classroom and online)
Introduction to Cultural Anthropology (7)
Development of the American Engineer (6)
Science and Technology in Modern Society: Decisions and Decision Making (4)
 Science and Technology in Modern Society: Values and Value Conflicts (3)
The Technologist in Society (3)
Humanities, Science and Technology: An Introduction (3)
Computers and Cultural Values (2)
Origins of Technological Man: The West and the Rest (2)
Science and Technology in Modern Society: Institutions (1)
 Humanities, the Physical Sciences and Technology (1)
Honors: Postmodernism and Pomophobia (1)
Honors: Technologies under Fire (1)
Honors: Nuclear Power in Society (1)

2001 École d'Ingénieurs, Paris, France

Engineering Cultures (1; with Juan Lucena)

1981-1983 Michigan Technological University

Introduction to Cultural Anthropology (9)
Nuclear Power and Public Policy (2)
Development of Radioactive Waste Management (2)
Technological Change in Developing Countries (2)

1977-1978 Chicago State University

Introduction to Anthropology (2)

1973-1974 Lehigh University

Engineering Statics (1)

DISSERTATIONS/THESES ADVISED (86)

Committee Chair (48)

Ph.D., expected May 2016, Margaret Layne, STS Blacksburg, "High-Water Mark: Gender, Diversity, and the Science and Engineering Equal Opportunity Act of 1980."

Ph.D., expected May 2016, Thomas Bigley, STS Blacksburg, "Patent Law and Chinese Nationalism."

Ph.D., expected May 2015, Marcia Davitt, STS Blacksburg, "Priming the Pump with Grass, Trees,

and Waste: How Biofuels Policy and Research Discourse are Shaping Regional and Global Habitats."

- Ph.D., expected May 2015, Sumitra Nair, STS Blacksburg, "Mustering India: Rural Poverty and the Promises of the Information Economy."
- Ph.D., expected May 2015, Jennifer Henderson, STS Blacksburg, "The Emergence of Weather Forecasting."
- Ph.D., expected May 2015, Timothy Jennings, STS Blacksburg, "Responsibility in STS and Biotechnology."
- Ph.D., expected May 2015, William Mullis, STS Greater Capital Region, "High-Water Mark: Gender, Diversity, and the Science and Engineering Equal Opportunity Act of 1980."
- Ph.D., expected May 2015, Thomas Faigle, STS Blacksburg, "The Career Community College."
- Ph.D. December 2013, John Tucker, STS Greater Capital Region, *American Intelligence, Unwilling Technology Transfer, and the V-2 Missile: A Case Study in the Epistemology of Technical Knowledge* (co-chair).
- Ph.D., December 2011, Kacey Beddoes, STS Blacksburg, *Practices of Brokering: Between STS and Feminist Engineering Education Research*."
- Ph.D., December 2010, Kuo-Hui Chang, STS Blacksburg, *Engineering Construction as Community Formation: the High-speed Railway, Localized-democracy and Hybrid Culture in Taiwan*.
- Ph.D., May 2007, Brent Jesiek, STS Blacksburg, *Between Discipline and Profession: A History of Persistent Instability in Computer Engineering*. (Recipient, 2007 Outstanding Dissertation Award, Graduate School, Virginia Tech; Assistant Professor, Engineering Education, Purdue University).
- Ph.D., May 2001, Wairimu Njambi, Program STS Blacksburg, *Science and the Debate over Female Circumcision*. (Associate Professor, Florida Atlantic Honors College)
- Ph.D., December 1998, Amy Crumpton, STS Blacksburg, *Epidemiology and Environmental Justice*. (Associate Curator, American Association for the Advancement of Science)
- Ph.D., December 1996, Juan Lucena, STS Blacksburg, *Making Policy for Making People: Manpower Policy at the National Science Foundation*. (Associate Professor, Colorado School of Mines)
- Ph.D., May 1996, Juan Rogers, STS Blacksburg, *Multiple Discourses on Information Infrastructure*. (Associate Professor of Public Policy, Georgia Institute of Technology)
- Ph.D., May 1996, Rafael Balderrama, Program in Science and Technology Studies, *Standardization in Agricultural Machinery*. (Visiting Professor, University of Texas)
- Ph.D., May 1995, Dey W. Watts, Department of Landscape Architecture, *An Ethnomethodological Study of Architectural Design*. (Associate Professor of Geography, Indiana University of Pennsylvania.)
- Ph.D., May 1994, Chung-Hsi Lin, STS Blacksburg, *The Politics of Development of Scientific Development in Taiwan: The Hepatitis B Control Program*. (Associate Professor, Cultural Conservation, Yun Lin University of Science and Technology, Taiwan)
- Ph.D., May 1992, Maarten Heyboer, STS Blacksburg, *The Grass Counters: Range Management as Applied Science*. (Associate Professor of Science and Technology Studies, State University of New York, Utica)

M.S., expected May 2015, Kristen Koopman, STS Blacksburg, exam option.

M.S., expected May 2015, Po-jen Shih, STS Blacksburg, exam option.

M.S., expected December 2014, Grace Hood, STS Blacksburg, exam option.

M.S., May 2014, Keith Johnson, STS Blacksburg, exam option.

M.S., May 2014, Merc Fox, STS Blacksburg, exam option.

M.S., May 2012, Margaret Layne, STS Blacksburg, exam option.

M.S., May 2012, Timothy Jennings, STS Blacksburg, exam option.

M.S., May 2012, Sumitra Nair, STS Blacksburg, exam option.

M.S., May 2008, Nicholas Sakellariou, STS Blacksburg, exam option. (Ph.D. student, Environment and Society, University of California, Berkeley).

M.S., December 2007, Masanori Wada, STS Blacksburg, "Engineering Education and the Spirit of Samurai at the Imperial College of Engineering in Tokyo, 1871-1886." (Ph.D. student, History, University of Tokyo).

M.S., December 2007, Sharon Elber, STS Blacksburg, exam option. (Ph.D. student, STS, Virginia Tech).

M.S., May 2007, Cora Olson, STS Blacksburg, exam option. (Ph.D. student, STS, Virginia Tech).

M.S., December 2004, John Fiore, STS Alexandria, exam option.

M.S., May 2003, Amy Nichols, STS Blacksburg, "Globalization on the Ground: An Ethnography of Volunteerism, Health, and Development in Rural Tanzania." (Ph.D. student, cultural anthropology, University of Virginia).

M.S., May 2003, Brent Jesiek, STS Blacksburg, "Of Meme and Metaphor: Following the Evolution of a Controversial Discipline." (Ph.D. student, STS Blacksburg, Virginia Tech).

M.S., January 2002, Stephen Garber, STS Falls Church, "Birds of a Feather?: How Politics and Culture Affected the Designs of the U.S. Space Shuttle and the Soviet Buran." (Staff Historian, NASA).

M.S., May 2000, Krista Gile, STS Blacksburg, exam option. (Ph.D. student, Statistics, University of Washington).

M.S., May 2000, Angela Ragusa, STS Blacksburg, exam option. (Ph.D. student, Sociology, Virginia Tech.)

M.S. May 1999, Bingbing Yu, STS Blacksburg, exam. (Ph.D. student, Instructional Technology, Case Western Reserve University.)

M.S., May 1997, Ming-hui Hu, STS Blacksburg, "Maintaining NASTRAN: The Politics and Technics of Aerospace Computing." (Ph.D. student, Department of History, UCLA..)

M.S., December 1996, Carmen Sears, STS Blacksburg, "(Re)Visions of the Village." (Senior Manager, Teloquent [software firm], Cambridge, Massachusetts.)

M.S., May 1996, Tobin White, "How to Do a Physics Problem: Negotiation of Student Identities in Undergraduate Physics Courses," STS Blacksburg (Ph.D. student, Education, Stanford University.)

M.S., May 1995, Shannon Hegg, Program STS Blacksburg, "A Guide to the Experiences of Undergraduate Women Engineers." (Engineer/planner for Microsoft, Inc.)

- M.S., May 1993, Chris Furlow, STS Blacksburg, "The Islamization of Scientific Knowledge." (Ph.D. candidate, Anthropology, University of Florida.)
- M.S., May 1993, Stephane Castonguay, Program STS Blacksburg, "The Legitimation of Agrobiology in Quebec." (Ph.D candidate, History, University of Quebec at Montreal.)
- M.S., May 1991, Virginia Salmon, STS Blacksburg, "Technical Theatre and the Computer." (Librarian, state college, Tennessee).
- M.S., September 1989, Maarten Heyboer, STS Blacksburg, "Knowledge Development in Applied Science: The Case of Range Management." (see above)
- M.S., June 1989, Hong L. Oei, STS Blacksburg, "A Study of Multi-Disciplinary Research Centers at Virginia Tech." (Ph.D. 1994, Public Administration and Policy, Virginia Tech. Senior staff person, National Science Foundation, The Netherlands.)

Committee Member (37)

- Ph.D., expected May 2015, Amy Kaminski, STS Greater Capital Region, "Sharing the Shuttle: NASA's Engagement of the American Public after Apollo."
- Ph.D., expected May 2015, Jennifer Carter, STS Greater Capital Region, Sharing the Shuttle: NASA's Engagement of the American Public after Apollo."
- Ph.D., May 2014, Yong-Seok Park, Department of Mechanical Engineering, *Theory and Methodology for Forming Creative Design Teams in a Globally Distributed and Culturally Diverse Environment.*
- Ph.D., May 2013, Jongmin Lee, STS Blacksburg, *Regulatory Engineering at the U.S. Environmental Protection Agency: 1970-1980.*
- Ph.D., May 2013, Cora Olson, STS Blacksburg, *Ab-normal Athletes: Technomedical Productions of Gender, Sports, Fairness and Doping.*
- Ph.D., December 2008, Jonson Miller, STS Blacksburg, *Citizen Soldiers and Professional Engineers: The Antebellum Engineering Culture of the Virginia Military Institute.*
- Ph.D., May 2008, Absalom Phiri, Teaching and Learning, Virginia Tech, *Science Education and Indigenous Knowledge in Malawi.*
- Ph.D., December 2006, Jane Lehr, STS Blacksburg, *Science Education & Non-Scientists: Social Justice, Scientific Literacy, and the Remaking of Democratic Citizenship.*
- Ph.D., May 2006, Laura DeNardis, STS Alexandria, *Politics of the Next Generation Internet.*
- Ph.D., May 2006, John McGlaughlin, Teaching and Learning, Virginia Tech, *Social Shaping of Biotechnology in the Classroom.*
- Ph.D. June 2005, Gabriella Coleman, Anthropology, University of Chicago, *The Free Software Movement.*
- Ph.D., December 2004, Dean Nieuwsma, STS Rensselaer Polytechnic Institute, *Appropriate Expertise: Alternative Energy Technology Design in Sri Lanka.*
- Ph.D., May 2003, Maria Rentetzi, STS Blacksburg, *Crossing Boundaries: The Gendered Production of Knowledge at the Institute for Radium Research in Vienna, 1920-1938.*
- Ph.D., December 2002, Stephen Poulson, Sociology, Virginia Tech, *Islamic Sovereignty as a Social Movement Frame in 20th Century Iran.*

Ph.D., December 2001, Annette Huston, STS Blacksburg, *Carillion: A Corporate System of Managed Health Care*.

Ph.D., May 1998, Brenda Brand, Teaching and Learning, Multiculturalism in Science Teaching and Learning.

Ph.D., December 1997, Seungho Jung, Department of Industrial Systems Engineering, *Total Quality Management between Organizations*.

Ph.D., December 1997, Charlotte Webb, STS Blacksburg, *A History of the Virginia Academy of Science*.

Ph.D., May 1996, Stuart Laughton, Department of Computer Science, *An Ethnography of Internet-based Applications in Education*.

Ph.D., May 1990, Govindan Parayil, STS Blacksburg, *Conceptualizing Technological Change: A Trans-Systemic Approach*.

Ph.D., May 1990, Steve Downes, STS Blacksburg, *Prospects for a Cognitive Science of Science*.

Ph.D., June 1989, Michael Riordan, Department of Accounting, *A Profile of the Accounting Profession*.

M.S., expected May 2011, Brent Voelker, STS Alexandria.

M.S., expected May 2011, Mike Conners, STS Greater Capital Region, "Surveillance and Society."

M.S., May 2009, Chris Hays, STS Blacksburg, exam option.

M.S., expected May 2007, Allison Martin, STS Blacksburg, "Breaking News or Business Novelty: Technology Coverage in Modern American Print Media."

M.S., May 2002, Frankie Bausch, STS Blacksburg, "Examining One's Own: Reflexivity and Critique in STS."

M.S., December 1999, Victoria Friedensen, STS Falls Church, "Nuclear Policy in Space."

M.S., May 1999, Joseph Kestel, STS Blacksburg, "Don't Take My Kodachrome Away: Eastman Kodak and the Digital Age."

M.S., May 1988, Sherry Dawson, Sociology, "The Meanings of Literacy."

M.S., May 1997, Maureen McArthur, STS Blacksburg, "Entrepreneurial Activity in the University."

M.S., August 1993, Michael Seltzer, STS Blacksburg, "Post-World War II Controversies over Radiation Testing."

M.S., May 1991, Tracy Glenn, STS Blacksburg, "Language Change in Chaos Theory."

M.S., August 1989, William Lynch, STS Blacksburg, "Politics in Hobbes' Mechanics: A Case Study in the Sociology of Scientific Knowledge."

M.S., May 1989, Adam Serchuk, STS Blacksburg, "Connectionism, Disciplinary Identity, and Continuity."

M.S., December 1988, David M. Bott, STS Blacksburg, "Program Officers at the National Science Foundation: A Case Study of the Biological Instrumentation Program."

M.S., June 1988, Robert Griffiths, STS Blacksburg, "Drug Lag in the Chemical Industry."

GRADUATE MENTORING: TEACHING AND RESEARCH

Mentored 29 STS graduate students to teach Engineering Cultures: 1995-2014

14 have taught their own versions in 39 sections, including 12 online, 6 at Colorado School of Mines, and 3 at Embry-Riddle Aeronautical University.

Juan Lucena (9), Sharon Ruff (8), Brent Jesiek (6), Tom Bigley (7), Jane Lehr (4), Jonson Miller (2), Liam Kelly (1), David Winyard (1), Seungmi Chung (1), Tristan Cloyd (1), Jonathan Grunert (1) Gregory Nelson (1), Kristen Koopman, Po-jen Shih, Bryn Whiteley, Grace Hood, Nicholas Sakellariou, Jongmin Lee, Chris Hays, Amy Nichols-Belo, Ben Cohen, Frankie Bausch, Donna Augustine, Wyatt Galusky, Sunita Raina, Theresa Jurotich, Lai-ju Zhang

Co-founded with students the Virginia Tech Research in Engineering Studies Group: 2005-2011.

Met every 3 weeks to discuss/critically assess work by student/faculty participants and other scholars. (www.res.sts.vt.edu)

Organized 7 Methods Workshops for graduate students campus-wide: Fall 1996.

21 instructors, 126 students from 11 departments; each workshop met 4-6 times.

Workshop topics: Ethnography, Archival Research, Quantitative Methods, Survey Research, Grantsmanship, Open-ended Interviewing, Telephone Interviewing, and Research Online.

POSTDOCTORAL FELLOWS SUPERVISED

Brent Jesiek, STS Postdoctoral Fellow, “The Emergence of Global Education for Engineers”:2007-2008.

GUEST LECTURES/PRESENTATIONS TO STUDENTS

Department of Science and Technology in Society (18)

Department of Mechanical Engineering (10)

Department of Teaching and Learning (6)

Department of Sociology (4)

Department of Environmental Design and Planning (2)

Department of Engineering Education (1)

College of Engineering Student Engineers’ Council (1)

Department of Engineering Science and Mechanics (1)

Department of History (1)

Pi Tau Sigma (honorary society) (1)

Program in Women’s Studies (1)

Tau Beta Pi (honorary society) (1)

TEACHING OUTREACH (beyond Virginia Tech)

Contributed 20 Engineering Cultures multimedia lectures to the Global Hub for Engineering Education, free to all users (<http://globalhub.org/resources/11>)

Contributed multimedia lecture “Problem Definition in Engineering Education” to Global Hub for Engineering Education

PROFESSIONAL SERVICE, UNIVERSITY SERVICE, AND RESEARCH EXPERIENCE

PROFESSIONAL SERVICE CONTRIBUTIONS

Editorships

Editor, *The Engineering Studies Series*, MIT Press, 2011-present.

Editor, *The Global Engineering Series*, Morgan & Claypool Publishers, 2010-present.

Founding Editor, *Engineering Studies: Journal of the International Network for Engineering Studies*, Routledge, an imprint of Taylor & Francis
(www.tandf.co.uk/journals/engineeringstudies), 2006-present.

Founding Organizer, International Network for Engineering Studies (INES)

An international network of 270 scholars to advance research in engineering studies: 2004-present.

Co-organizer, 2004-present

Co-designed INES website: <http://inesweb.org>

Organized the NSF-sponsored INES Workshop, "Locating Engineers: Education, Knowledge, Desire," at Virginia Tech: September 2006 (37 scholars from 11 countries)

Member, Program Committee, INES Workshop, Lisbon, Portugal: October 2008

Elected/Honorary Service Committees

President, Society for Social Studies of Science (1,500 members; 60% non-U.S; largest STS professional society in the world): 2013-2015

President-elect, Society for Social Studies of Science (1,500 members; 60% non-U.S; largest STS professional society in the world): 2012-2013

Chair, Liberal Education Division, 115th Annual Meeting of the American Society for Engineering Education: 2009-2010

Vice-Chair, Liberal Education Division, 115th Annual Meeting of the American Society for Engineering Education: 2008-2009

Invited Member, National Summit Meeting on Global Engineering Education, Newport Rhode Island: 2008

Program Chair, Liberal Education Division, 115th Annual Meeting of the American Society for Engineering Education: 2007-2008

Elected Council Member, Society for Social Studies of Science (1,100 members): 2003-2006

Chair, Publications Committee: 2006, 2005, 2004

Member, Ludwig Fleck Prize Committee (best book): 2006

Chair, Rachel Carson Prize Committee (best book with social relevance): 2005

Member, Ethics and Public Affairs Committee: 2004

Chair, Nicholas C. Mullins Prize Committee (best graduate student paper): 2004

Chair, Ad Hoc Committee on Immigration Policy and Scholarly Work: 2003

Chair, Travel Grants Committee (awarded \$9,000): 2003

Affiliated Researcher, Center for the Advancement of Scholarship on Engineering Education, National Academy of Engineering: 2003-present

Member, Advanced Seminar, "Liberal Arts and the Professions," Carnegie Foundation for the Advancement of Teaching, Menlo Park, California: 2002-2006

Member, Action Forum for Diversity in the Engineering Workforce, National Academy of Engineering: 2000-2003

Chair, Diana Forsythe Prize Committee, Anthropology of Science, Technology, and Medicine, American Anthropological Association: 1999, 1998

Chair, Energy Policy Research Group, American Anthropological Association: 1984, 1983

Other Editorial Contributions

Contributing Editor, *Science, Technology, and Human Values*, 2004-2007 (29 manuscript reviews)

Reviewer, *American Anthropologist*, *American Ethnologist*, *Science, Technology, and Human Values*, *Social Studies of Science*, *Social Problems*, *Knowledge: Production, Diffusion, Utilization*, *Anthropological Quarterly*, *Journal of Policy History*, *Science as Culture*, *International Journal for History and Philosophy of Science*, *Social Epistemology* (57 manuscript reviews)

Editorial Board, *Science, Technology & Human Values*, 2009-present (consult on editorial policy)

Editorial Board, *Social Epistemology*, 1989-present (consult on editorial policy)

External Promotion and Tenure Reviews

Massachusetts Institute of Technology (7)

Rensselaer Polytechnic Institute (7)

Cornell University (1)

Purdue University (1)

Colorado School of Mines (2)

External Program Reviews

University of California at San Diego: Member, Review Committee, Program in Science Studies: 2015 (February)

Rensselaer Polytechnic Institute: Chair, Review of Interdisciplinary Product Design and Innovation Program, Department of Science and Technology Studies/College of Engineering: 2002

Michigan Technological University: Chair, Review of Department of Social Sciences: 2002

Embry-Riddle Aeronautical University: Review of Program on Science, Technology, and Globalization: 1998

University of California at San Diego: Member, Review Committee, Program in Science Studies: 1992

Peer Review, Research Grants

Panelist, National Science Foundation Program on Studies in Science, Technology, and Society, 382 proposals: 1995-1995, 1993-1994, 1992-1993

Panelist, National Science Foundation Program in Ethics and Values in Science and Technology/National Endowment for the Humanities Program in Humanities, Science, and Technology, 36 proposals: 1986

Reviewer, National Science Foundation: Science and Technology Studies, Societal Dimensions of Science and Technology, Anthropology, International, Engineering Education, 43 proposals: 1995-present

Reviewer, Research Proposals, National Endowment for the Humanities, Program in Humanities, Science and Technology, 15 proposals: 1995-present

Professional Societies

Society for the Social Studies of Science
Society for History of Technology
American Anthropological Association
Society for Cultural Anthropology
American Ethnological Society
American Society of Engineering Education
European Association for Engineering Education
International Association for Continuing Engineering Education

Public Service/Outreach

Merit Badge Instructor, Boy Scout Troop 152 (Citizenship in the Community, Citizenship in the Nation, Citizenship in the World): 2002-2006

Co-leader, (with Joan Robinson-Berry, The Boeing Company), Task Force for Diversity Resources and Networking, Action Forum for Diversity in the Engineering Workforce, National Academy of Engineering: 2000-2003

Op-ed on university governance, *Roanoke Times*: 2003

Op-ed on university governance, *Roanoke Times*: 2002

WDBJ7-TV, Roanoke, Virginia, half-hour interview, "Unintended consequences of technological change": 1984

UNIVERSITY SERVICE CONTRIBUTIONS

STS Graduate Program (interdepartmental collaboration among STS, History, Philosophy, Political Science, and Sociology)

3 years as Director, 1997-2000: expanded faculty participation; increased graduate assistantships from 13 to 22; established full-time leadership and enhanced recruiting in Greater Capital Region; led process to add Political Science.

11 STS Admissions Committees: 2004-2005 (member); 1999-2000 (chair); 1998-1999 (chair); 1997-1998 (chair); 1994-1995 (member); 1993-1994 (member); 1990-1991 (member); 1989-1990 (member); 1988-1989 (member); 1987-1988 (member); 1986-1987 (member).

9 STS Steering/Policy Committees: 1999-2000 (chair); 1998-1999 (chair); 1997-1998 (chair); 1993-1994 (member); 1990-1991 (member); 1989-1990 (member); 1986-1987 (member); 1984-1985 (member); 1983-1984 (member).

6 STS Curriculum Committees: 1998-1999 (chair); 1997-1998 (chair); 1993-1994 (member); 1992-1993 (member); 1986-1987 (member); 1985-1986 (member).

6 Ph.D. preliminary exam committees (for students in addition to advisees).

Curriculum design/revision

Led expansion of Ph.D./M.S. degrees to include tracks in history, philosophy, social and cultural studies, and politics and policy studies: 1998-1999 (Ph.D.); 1997-1998 (M.S.) (STS Director)

Led complete revision of STS curriculum, including the design of 19 new courses: 1993-1994 (Chair, Curriculum Committee)

Designed entire social studies curriculum, including 6 new courses: 1985-1987 (Chair, Social Studies Curriculum Committee)

Department of Science and Technology in Society (Center for Science and Technology Studies [1995-2002]; Center for the Study of Science in Society [1981-1995])

- 3 years as Director, 1997-2000. Expanded faculty in social and cultural studies and politics and policy studies; led effort to join School of Public and International Affairs.
- 8 Faculty Search Committees: 2007-2008 (member; search cancelled); 2006-2007 (member); 2000-2001 (co-chair, 2 positions); 1996-1997 (chair); 1994-1995 (member, visiting position); 1987-1988 (member, 2 positions); 1987 (member, visiting position); 1985-6 (member).
- 6 STS Seminar Committees (selecting/hosting 6-10 speakers): 2003-2004 (co-organizer); 1997-1998 (organizer, TLD); 1987-1988 (organizer); 1984-1985 (organizer); 1983-1984 (organizer).
- 9 Promotion and Tenure Committees: 2013 (member); 2012 (chair); 2012 (member); 2007 (chair); 2006 (chair); 2003 (chair); 2003 (3rd year review, chair); 2002 (chair); 1992 (member).
- 4 Honorifics Committees: 2006-2007 (co-chair); 2005-2006 (co-chair); 2004-2005 (co-chair); 2003-2004 (co-chair). Wrote 7 award nominations (3 awards).
- 11 Personnel Committees: 2013-2014 (member); 2012-2013 (member); 2011-2012 (member); 2010-2011 (member); 2009-2010 (member); 2008-2009 (member); 2007-2008 (member); 2006-2007 (member); 2005-2006 (member); 2004-2005 (member); 2003-2004 (member). Conduct annual reviews of department faculty.
- 4 Curriculum Committees: 1996-1997 (member); 1995-1996 (member); 1986-1987 (member); 1985-1986 (member).
1996-1997, 1995-1996: helped redesign undergraduate program in Humanities, Science, and Technology.
1986-1987, 1985-1986: re-designed year-long sequence, Science and Technology in Modern Society.
- 1 Advisory Committee for Restructuring: 2008-2009 (member).
- 1 Advisory Committee, Choices and Challenges Project.
- 1 Engineering Cultures Online project: 1999-2008 (co-leader with Mark Harden, Video Broadcast Services). Co-designed multimedia format including video, text, and images. Drafted outlines and scripts. Delivered 36 hours of video presentations. Co-organized team of 13 participants. Helped edit to produce 7 modules for online versions of Engineering Cultures. Ported material to Global Hub project.

Curriculum design/revision

- Designed year-long sequence Science and Technology in Modern Society.
- Designed Engineering Cultures course (classroom and online).
- Helped re-design Humanities, Science, and Technology curriculum.

College of Engineering

- 4 Department consultations on engineering curricula: 2005-2006 (Department of Engineering Education); 2005-2006 (Department of Engineering Science and Mechanics); 2004-2005 (Department of Engineering Education); 2004-2005 (International Programs).
- 10 years, Faculty adviser, Engineers' Forum: 1985-1995.
- 6 years, Faculty Judge, Technical Writing Contest, Engineers' Forum: 1985-1990.
- 4 years, Lecturer, Engineering Enrichment Camp for Rising Ninth Graders, "History and Philosophy of Science and Engineering": 1984-1987 (5 lectures delivered 3 times each summer).
- 3 years, "STS and Engineering": 1985-1988 (summer presentations at Engineering Orientation).

- 3 years, P&T Advocate for Lisa McNair: 2006-2009 (assist in preparing and presenting the case).
- 1 year, co-developed with Arvid Myklebust a prototype expert system to aid in the configuration of computer-aided design systems: 1989-1990.
- 1 year, co-designed "Introduction to CAD/CAM" short course, Center for Continuing Education: 1991.
- 1 year, Organizer, Distinguished Lecture Series, "The Nature of Engineering": 1984-1985.

Curriculum design/revision

- Helped design graduate certificate, M.S. program, and Ph.D. program in Engineering Education.
- Helped redesign curriculum in Engineering Science and Mechanics.
- Helped redesign study-abroad program.

Department of Interdisciplinary Studies (Center for Interdisciplinary Studies [1995-2002])

- 5 Steering Committees: 1996-2000 (member); 1994-1995 (member, Coordinating Council).
- 3 Curriculum Committees: 1996-1997 (member); 1995-1996 (member); 1994-1995 (Co-chair, Task Force on Curriculum Review and Development).
- 3 Promotion and Tenure Committees: 2002-2003 (member); 1997-1998 (member); 1996-1997 (member).
- 3 Graduate Committees: 1999-2000 (member); 1998-1999 (member); 1997-1998 (member).
- 1 IDST Student Success Project: 1999.

Curriculum design/revision

- Helped design B.A. in Interdisciplinary Studies.

College of Liberal Arts and Human Sciences (College of Arts and Sciences [pre-2002])

- 1 Graduate Education Strategic Plan Committee: 2008-2009 (member).
- 1 Dean's Search Committee: 2006-2007 (member).
- 3 College William E. Wine Award Committees: 2008 (member); 2007 (member); 2005 (chair).
- 2 Five-Year Department Review Committees: 2001-2002 (Center for Interdisciplinary Studies, member; 1990-1991 (STS Center/STS Graduate Program, chair).
- 2 Steering Committees, School of Public and International Affairs, College of Arts and Sciences/College of Architecture and Urban Planning: 1998-2000 (member).
- 1 College Grant Writing Workshop: 2006 (mentor for 2 faculty; mock panel reviewer).
- 1 Dean's Committee for Research Policy: 2005 (member).

Women's and Gender Studies Program

- 3 Curriculum Committees: 2007-2008 (member); 2006-2007 (member); 2001-2002 (member).
- 2 Advisory Board: 1998-1999 (member); 1997-1998 (member).
- 2 Gender and Race in Science and Technology Committee: 1998-1999 (member); 1997-1998 (member).
- 1 Presentation to Faculty Development Seminar: 2006.
- 1 Director Search Committee: 2004-2005.

Curriculum design/revision

- Co-designed undergraduate minor, Gender and Race in Science and Technology.

Helped design IDST degree option in Women's Studies.
Helped redesign minor in Women's Studies.

Graduate School

3 Graduate Teaching Assistant Seminars: Preparation for Teaching (2006, 2000, 1999).
1 Oversight Committee, Center for Human-Computer Interaction: 1999-2000.
1 Search Committee (member): Associate Dean for Extended Campus: 1997-1998.
1 Workshop on Implications of Electronic Theses and Dissertations: 1999.
1 Graduate Student Feminist Research Forum: 1995 (reviewer, facilitator).

Academy of Teaching Excellence

2 William E. Wine Teaching Award Committees: 2005-2006 (chair); 2004-2005 (member).
2 Alumni Teaching Award Committee: 2005-2006 (member); 2004-2005 (member).
1 ATE Teaching Dossier Workshop: 2006 (member, teaching philosophy).

Center for Excellence in Undergraduate Teaching

3 Workshops, Blacksburg, Virginia: 2000, 1998, 1997 ("Learner-Oriented Grading: Short Answer Exams").
1 Workshop, Blacksburg, Virginia: September 2005 ("Mining the Scholarly Potential of Elective Courses").
1 Workshop, Blacksburg, Virginia: 1998 ("Teaching Large Classes").

Provost Office

2 Provost ADP Advisory Committees: 2008-2009 (member); 2007-2008 (member).
1 Search Committee, Vice-Provost for Undergraduate Affairs: 2013 (member).
1 Personnel Review Committee: 2006 (member).
1 Advisory Committee on Diversity: 2003 (member).
1 Advisory Committee, NSF ADVANCE project: 2003-2006 (member).
1 Exchange Agreement with University of Amsterdam: 1992 (organized collaboration among departments of History, Philosophy, Sociology, Political Science, and the Center for the Study of Science in Society).

Center for Programs in the Humanities

4 Curriculum Committees, Humanities, Science, and Technology Program: 1991-1992 (member); 1987-1988 (member); 1986-1987 (member); 1985-1986 (member).
1 Judge, Humanities, Science, and Technology Essay Contest: 1988.

Curriculum design/revision

Helped design undergraduate concentration/minors in Humanities, Science, and Technology.

Diggs Teaching Scholar Program

3 Diggs Teaching Scholar Award Committees: 1999-2000 (member); 1998-1999 (member); 1997-1998 (member).

Research Division

3 Aspires Grants Review Committees: 2005, 2001, 2000 (reviewed 66 proposals)

Honors Program

2 Horton Scholarship Committees: 2008, 2007 (interviewed 8 candidates)

School of Public and International Affairs

3 Steering Committees: 1997-2000 (member).

Curriculum design/revision

Helped redesign Masters in Public and International Affairs.

Department of History

1 Faculty Search Committee: 1986-1987 (member, 20th century social history of technology).

Michigan Technological University, Department of Social Sciences

2 Faculty Search Committees: 1982-83 (junior STS position); 1981-82, (junior STS position).

2 STS Program Committees: 1981-83

Curriculum design/revision

Helped design new undergraduate major in Science and Technology in Society.

ETHNOGRAPHIC/ARCHIVAL/ARCHAEOLOGICAL RESEARCH EXPERIENCE

Politics of engineering education: participant observation and ethnographic interviews on emergent debates over engineering education, Egypt 2003, 2005, France 2004, Germany 2008, Japan 2004, Turkey 2007, United States 2001-present

“Cultural Projects: The New Academy”: participant observation research about the academy as a collection of cultural projects, each with its own legitimacy outside the academy, while CSTS/STS director, July 1997-present.

Engineering education, Virginia Tech: participant observation, interviews, and document collection on the construction of persons in engineering education, August 1991-present.

CAD/CAM Laboratory, Virginia Tech: participant/observation, interviews, and document collection on the history and philosophy of computer-aided design, August 1988-August 1992.

Design Theory and Methodology Conference, American Society of Mechanical Engineers, Montreal, Quebec: participant/observation, interviews, and document collection on faculty concerns about research in computer-aided design, September 1989.

Design Automation Conference, American Society of Mechanical Engineers, Montreal, Canada: participant/observation, interviews, and document collection about historical developments in computer-aided design technology, September 1989.

Bell Labs, New Jersey: interviews and document collection on the history of fiber optics, July 1988.

MIT Archives: Union of Concerned Scientists' collection, January 1980 and February 1988.

Union of Concerned Scientists, Cambridge Massachusetts: interviews and document collection, January 1987 and February 1988.

Nuclear waste disposal in New Mexico: participant-observation, interviews, and document collection, November 1980 and March 1981.

Anti-nuclear power movement: participant-observation, interviews, and document collection, August 1977-June 1979.