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ACADEMIC POSITIONS

Department of History and Politics, Drexel University, Philadelphia, PA
Professor, 2011-; Associate Professor, 2002-2011; Assistant Professor, 1996-2002
Director, Master's Program in Science, Technology, and Society, 2001-2009
Assistant Department Head, 2003-2009
Graduate and Undergraduate Courses in: Science, Technology and Society; History of Technology; History of Science; Race in Science and Technology; Gender and Technology; Architecture and Politics; Labor History; United States History (Nineteenth- and Twentieth-Century); and Historical Research and Methods

Independent College Programs, Haverford College, Haverford, PA
Visiting Associate Professor, 2007-2009
Co-Organizer, Faculty Development Seminar on "Imaging and Science"
Instructor, Undergraduate Courses, "Science and Society: An Introduction" and "Race, Science, and Understandings of Human Aptitude"

Department of the History of Science, Harvard University, Cambridge, MA
Teaching Fellow, 1994-1996
Undergraduate Courses in: History of Technology; History of Science; History and Methods; Junior and Senior Thesis Supervision

EDUCATION

University of Pennsylvania, Department of History and Sociology of Science, Ph.D., 1995
Dissertation: "Origins of a Modern Form: The Reinforced-Concrete Factory Building in America, 1900-1930"; Advisor: Thomas P. Hughes

Pratt Institute, M.F.A., Painting and Printmaking, 1980

Northwestern University, B.A., Fine Arts and Art History, 1978

SELECTED PUBLICATIONS

Books:

Race, Rigor, and Selectivity in U.S. Engineering: The History of an Occupational Color Line (Cambridge, Mass.: Harvard University Press, 2010)

Reinforced Concrete and the Modernization of American Building, 1900-1930. Studies in the History of Technology (Baltimore: Johns Hopkins University Press, 2001)

Articles and Book Chapters:

"Metrics of Marginality: How Studies of Minority Self-Efficacy Hide Structural Inequities," American Society for Engineering Education *Annual Conference Proceedings* 2011

"Note to Self: Save Humanity (The Grand Challenges of the National Academy of Engineering)," American Society for Engineering Education *Annual Conference Proceedings* 2011

"Ambiguous Reform: Technical Workforce Planning and Ideologies of Class and Race in 1960s Chicago," *Engineering Studies* 2 (April 2010): 5-28

"Engineering Segregation: The University of Maryland in the Twilight of Jim Crow," Organization of American Historians *Magazine of History* (April 2010): 15-22

"Two-Year Colleges and the Allure of 'Nano': Understanding Institutional Enthusiasms," with Mary Ebeling, American Society for Engineering Education *Annual Conference Proceedings* 2010, AC 2010-936

"Practitioner Identity and the Meaning of Merit," in *Gender in Science and Engineering*, ed.: Maria Rentetzi, (Athens: National Technological University of Athens, forthcoming 2011 [Greek; translated from English])

"'Minority Engineering Education in the United States Since 1945': A Research Proposal," in *Technology and the African-American Experience: Needs and Opportunities for Study*, ed.: Bruce Sinclair (Cambridge, Mass.: MIT Press, 2004): 171-185

"Diversity in the Infinite Corridor: Documenting Race at M.I.T." (review essay), *Annals of Science* 60 (2003): 321-325

"Suitable for Framing: Fingerprinting and the Rise of Criminal Identification" (review essay), *Technology and Culture* 43 (2002): 777-781

SELECTED PUBLICATIONS, continued

"George Washington Carver Slept Here: Racial Identity and Laboratory Practice at Iowa State College," *History and Technology* 17 (2001): 353-374

"'As Near as Practicable:' Ambiguity, Precision, and the Social Features of Quality Control," *Technology and Culture* 42 (2001): 51-80

"The Hidden Lives of Standards," with Janet Abbate, in *Technologies of Power: Essays in Honor of Thomas Parke Hughes and Agatha Chipley Hughes*, eds.: M. Allen and G. Hecht (Cambridge, Mass.: MIT Press, 2001): 95-143

"Style/Type/Standard: The Production of Technological Resemblance," in *Picturing Science/Producing Art*, eds.: Peter L. Galison and Caroline Jones (New York and London: Routledge Press, 1998): 78-97

"Aesthetics of a Modern Industry: Buildings of the Delaware, Lackawanna & Western Railroad's Scranton Yards," *IA: Journal of the Society for Industrial Archaeology* 22 (1996): 25-40

"Ernest Ransome," "The Ward House," and other essays in *L'art de Ingenieur*, ed.: Antoine Picon (Paris: Centre Georges Pompidou and Le Monitor, 1997)

"Reinforced Concrete," in *Twentieth-Century Building Materials*, ed.: Thomas Jester (New York: McGraw-Hill, 1995)

Other publications:

Book reviews in *Isis*; *Annals of Science; Journal of the Society of Architectural Historians; Design Book Review; Historical Studies in the Physical and Biological Sciences; Technology and Culture*; *The Americas;* and *IEEE Technology and Society Magazine*

Op-Ed and column contributions to the *Philadelphia Inquirer*, InsideHigherEd.com, and others

GRANTS, AWARDS AND FELLOWSHIPS

National Science Foundation, Directorate for Social, Behavioral and Economic Sciences, Division of Social and Economic Sciences, Program in Science, Technology and Society and Program in Advanced Technical Education: Award #0956518 [9/2010-8/2011]; with Dr. Mary Ebeling, co-P.I. "Two-Year Colleges and the Invention of Nano-Labor: Between Promise and Possibility"

GRANTS, AWARDS AND FELLOWSHIPS, continued

Philadelphia Area Center for the History of Science, Conference Grant: "So Many Boundaries...: Recent Understandings of Scientific Expertise" (Chemical Heritage Foundation and Drexel University, May 2011)

National Science Foundation, Directorate for Social, Behavioral and Economic Sciences, Division of Social and Economic Sciences, Program in Science, Technology and Society: Award #0551397 [2/2006-2/2008]; with Dr. Kali Gross and Dr. Keith Wailoo, co-P.I. for conference grant for "Science, Technology and the Historiography of Race: An Interdisciplinary Conversation" (Drexel University, March 2007)

Society the History of Technology, Conference Grant; with Dr. Kali Gross and Dr. Keith Wailoo, for "Science, Technology and the Historiography of Race: An Interdisciplinary Conversation" (Drexel University, March 2007)

National Science Foundation, Directorate for Social, Behavioral and Economic Sciences, Division of Social and Economic Sciences, Program in Science, Technology and Society and Program in Engineering Education: Award #0115208 [10/01-10/05]: P.I. for grant of salary replacement, travel expenses and other costs related to research project, "Minority Engineering Education in the United States, 1945 to the Present"

Society for the History of Technology, Abbott Payson Usher Prize, 2003 (awarded annually to the author of the best scholarly work published during the preceding three years under the auspices of SHOT), for "'As Near as Practicable:' Ambiguity, Precision, and the Social Features of Quality Control," *Technology and Culture* 42 (2001): 51-80

Chemical Heritage Foundation, Cain Research and Travel Grant, 2004

Society for the History of Technology, Conference Grant, 2004-2006 (for development of conference entitled "Science, Technology, and the Historical Influence of Race: An Interdisciplinary Conversation" (2007); with Dr. Kali Gross, Director of Africana Studies, Drexel University)

National Science Foundation, Directorate for Social, Behavioral and Economic Sciences, Division of Social and Economic Sciences, Program in Science and Technology Studies: Award #9815287 [09/98-08/00]: CO-P.I. for grant for workshop on "STS Curricula and the Pursuit of Diversity in Science and Technical Education," October, 1999, Drexel University: Institute for the Humanities, with Dr. Julie Mostov

GRANTS, AWARDS AND FELLOWSHIPS, continued

The Sherwin-Williams Company, Philadelphia, PA, Grant for 1998-1999 Speaker Series in Science, Technology and Society, (Drexel University: Institute for the Humanities), with Dr. Julie Mostov, 1998

Harvard University, Department of the History of Science, Post-doctoral Fellowship, 1994-1996; under direction of Dr. Peter L. Galison

Harvard University, Graduate School of Business Administration, Alfred D. Chandler Travel Fellowship, 1993

Samuel H. Kress Foundation, Travel Fellowship, 1993

Society for the History of Technology/Historic American Engineering Record, Dissertation Fellowship, 1993-1994

University of Pennsylvania, Dissertation Fellowship, 1992-1993

National Science Foundation, Graduate Fellowship, 1989-1992

SELECTED PAPERS AND PRESENTATIONS

"The Smallest Bench: Standards in Nanobiotechnologies," with Mary Ebeling, Seventh Laboratory History Conference, Katholieke Universiteit Leuven, June 6-8, 2011

"Metrics of Marginality: How Studies of Minority Self-Efficacy Hide Structural Inequities," American Society for Engineering Education Annual Meeting, Vancouver, June 27-29, 2011

"Note to Self: Save Humanity (The Grand Challenges of the National Academy of Engineering)," American Society for Engineering Education Annual Meeting, Vancouver, June 27-29, 2011

"Two-Year Colleges and the Allure of 'Nano': Understanding Institutional Enthusiasms," with Mary Ebeling; American Society for Engineering Education Annual Meeting, Louisville, KY, June 20-22, 2010

"Research On Learning and Education Reform," The Structures Congress, American Institute of Steel Construction/American Society of Civil Engineers, May 12-15, 2010

SELECTED PAPERS AND PRESENTATIONS, continued

"Reformations of Design Expertise," Cambridge Talks IV: Design Politics, Harvard University Graduate School of Design, April 16-17, 2010 [invited speaker]

"Knowledge Found and Lost: Secrecy and Liability in Skyscraper Preservation and Repair," Society for the History of Technology, Annual Meeting, Oct. 16-19, 2009

"Manual and Labor: Constructions of Worker (In)Competence, (Mal)Intention, and (Minority) Identity in the Factory Handbook, Society for the Social Studies of Science Annual Meeting, Oct 28-31, 2009

Comment, "The History of American Science Education" History of Education Society, Annual Meeting, Oct. 22-25, 2009

"American Racial Ideologies at the 'Frontiers of Truth': White Denials of Black Scientific Aptitude in the 1940s," Fifth Laboratory History Conference, Johns Hopkins University, June 4-5, 2009

"Go/No Go: The Social Relations of Measurement in U.S. Manufacturing," Conference on "Instruments in Manufacturing," Rice University, June 17-19, 2009 [invited speaker]

"Conclusions from *Race, Rigor, and Selectivity in U.S. Engineering*," Workshop on "Engineering Identities----Deepening Theoretical Understandings" (International Network for Engineering Studies), Rensselaer Polytechnic Institute, July 23-24, 2009 [invited speaker]

"Among Giants: City Hall and the Philadelphia Skyline," Philadelphia Foundation for Architecture, May 26, 2009 [invited speaker]

Organizer, "A Round-Table Conversation :'Science, Technology, and the Social Functions of Our Disciplinary Boundaries; or, Is SHOT Necessary?'" (with Maria Rentetzi, National Technological University of Athens; Jessica Wang, University of British Columbia), Society for the History of Technology, Lisbon, Portugal, Oct. 12-14, 2008

"Race and the Construction of Aptitude in the 'Post-Civil Rights' U.S.," Philadelphia Area Center for the History of Science (PACHS), April 18, 2008 [invited speaker]

SELECTED PAPERS AND PRESENTATIONS, continued

"Two Steps Back: Engineering and Race at the University of Maryland in the Separate-but-Equal Era," Maryland Colloquium in the History of Technology, University of Maryland, College Park, Md., April 2007 [invited speaker]

"American Universities and the 'Whiteness' of Engineering: Origins of an Occupational Color-Line," Fourth Laboratory History Conference, University of British Columbia, Vancouver, March 2006; Department of History, Mississippi State University, Starkville, Miss., September 2006 [invited speaker]; and University of Wisconsin, Madison, Wisc., March 2007 [invited speaker]

"Setting Tolerances: Minority Engineering Programs and the Limits of University Diversity Agendas," with Agyeman Boateng, International Network for Engineering Studies, Virginia Tech, Blacksburg, Va., September 2006

"Keeping STS Out: Disciplinarity, Rigor, and the Stigma of Activist Scholarship," STS (R)evolutions Conference, Virginia Tech, Blacksburg, Va., March 2005

"How Exclusion Happens: American Engineering Education and the Maintenance of Racial Difference," Department of the History of Science and Technology, Johns Hopkins University, September 2004 [invited speaker]

"Metrics of Doubt: Public Mistrust and the CDC's Smallpox Vaccination Program," with Susan Coffin, MD, University of Pennsylvania School of Medicine, Society for the History of Technology (SHOT) Annual Meeting, Amsterdam, October 2004

Conference on "National Identities of Engineers: Their Past and Present," National Technical University of Athens and Ecole Nationale des Ponts et Chaussees, Syros, Greece, July 2004 [invited speaker]

"Urban Renewal and the Whiteness of Engineering: Historical Origins of an Occupational Color Line," Department of History and Sociology of Science, University of Pennsylvania, November 2003 [invited speaker]

"Race, Geography, and the Definition of Engineering Communities: The University of Maryland 1940-1960," History of Science Society, Annual Meeting, Cambridge, Mass., November 2003

"Reinventing the Factory," Hagley Fellows Conference, Hagley Museum and Library/University of Delaware, Wilmington, Del., March 2003 [invited keynote speaker]

SELECTED PAPERS AND PRESENTATIONS, continued

"Engineering Education and Chicago's Geographies of Race," Third Laboratory History Conference, University of Illinois, Urbana, Ill., March 2003

"Minority Engineering Programs at the Illinois Institute of Technology," Social Science History Association, Annual Meeting, St. Louis, October 2002

"Liberal Studies and the Integrated Engineering Education of ABET 2000," Planning Conference: University of Virginia, School of Engineering and Applied Science, Charlottesville, Va., April 2002 [invited speaker]

"Workshop on Race and/in The History of Technology,"
Center for Diversity in the History of Science, Technology, and Medicine, Massachusetts Institute of Technology, Cambridge, Mass., March 2002 [invited speaker]

Planning Meeting, "Addressing the Crisis in Critical Personnel Skills to Design, Construct, Manage and Operate the Nation's Facilities and Infrastructure," Board on Infrastructure and the Constructed Environment, National Academy of Engineering/National Research Council, Washington, DC, January 2002 [invited speaker]

"Technical Change and Social Stasis: Racial Ideologies in American Engineering Education since 1945," Department of Science and Technology Studies, Cornell University, November 2001[invited speaker]

Comment, "The Role of Risk In Technological Change," Panel, Society for the History of Technology (SHOT) Annual Meeting, October 2001

"Race, Gender and the Modern Engineering Department: The Laboratories of Iowa State," Second Laboratory History Conference, Jefferson National Laboratories, Newport News, Va., April 2001

Introductory Address, "John Earley and Concrete Construction and Decoration 1910-1945," Society of Architectural Historians, Baltimore, Md., March 2001 [invited speaker]

"Standards and Specifications: Shaping the Modern Workplace," Dibner Institute for the History of Science and Technology, Cambridge, Mass. April 2000 [invited speaker]

"Materials Standards for Industry and the Problem of Scientific Fixity," History of Science Society Annual Meeting, Pittsburgh, 1999 and the University of Pennsylvania, 1999

SELECTED PAPERS AND PRESENTATIONS, continued

"Materials Standards and the 'Neutrality' of Engineering Practice," SHOT Annual Meeting, Detroit, 1999

Comment, "Of Rivers and Engineers," SHOT Annual Meeting, Baltimore, 1998

"Science into Commerce: Materials Science and Engineering Professions in the U.S., 1900-1920," Cambridge University and University College London, 1996 [invited speaker]

Comment, "Liquid Technologies," SHOT Annual Meeting, London, 1996

"Style/Type/Standard: The Production of Technological Resemblance," conference on "Histories of Science/Histories of Art," Harvard University,1995

"What 'Modern' Meant: The Construction and Cultural Status of the Early Twentieth-Century Factory Building," Hagley Museum and Library, conference on "Industrial Modernism: Factory Architecture, Engineering, and Workers' Housing," 1995

"The Persistence of Expertise in Standardized Building Practice," SHOT Annual Meeting, Lowell, MA, 1994

"Building for Commerce: Concrete Factory Architecture in America, 1900-1920," Society of Architectural Historians, Charleston, SC, 1993

"Approaches to the History of Building: Technology, Aesthetics and Expertise," Royal Institute of Technology, Stockholm, Sweden and Lehigh University, 1992 [invited speaker]

ADVISORY AND PROFESSIONAL EXPERIENCE

Advisory Board, Chicago Architectural Foundation, "One Nation, Under Construction...." exhibition development, 2010-present

Member, Working Group on Forensic Genetics, University of Pennsylvania Center for Bioethics, 2008-present

Advisory Board Member, Industrial Heritage Corridor Development Project: Binghamton/Johnson City/Endicott, New York, 2002-2007

Advisory Board Member, National Building Museum, Washington DC, "Reinforced Concrete" exhibition development, 2002-2004

ADVISORY AND PROFESSIONAL EXPERIENCE, continued

Historian, Historic American Engineering Record, National Park Service, Washington, DC, intermittent, 1989-1992: Writing and editing of inventories of historic railroad and military structures dating 1885-1980

Historian, Renewable Technologies, Inc., Butte, Mont., 1990: Documentation of U.S. Bureau of Reclamation structures in Idaho and Oregon, 1909-1955

Associate Managing Editor, *Art in America* Magazine, New York, NY, 1982-1988

PROFESSIONAL SERVICE

Society for the History of Technology:
- Editorial Committee (2008-2011)
- Executive Council (2005-2007)
- Nominating Committee, 2000-2002 (Chair, 2002)
- Levinson Prize Committee, 2000-2002 (Chair, 2001)
- Da Vinci Prize Committee (Voting member), 1998-1999, 2001-2002
- Secretarial Search Committee, 1998
- Robinson Prize Committee, 1997-1999; 2009-present (Chair, 1998)
- Secretary/Treasurer, Building and Civil Engineering S.I.G., 1997-1999
- Women in Technology's History (WITH) S.I.G, 1998-present.
- Member, 1988-present

Member, Science and Technology Studies Advisory Panel, National Science Foundation (2004-2007)

Member, Editorial Board, *Engineering Studies*, 2008-present

Book Review Editor, *History and Technology*, 2002-2008

Visiting Committee, Howard Hughes Medical Institute Grant Review, "Biology, Medicine and Society Program," Haverford College, 2000, 2003

Dissertation committee member, thesis advisor, and independent-study instructor for graduate and undergraduate programs at the Drexel University School of Public Health; University of Pennsylvania; Imperial College London; Harvard University; and Haverford College

Review of proposals and manuscripts for *Technology and Culture*, *Social Studies of Science*, *History and Technology*, *Business History Review*, *Scientia Canadensis*, the National Science Foundation, Chemical Heritage Foundation, Philadelphia Area Center for History of Science, Corporation for Public Broadcasting, and various university presses

PROFESSIONAL SERVICE, continued

Member: History of Science Society; Society for the Social Studies of Science; International Network for Engineering Studies