

## Matthew Wisnioski

Science and Technology in Society  
Virginia Tech  
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### APPOINTMENTS

Associate Professor, Department of Science and Technology in Society, Virginia Tech, 2013-Present  
Senior Fellow, Institute for Creativity, Arts, and Technology  
Affiliated Faculty, Department of History  
Affiliated Faculty, Department of Engineering Education  
Faculty & Co-Founder, Human-Centered Design Interdisciplinary Graduate Education Program  
Assistant Professor, Department of Science and Technology in Society, Virginia Tech, 2007-2013  
Andrew W. Mellon Postdoctoral Fellow, Modeling Interdisciplinary Inquiry, Washington University in St. Louis, 2005-2007

### EDUCATION

Ph.D. History, Princeton University, 2005  
M.A. History, Princeton University, 2002  
B.S. Materials Science & Engineering, The Johns Hopkins University, 2000

### PUBLICATIONS

#### Book

*Engineers for Change: Competing Visions of Technology in 1960s America* (Cambridge, MA: MIT Press, 2012).  
Paperback edition September 2016. Inaugural book in Engineering Studies series. Reviewed in *American Historical Review*; *British Journal for the History of Science*; *Choice*; *Civil Engineering*; *Historical Studies in the Natural Sciences*; *INCOSE Insight*; *ISIS*; *Journal of American History*; *New Books in Science, Technology, and Society* (podcast); *The Sixties*; *Social Epistemology*; *Technikgeschichte*; *Technology and Culture*; WPRB (radio).

#### Journal Articles

Kari Zacharias and Matthew Wisnioski, "Land-Grant Hybrids: From Art and Technology to SEAD" *Leonardo* [accepted, online access early 2017]  
"The Birth of *Innovation*." *IEEE Spectrum* 52, no. 2 (2015): 40-45, 60-61.  
"Suppose the World Were Already Lost': Worst Case Design and the Engineering Imagination at Harvey Mudd College." *Engineering Studies* 6, no. 2 (August 2014): 65-86.  
Matthew Wisnioski and Kari Zacharias, "Sandbox Infrastructure: Field Notes from the Arts Research Boom," *ARPA Journal* 1, no. 1 (May 2014). <http://arpajournal.gsapp.org/we-are-test-subjects-2/>  
"Why MIT Institutionalized the Avant-Garde: Negotiating Aesthetic Virtue in the Postwar Defense Institute," *Configurations* 21, no. 1 (Winter 2013): 85-116.  
"Liberal Education has Failed': Reading Like an Engineer in 1960s America," *Technology & Culture* 50, no. 4 (October 2009): 753-782.  
"Inside 'The System': Engineers, Scientists, and the Boundaries of Social Protest in the Long 1960s," *History and Technology* 19, no. 4 (December 2003): 313-333.

#### Peer-Reviewed Book Chapters

"How the Industrial Scientist Got His Groove: Entrepreneurial Journalism and the Fashioning of Technoscientific Innovators," in *Groovy Science: Knowledge, Innovation, and American Counterculture*, David Kaiser and W. Patrick McCray, eds. (Chicago: University of Chicago Press, 2016): 337-365.

- "Engineers Make Their Own Context: Vision-Construction in the Profession," in *Issues in Engineering Studies: Engineering Education and Practice in Context*, S.H. Christensen, C. Didier, A. Jamison, M. Meganck, C. Mitcham, and B. Newberry, eds. (New York: Springer, 2015), 347-359.
- "Centerbeam: Art of the Environment," in *A Second Modernism: MIT, Architecture and the 'Techno-Social' Moment*, Arindam Dutta, ed. (Cambridge, MA: MIT Press, 2013), 189-225.
- Otto Piene and Matthew Wisnioski "Art/Science/Technology," in *A Second Modernism: MIT, Architecture and the 'Techno-Social' Moment*, Arindam Dutta, ed. (Cambridge, MA: MIT Press, 2013), 770-798.
- "How Engineers Contextualize Themselves," in *Engineers in Context*, Steen Hyldgård Christensen, Bernard Delahousse, and Martin Meganck, eds. (Aarhus, Denmark: Academica, 2009), 403-415.

### Public Media

- "Inside the online world not indexed by search engines," (Review of Jamie Bartlett, *The Dark Net*) *Washington Post*. June 26, 2015. [http://www.washingtonpost.com/opinions/a-tour-of-the-webs-other-dark-side/2015/06/25/19a5ee2e-0e11-11e5-9726-49d6fa26a8c6\\_story.html](http://www.washingtonpost.com/opinions/a-tour-of-the-webs-other-dark-side/2015/06/25/19a5ee2e-0e11-11e5-9726-49d6fa26a8c6_story.html)
- "How Digital Technology is Destroying Your Mind," (Review of Susan Greenfield, *Mind Change*) *Washington Post*. February 13, 2015. [http://www.washingtonpost.com/opinions/healine-here/2015/02/13/a78172e0-855e-11e4-9534-f79a23c40e6c\\_story.html](http://www.washingtonpost.com/opinions/healine-here/2015/02/13/a78172e0-855e-11e4-9534-f79a23c40e6c_story.html)
- "'The Innovators,' on the creation of the digital revolution, by Walter Isaacson," *Washington Post*, October 3, 2014. Review of Walter Isaacson, *The Innovators* (New York: Simon & Schuster, 2014). [http://www.washingtonpost.com/opinions/the-innovators-on-the-creation-of-the-digital-revolution-by-walter-isaacson/2014/10/03/cd41676c-37a0-11e4-9c9f-ebb47272e40e\\_story.html](http://www.washingtonpost.com/opinions/the-innovators-on-the-creation-of-the-digital-revolution-by-walter-isaacson/2014/10/03/cd41676c-37a0-11e4-9c9f-ebb47272e40e_story.html)
- "'Change or Die!': A History of the Innovator's Aphorism," *The Atlantic* (December 12, 2012), <http://www.theatlantic.com/technology/archive/2012/12/change-or-die-the-history-of-the-innovators-aphorism/266191/>

### Essay Reviews

- "Design Enigmas: SSK in the Service of Practice." *Studies in the History and Philosophy of Science, Part A* 44, no. 4 (2013): 613-617. Review of David Bloor's *Enigma of the Aerofoil: Rival Theories in Aerodynamics, 1909-1930* (Chicago: University of Chicago Press, 2011).
- "Let's Be Fysiksists Again," *Science* 332, no. 6037 (June 24, 2011): 1504-1505. Review of David Kaiser, *How the Hippies Saved Physics* (New York: Norton, 2011).

### Reviews

- "Review: Henry Petroski, *To Forgive Design: Understanding Failure* (USA: Belknap Press, 2012)," *ISIS* 104, no. 4 (December 2013): 829-830.
- "Review: David Kaiser, ed., *Becoming MIT: Moments of Decision* (Cambridge, MA: MIT Press, 2010)" *Technology and Culture* 52, no. 4 (October 2011): 52-53.
- "Review: Peggy Aldrich Kidwell, et al., *Tools of American Mathematics Teaching, 1800-2000* (Baltimore: Johns Hopkins University Press, 2008)" *Technology and Culture* 50, no. 2 (April 2009): 500-502.

### Editorials and Introductions

- Matthew Wisnioski, "What's the Use?: History and Engineering Education Research," (editorially reviewed), *Journal of Engineering Education* 104, no. 3 (2015): 244-251.
- Matthew Wisnioski and William Grimson, "Series Introduction: Competing Contexts in Engineering," in *Issues in Engineering Studies: Engineering Education and Practice in Context*, S.H. Christensen, C. Didier, A. Jamison, M. Meganck, C. Mitcham, and B. Newberry, eds. (New York: Springer, 2015), 341-346.

### Under Review

- Matthew Wisnioski, Eric Hintz, and Marie Stettler Kleine, eds., *Can Innovators Be Made?* Submitted to MIT Press September 20, 2016.

In Preparation

Matthew Wisnioski, *Every American an Innovator*. Book project.

**GRANTS**External Awarded

Luke Lester (PI), Benjamin Knapp, Tom Martin, Lisa McNair, and Matthew Wisnioski, "IUSE/PFE:RED. Radically Enhancing Pathways in the Professional Development of Engineers," National Science Foundation. 2016-2021. \$2,000,000.

Matthew Wisnioski (PI), "Scholar's Award: Developing Innovators and Expertise for Fostering Innovation," National Science Foundation. Award number 1354121. 2014-2017. \$187,425.

Christopher Williams (PI), Lisa McNair, Marie Parette, and Matthew Wisnioski. "Assessment of Product Archaeology as a Platform for Contextualizing Engineering Design." National Science Foundation TUES Type 2 Award. 2012-2014. Five institution grant. Virginia Tech funding: \$64,933.00.

Matthew Wisnioski (PI) and Jongmin Lee, "Doctoral Dissertation Research: Regulatory Engineering in the EPA's Office of Research and Development." National Science Foundation. 2011. \$9,905.

Internal Awarded

Lisa McNair (PI), Liesl Baum, Marc Junkunc, Brook Kennedy, Matt Wisnioski. Pathways Minor Delivery Grant. Virginia Tech Office of the Provost. \$70,000. 2016-2018.

International Travel Supplemental Grant, Office of the Vice President for Research. \$1,000. 2016.

Troy Abel (PI), Matthew Wisnioski, Michael A. Evans, R. Benjamin Knapp, et al. "Human-Centered Design." Virginia Tech Interdisciplinary Graduate Education Program. \$400,000. 2013-2017.

VTRC-A Executive Briefing Center Meeting Grant. \$10,000. 2014-2015.

SEAD (Science, Engineering, Art, and Design) Mini Grant. \$3,000. 2014-2015.

"Humanities Symposium: Understanding Innovation Expertise." Virginia Tech CLAHS and HCD-IGEP. \$11,000. Awarded 2013 for spring 2015.

Visible Scholarship Initiative Mini Grant, University Libraries and CLAHS, \$500. 2013.

Advance VT Mentoring Micro-Grant. \$1,500. Spring 2012.

Virginia Tech CLAHS International Travel Grant. \$900. Spring 2009.

**FELLOWSHIPS AND AWARDS**

Visiting Professor, École normale supérieure de Cachan, September-October, 2016.

Visiting Scholar, Program in Science, Technology, and Society, Massachusetts Institute of Technology, Summer 2015.

Smithsonian Lemelson Center for the Study of Invention and Innovation, Fellow, 2014-2015.

XCaliber Award for Exceptional, High-caliber Contributions to Technology-enriched Teaching and Learning, Office of the Provost, Virginia Tech, 2014.

Excellence in Research and Creative Scholarship Award, College of Liberal Arts and Human Sciences (CLAHS), Virginia Tech 2014.

Fellow, Institute for Creativity, Arts, and Technology, 2013-2014.

Shelby Cullom Davis Center for Historical Studies, Davis Prize Fellowship, 2003-2005.

Best Undergraduate Poster. "Pulsed Laser Deposition of Ni<sub>2</sub>Si on SiC for High Temperature Semiconducting Devices." Materials Research Society Annual Meeting, San Francisco, 2000.

**PRESENTATIONS**Keynote Lectures

"Aesthetic Virtue in the Defense Institute," Systems, Process, Art and the Social Symposium, Massachusetts Institute of Technology, February 4, 2011 [one of five speakers with: Benjamin Aranda, architect Aranda/Lasch; Michelle Kuo, editor *Artforum*; João Ribas, curator List Visual Arts Center; and Matthew Ritchie, artist].

"Technological Change as a Concept in Post-WWII Social Sciences," Conference on the History of Recent Economics, Ecole normale supérieure de Cachan, France, June 2-3, 2010. [one of two keynote speakers with Marion Fourcade]

#### International Lectures and Workshops

Matthew Wisnioski, "Innovators," Ideologies and Imaginaries of Innovation Workshop, Technische Universität München, Munich, Germany, May, 19-20, 2016. [invited]

Matthew Wisnioski, Eric Hintz & Marie Stettler Kleine, "Can Innovators Be Made? A Critical Participatory Model for Reflective Innovation," Participating in Innovation, Innovating in Participation. Mines ParisTech, Paris, December 3-4, 2015. [selected]

"Everyone an Innovator," Center for Technology in Society, Technische Universität München, Munich, Germany, December 1, 2015. [invited]

"Why MIT Institutionalized the Avant-Garde," György Kepes - Form and Information, University of Basel/ETH Zurich, Basel, Switzerland, October 25-26, 2012. [invited]

"How Culture Matters in Engineering," Ecole Normale Supérieure de Cachan, France, June 10, 2010. [invited]

"Jihadists, Nazis, and the Ways Engineers Contextualize Themselves," Dublin Institute of Technology Symposium on Engineering in Context, Engineers Ireland, July 2-3, 2009. [invited]

"Strange Happenings: Engineers, Artists, and the Dream of 'Human' Technology," Royal Institute of Technology, Stockholm, Sweden, October 11, 2004. [invited]

#### Invited Domestic Lectures

"The Origins of Changemaker Engineers." Science Studies Program. University of San Diego, CA, November 15, 2016.

"Every American an Innovator: How Innovation Became a Way of Life." Science Studies Program. University of California, San Diego, CA, November 14, 2016.

"From Grey to K: Innovation Expertise and Play." Lifelong Kindergarten Group, MIT Media Lab, Cambridge, MA, July 7, 2015.

"What Makes Innovators?: 'Innovation Expertise' and the Technoscientific Self." Department of the History and Sociology of Science, University of Pennsylvania, April 13, 2015.

"Who Should Engineers Be?: Innovation, Out-of-Control Technology, and the Remaking of the Engineering Profession," Department of Engineering Education Seminar Series, Purdue University, October 2, 2014.

"Where is the Responsibility in Responsible Innovation," Innovation Day, Chemical Heritage Foundation, September 16, 2014.

"Prototyping Play: Invention Exhibitions as Informal Innovation Policy," Lemelson Center brown-bag talk, National Museum of American History, July 15, 2014.

"Innovation, Out-of-Control Technology, and the Twilight of the Engineer," Smithsonian Contemporary History Colloquium, National Air and Space Museum, April 18, 2013.

"Engineers at War With Themselves: 'New Luddites,' Humane Technology, and the Remaking of a Profession in 1960s America," inaugural lecture of the Lafayette Forum on Technology and the Liberal Arts, Lafayette College, March 22, 2012.

"Bridges to Creative Renewal: Engineers and the Design Revolution in 1960s America," commentary by Kelly Moore, STS Colloquium, Massachusetts Institute of Technology, February 13, 2012.

"Bridges to Creative Renewal: Engineers and the Design Revolution in 1960s America," Klopsteg Lecture Series, Northwestern University, November 15, 2011.

"Technology Out-of-Control as an Innovation Problem," STS Center, University of California, Berkeley, May 21, 2010.

"Engineers as Culture Warriors? Competing Visions of Technology in 1960s America," STS Seminar Series, Stanford University, November 9, 2009.

"Do Books Cause Revolutions?: Technology Out-of-Control as a Theme in Engineering Thought," STS Seminar Series, University of Virginia, October 23, 2008.

- "Engineers as Radical Intellectuals: Contested 'Responsibilities' in the 1960s," Anthropology brown-bag lunch seminar, Massachusetts Institute of Technology, December 4, 2006.
- "Drop the Bomb or Drop Out," Great Works Symposium, Drexel University, August 14-16, 2006.
- "Engineers as Radical Intellectuals: Contested 'Responsibilities' in the 1960s," History & Philosophy of Science Brown Bag Seminar, Washington University in St. Louis, March 1, 2006.

#### Domestic Workshop and Symposia Papers

- "Cultivating Innovation Experts from 'New Men' to Everygirl," for Can Innovators Be Made? Joint Virginia Tech/Smithsonian Workshop, March 20-21, 2015.
- "Suppose the World Were Already Lost: Student Designs for Nuclear Holocaust," for Imagining the Worst Workshop, Cornell University, April 18-21, 2013.
- "Inventing *Innovation*: Out-of-Control Technology and the Twilight of the Engineer," Mellon Symposium on Disciplining the Humanities, Washington University in St. Louis, September 21-22, 2012.
- "Technics-out-of-Control as a Theme in Engineering Thought," Hixon Forum for Responsible Science and Engineering: Engineers, Exact Scientists (Technocrats) and Political Processes: Global Perspectives, Harvey Mudd College, March 1-3, 2012.
- "How the Industrial Scientist Got His Groove" for the "Workshop in the History of Science: Groovy Science," Princeton University, February 5, 2011.
- "Design and Liminality" for "Architectural Histories of Organization," Radcliffe Exploratory Seminar, Radcliffe Institute for Advanced Study, Harvard University, January 29-30, 2010.
- "From System Builders to Servants of the System," International Network for Engineering Studies Workshop "Engineering Identities," Grafton, NY, July 22-24, 2009.
- "Reading Imaginary Machines: Student Designs for Nuclear Apocalypse," for the "Historical Career of Michael S. Mahoney," Princeton University, May 15-16, 2009.
- Technics-out-of-Control as a Theme in Engineering Thought," *Re:calling 'Science as a Vocation'* Science in Human Culture, Northwestern University, May 29-30, 2008.
- "Engineering in Context: An American-European Workshop on Futures in Metadisciplinary Humanities and Engineering," Colorado School of Mines, April 27-29, 2008.
- "Making Technology 'Human,'" Society for the History of Technology Writing Workshop, Woods Hole, MA, June 11-17, 2004.
- "Taking Issue with the State," Joint Atlantic Seminar in the History of the Modern Physical Sciences, co-sponsored by the Dibner Institute, Harvard University, and the Massachusetts Institute of Technology, September 19-21, 2003.

#### Workshop Organizing

- "Can Innovators Be Made?: A Dialogue on the Past, Present, and Future of Innovation Expertise." In March 20-21, 2015, I co-organized with Lemelson Center historian Eric Hintz a two day Virginia Tech/Smithsonian workshop in Washington DC (for which I raised \$30,000) that brought together critical scholars with innovation practitioners.

#### Panels Organized

- Organizer and commentator, "Coordinating the Dance between Research, Infrastructures, and Arts Practices," National Conference of the Alliance for the Arts in Research Universities, Ames, IA, October 9, 2014. [Ico Bukovic, Ben Knapp, Tom Martin, and Kari Zacharias]
- Organizer, "Late 20<sup>th</sup> Century Scientific Publics," History of Science Society, Cleveland, OH, November 6, 2011. [Matthew Wisnioski, W. Patrick McCray, Erika Milam, Bruce Lewenstein (commentator and chair)]
- Co-organizer with Adelheid Voskuhl, "Intellectual Cultures and the Meaning of Technology," Society for the History of Technology, Minneapolis, MN, November 4, 2005. [Matthew Wisnioski, Adelheid Voskuhl, Rayvon Fouché, Langdon Winner (commentator), and Amy Slaton (chair)]

Organizer, "Engineers and the Politics of Responsibility," Society for the History of Technology, Atlanta, GA, October 18, 2003. [Matthew Wisnioski, Rebecca Slayton, Alexander Brown, Robert Seidel (commentator), Thomas Hughes (chair)]

### Commentaries

Invited commentator for keynote lecture by Benoît Godin, Ideologies and Imaginaries of Innovation Workshop, Technische Universität München, Munich, Germany, May 19, 2016.

Invited commentator for session "Engineers as Artists, Artists as Inventors," papers by Peter Sachs Collopy, Patrick McCray, Andrew Nelson, and Dawna Schuld, Society for the History of Technology, Albuquerque, NM, October 9, 2015.

Invited commentator for session "Who Were the Innovators? Consumers, Gender, and Reform in 20th Century America," papers by Renee Blackburn, Con Diaz, Joy Rankin, and Ellan Spero, Society for the History of Technology, Dearborn, MI, October 10, 2014.

Commentator for session "Technoculture," papers by Dustin A. Abnet, Thomas Wieland, and Frode Weium, Society for the History of Technology, Portland, ME, October 12, 2013.

Invited commentator for session "Lies, Damn Lies, and Their Characteristics," papers by Ken Alder, Londa Schiebinger, Laura Stark, and Alison Winter, History of Science Society, Vancouver, BC, November 2-5, 2006.

### Conference Papers

Matthew Wisnioski, "Big Bird and the Artificial Kidney: Innovation Prizes and Science Policy in the Nixon Era," History of Science Society, Atlanta, GA, November 5-6, 2016.

Kari Zacharias and Matthew Wisnioski, "Land Grant Hybrids: Transdisciplinarity, Identity, and Mission-Based Arts Research," Society for the Social Studies of Science, Denver, CO, November 11-14, 2015.

Marie Stettler Kleine, Matthew Wisnioski, and Eric Hintz, "Can Innovators Be Made? A Dialogue on the Past, Present, and Future of Innovation Expertise," Society for the Social Studies of Science, Denver, CO, November 11-14, 2015.

Kari Zacharias and Matthew Wisnioski, "Land Grant Hybrids: Transdisciplinarity, Identity, and Mission-Based Arts Research," Hybrid Practices in the Arts, Science, and Technology from the 1960s to Today, Spencer Museum of Art, Lawrence, KS, March 13, 2015.

"Graduate Seminars that Reach Out to Science and Engineering Students," Society for the History of Technology Prometheans SIG, Portland, ME, October 13, 2013.

"Be an Innovation Millionaire! Innovation Expertise as Self-Help in the Post-Vietnam Era," Society for the History of Technology, Portland, ME, October 11, 2013.

"Marketing Technoscientific Selves," History of Science Society, Cleveland, OH, Nov. 6, 2011.

"Engineers for Change," International Network for Engineering Studies, Cleveland State University, November 2, 2011.

"Do Books Cause Revolutions?: Reading Like an Engineer in 1960s America," University of Wisconsin Madison, Conference on the Culture of Print in Science, Technology, Engineering, and Medicine (STEM), September 11-14, 2008.

"'Scientists' and 'Engitists': Blaming and Changing in 1960s America," for the panel *1968: Science and the Counterculture*, History of Science Society, Washington, DC, November 1-4, 2007.

"'Liberal Education has Failed': Reading Like an Engineer in the 1960s," for the panel *Why SHOT Exists: Humanistic-Social Education and Engineering Curricula*, Society for the History of Technology, Washington, DC, October 18-21, 2007.

"Engineers as Critical Theorists of Modernity," for the panel *Beyond Separate Spheres: Modern History, History of Science, History of Technology*, American Historical Association, Atlanta, GA, January 4-7, 2007.

"Applying the Humanities: Intellectual Crisis and Engineering Pedagogy," First Workshop of the International Network for Engineering Studies, Blacksburg, VA, September, 2006.

"'Keeping Pace' in 1960s America: Value and Agency in the Intellectual Crisis of Technology," Society for the History of Technology, Minneapolis, MN, November 4, 2005.

- "Existential Pleasures: Engineers and 'Creativity' in the History of EAT," Society for the History of Technology, Amsterdam, Netherlands, October 9, 2004.
- "New Questions, Old Answers: Engineers, Pessimism and Responsibility in the Long 1960s," Society for the History of Technology, Atlanta, GA, October 18, 2003.
- "Engineers and the Cultural Revolution?" Columbia University Conference on the History of Activism/History as Activism, New York, NY, April 5, 2002.
- "Playing Games: Chess, Automata, and Artificial Intelligence," History of Science Society, Denver, CO, November 9, 2001.

### Virginia Tech Presentations

- Over 25 research presentations including commentaries, lectures in various department colloquia, and international exchanges. 2007-Present.
- Over 25 invited graduate and undergraduate classroom presentations in six departments. 2007-Present.

## **TEACHING**

### Undergraduate

- Innovation in Context*, instructor; fall 2016; Virginia Tech. Hybrid historical analysis, reflection, and problem-based design course.
- iScholars: Navigating Innovative Labor/Navigating Innovative Regions*, course designer and faculty mentor; summer 2016; Virginia Tech. Experiential learning courses for students in entrepreneurial internships in Washington DC.
- Engineering Cultures*, instructor; spring 2013, spring 2012, fall 2010, spring 2010, spring 2009; Virginia Tech. Lecture course on the comparative history of engineering in six national contexts with the goal of developing reflective professionals.
- Rise of System: The United States and the Technological World*, instructor; fall 2009, fall 2008, spring 2007; Virginia Tech and Washington University. Explores global development of technology situated in the United States from colonial era to the present.
- The Social Life of Everyday Things*, instructor; fall 2007, fall 2005; Virginia Tech and Washington University. Interdisciplinary material culture course taught as a freshman seminar and as a discussion course with students from 20 different majors.
- Modern American Utopias*, instructor; spring 2007; Washington University. Sophomore guided reading seminar exploring utopian and alternative social theory in the context of actual built communities in the United States from the 19<sup>th</sup> century to the present.

### Graduate

- Origins of Innovation*, instructor; spring 2016, fall 2013. Studio-based seminar in the Institute of Creativity, Arts, and Technology for STS, engineering, science, and design students.
- Transdisciplinarity in the Technical Professions* (independent study), instructor; fall 2014.
- Pedagogy and Technology* (independent study), instructor; spring 2013.
- Interdisciplinary Cultures of Design*, instructor; spring 2012, spring 2009. Investigates the history of design theory & practice in architecture, engineering, industrial design, and sciences.
- Introduction to STS*, co-instructor; fall 2011 (with Janet Abbate), fall 2010 (with Sonja Schmid); Virginia Tech. Co-designed with Sonja Schmid as core course for new department curriculum.
- Main Themes in the History of Science*, instructor; spring 2013, spring 2011. Methods and historiography on themes of "knowledge in transit" and technoscience from 1500s to 1980s.
- Progress and Decline: Normative Visions of Technology*, instructor; spring 2010, fall 2007. Cultural-intellectual history of technology from Francis Bacon to the Unabomber.
- The Agency of Things*, co-instructor; spring 2006; Washington University. Interdisciplinary theories and methods. Co-taught with other Mellon fellows and program director Steven Zwicker.

## **GRADUATE ADVISING**

Degrees Awarded as Advisor

Monique Dufour (PhD 2014). "Reading for Health: Bibliotherapy and the Medicalized Humanities in the United States, 1930-1965." Collegiate Assistant Professor, History, Virginia Tech.

Jongmin Lee (PhD 2013). "Engineering the Environment: Regulatory Engineering at the U.S. Environmental Protection Agency, 1970-1980." Lecturer, University of Virginia, Engineering and Society. Winner of NSF dissertation improvement grant \$9,905; CHF fellowship \$25,000; Linda Hall Library Fellowship \$29,000.

Marie Stettler Kleine, (MS 2013). Exam. Enrolled as STS PhD student at Virginia Tech.

Samantha Arthur (MS 2013). Exam.

Degrees Awarded as Committee Member

Nicolas Sakellariou (PhD 2015; University of California, Berkeley). "Life Cycle Assessment of Energy Systems: Closing the Ethical Loophole of Social Sustainability."

Stephanie Kusano (PhD 2014; Engineering Education). "Understanding the Educational Significance of Informal Experiences for Engineering Learning."

Kuo-Hui Chang (PhD 2010). "Taiwan High Speed Rail Project as Engineering/Political Community Formation." Assistant professor, National Taiwan University, Taiwan; formerly a postdoctoral fellow at the Research Center for Humanities and Social Sciences, Academia Sinica, Taiwan.

Sara Grace Hood (MS 2015). Exam. Standards and Training Coordinator, Crisis Support Services of Alameda County, CA.

Jessie Mann (MS 2015). Exam. Enrolled as STS PhD student at Virginia Tech.

Jonathan Grunert (MS 2014). "Aesthetics for Birds: Institutions, Artist-Naturalists, and Printmakers in American Ornithologies, from Alexander Wilson to John Cassin." Enrolled as STS PhD student at Virginia Tech.

Charles DeSouza (MS 2013). Exam. Enrolled as STS PhD student at Virginia Tech.

Timothy Jennings (MS 2012). Exam. Enrolled as STS PhD student at Virginia Tech.

Sumitra Nair (MS 2012). Exam. STS PhD student at Virginia Tech (inactive).

Greg Nelson (MS 2012). Exam. Enrolled as STS PhD student at Virginia Tech.

T. Jacob Spraker (MA History 2012). "Postwar Public Health and Commerce in a Rural Virginian Polio Epidemic." Adjunct instructor, Virginia Highlands Community College.

Mel Eulau (MS 2011). Exam. BAE Systems, Inc. and enrolled as STS PhD student at Virginia Tech.

Parissa Moosavi (MS 2011). Exam. PhD student at University of Toronto Department of Philosophy.

Joshua Erik Taylor (MS 2010). Exam. Disability Services Media Supervisor, Seattle University.

Joseph A. Forte (MA History 2010). "'We Weren't Kidding': Prediction as Ideology in American Pulp Science Fiction, 1936-1949." Enrolled as ASPECT PhD student Virginia Tech.

Harold M. Roberts (MS 2010). "Google AdWords as a Network of Grey Surveillance." Fellow, Harvard University Berkman Center for Internet & Society.

PhD Committee Chair (current)

Kari Zacharias, Becoming Transdisciplinary: Research, Innovation and Belonging in SEAD, PhD expected 2017.

Marie Stettler Kleine, Design and Religion, PhD expected 2018.

Justin Shanks, "Understanding the Learning Revolution," PhD expected 2018. Employed full time as Director of Technology Enhanced Active Learning for the College of Education, Health, and Human Development at Montana State University.

PhD Committee Member (current)

Charles DeSouza, "The Philosophy of STEM Education."

Mel Eulau, "Imaginariness of Fusion Power."

Tom Faigle, "Information Technology, Distance Education, and the Struggles Between Career Colleges and Community Colleges," (inactive).



Diana Hoyt, *Contested Knowledge Circulation*.

Tim Jennings, "Norms and Values in Natural and Social Scientific Characterizations of the Human-Technology Relationship."

Kristin Machac, "Exploration of Design Thinking," (Human Centered Design).

Stephanie S. Mawler, "Communities of Practice in Computer Programming."

Sumitra Nair, "Mustering India: Rural Poverty and the Promises of the Information Economy."

Bunyakiat Raksaphaeng, "Metrics in International Science Policy."

## **SERVICE, COLLABORATION, AND OUTREACH**

### Service to the Profession

Associate Editor, *Engineering Studies*, Taylor and Francis, 2008-Present.

Article, Grant, and Monograph Reviewer: *British Journal for the History of Science*; *Journal of Cold War Studies*; Cornell University Press; *Journal of Engineering Education*; *Engineering Studies*; *Futures*; *Historical Studies in the Natural Sciences*; *International Journal of Engineering, Social Justice, and Peace*; MIT Press; National Science Foundation; *Science and Ethics*; *Social Studies of Science*; *Technology & Culture*.

Panel Reviewer for World Class University Program of the Korean Ministry of Education, Science, and Technology (MEST), 2010-2013.

Joan Cahalin Robinson Prize Committee, Society for the History of Technology, 2006-2007.

Member, SHOT "Promethean" special interest group on strengthening relations with the engineering community, 2005-Present.

### Service to the University

Beyond Boundaries Presidential Advisory Group member, 2016-2017.

Innovation and Entrepreneurship Strategic Growth Initiative planning, 2016-Present.

Co-chair of "preparing students" advancement area and steering committee member of university-wide strategic visioning initiative Beyond Boundaries, 2015-2016. Convened a group of 14 faculty and students for monthly visioning meetings; drafted language and vision for report to Commonwealth of Virginia, presented results to external stakeholders. <http://www.beyondboundaries.vt.edu/about.html>

Moderator for academic showcase for the Presidential Installation of Timothy D. Sands 16<sup>th</sup> President of Virginia Tech, October 18, 2014.

Associate Director, Human Centered Design IGEP, 2013-2014.

Search committee member for visual communication designer, School of Visual Arts, College of Architecture and Urban Studies, 2013-2014.

Senior Fellow, Residential College at West Ambler Johnston, 2012-2014.

Panelist for Future Faculty Development Program of the *Advance VT* initiative to diversify Virginia Tech's faculty, January 2013.

Participant in Center for Innovation in Learning New Media Networked Faculty-Staff Development Seminar, fall 2012.

### College of Liberal Arts and Human Sciences

CLAHS Promotion and Tenure Committee, 2013-2015.

Search committee member for director of undergraduate student recruitment and career development, 2013-2014.

Panelist for "The Tenure Process," CLAHS Pre-tenure mentoring sessions, October 8, 2013.

Search committee member for 19<sup>th</sup> century US historian, Department of History, 2011.

Curriculum development for new Material Culture and Public Humanities masters degree, 2009.

### Department

Search committee member for Assistant Professor of STS, 2014-2015.

Graduate Admissions Committee, 2009-2014.

Faculty mentor for assistant professor Ashley Shew, 2013-present.  
 Ad-hoc Committee on Evaluating Student Progress, 2010-2014.  
 Co-Organizer, STS Seminar Series, 2009-2012. Responsible for organizing more than 70 events with 31 external speakers.  
 Co-Organizer, Department Northern Virginia/Blacksburg Meet & Greet, 2009-2012.  
 Graduate Curriculum and Plan of Study Revision, 2009-2011.  
 Co-Organizer, Modern America Workshop, Princeton University, 2002-2003.

#### Additional Student Service

Host of visiting graduate student Geetanjali Date from Tata Institute of Fundamental Research, Mumbai, India, July 2016.  
 Panelist for "From Conference Paper to Journal Article: The Ins and Outs of Publishing," Public Knowledge Journal/Graduate Education Week, March 26, 2013.  
 Organizer, "On The Job Market," Graduate Student Professional Development, 2007, 2012, 2013.  
 Organizer and panelist, "How to Win Grants and Get Papers Accepted as a Graduate Student," STS Seminar Series, 2011.  
 Advisor for *Outside Authority: Virginia Tech STS Graduate Conference*, 2011.  
 Manuscript reviewer, Department of History *Undergraduate Historical Review*, 2012.

#### Additional Outreach Presentations

"We Revolve Around *What?*: The History of Astronomy from Ptolemy to Galileo," Kipps Elementary School, Blacksburg, VA, 2008, 2014.  
 "Digital vs. Analog Politics," Choices and Challenges Forum, Virginia Tech, Blacksburg, VA, October 30, 2008.  
 "Nuclear Power and Technology's Critics," Choices and Challenges Forum, Virginia Tech, Blacksburg, VA, November 8, 2007.

#### **REFERENCES**

Available on Request.