Curriculum Vitae - Matthew Nicholas Eisler

Interdisciplinary Studies
College of Humanities and Social Sciences
North Carolina State University
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Education and Experience

2016-	Teaching Assistant Professor and Interim Director of Science, Technology, and Society Program, Interdisciplinary Studies, North Carolina State University
2015-2016	Visiting Assistant Professor, Integrated Science and Technology Department, James Madison University
2012-2015	Lecturer, Department of Engineering and Society, School of Engineering and Applied Science, University of Virginia
2011-2012	Research Fellow, Chemical Heritage Foundation
2009-2011	Postdoctoral Fellow, Center for Nanotechnology in Society, University of California at Santa Barbara
2008-2009	Postdoctoral Fellow, Department of History, University of Western Ontario
2008	PhD History (modern US/science and technology), University of Alberta; Dissertation: "Fueling Dreams of Grandeur: Fuel Cell Research and Development, 1940-2005"
2005	Pre-dissertation Fellow, National Air and Space Museum, Smithsonian Institution
2005	Pre-dissertation Fellow, Institute of Historical Research/Mellon Foundation/University of London
2004	Pre-dissertation Fellow, IEEE History Center
2004	Pre-dissertation Fellow, Chemical Heritage Foundation
2002	MA History (modern US/science and technology), University of Alberta
2000	BA History, University of Alberta (with distinction)

Publications

Book

2012 Eisler, Matthew N. *Overpotential: Fuel Cells, Futurism, and the Making of a Power Panacea*. Rutgers University Press.

Peer-Reviewed Articles

2017 Eisler, Matthew N. "Exploding the Black Box: Personal Computing, the Notebook Battery Crisis, and Postindustrial Systems Thinking." Forthcoming, *Technology and Culture*.

2016 Eisler, Matthew N. "Cold War Computers, California Supercars, and the Pursuit of Lithium Ion Power." *Physics Today*, September 2016: 30-36.

2016 Eisler, Matthew N. "Materials Research, Super Batteries, and the Technopolitics of Electric Automobility." *Historical Studies in the Natural Sciences* 46, no. 1: 44-66.

2013 Eisler, Matthew N. "'The Ennobling Unity of Science and Technology:' Materials Sciences and Engineering, the Department of Energy, and the Nanotechnology Enigma." *Minerva* 51, no. 2: 225-251.

2011 Motoyama, Yasuyuki, and Matthew N. Eisler. "Bibliometry and Nanotechnology: A Meta-Analysis." *Technological Forecasting and Social Change* 78, no. 7: 1174-1182.

2009 Eisler, Matthew N. "'A Modern Philosopher's Stone:' Techno-Analogy and the Bacon Cell." *Technology and Culture* 50, no. 2: 345-365.

2009 Eisler, Matthew N. "Getting Power to the People: Technological Dramaturgy and the Quest for the Electrochemical Engine." *History and Technology* 25, no. 1: 49-68.

Popular Articles

2016 Eisler, Matthew N. "The History of Lithium Ion Batteries is Explosive." *Slate* 09.13.

2016 Eisler, Matthew N. "The Bolt Probably Won't Make GM A Dime." *IEEE Spectrum* 02.16.

2016 Eisler, Matthew N. "A Tesla in Every Garage? Not So Fast." *IEEE Spectrum* 02.16.

2015 Eisler, Matthew N. "Can Tesla's Enthusiast Customers Help it Sell the Electric Car for the Everyperson?" *The Conversation* 11.17.

2012 Eisler, Matthew N. "Science, Silver Buckshot, and 'All of the Above:' Negotiating Energy R&D Policy at ARPA-E Energy Summit 2012." *Science Progress* 04.02.

2011 Eisler, Matthew N. "Energy Innovation at Nanoscale: Case Study of an Emergent Industry." *Science Progress* 05.23.

2009 Eisler, Matthew N. "Sustainability Made Easy? R&D and Energy Technopolitics." *Chemical Heritage* 27, no. 2: 1-3.

2008 Eisler, Matthew N., and Katherine Zwicker. "Putting Region in its Place: An Interdisciplinary Conference on Health, Healing and Place." *The Gazette: Society for the Social History of Medicine* 44: 6-9.

2005 Eisler, Matthew N. "Fuel Cell Research and Historical Consciousness." *Chemical Heritage* 23, no. 1.

2005 Eisler, Matthew N. "Francis Thomas Bacon and the Fuel Cell." *IEEE-USA Today's Engineer Online.*

Book Chapters

2014 Eisler, Matthew N. "At Arm's Length: Energy and the Construction of a Peripheral Prairie Petrometropolis." In *Energy Capitals*, eds. Martin V. Melosi and Joe Pratt, 111-126. University of Pittsburgh Press.

2012 Eisler, Matthew N. "Chapter 1: Perspective: Where Nano Came From." In *Nanotechnology and the Public: Risk Perception and Risk Communication*, ed. Susanna Hornig Priest, 9-19. Boca Raton, FL: CRC Press/Taylor & Francis Group.

2012 Eisler, Matthew N. "Chapter 2: Science That Pays for Itself: Nanotechnology and the Discourse of Science Policy Reform." In *The Social Life of Nanotechnology*, eds. Barbara Herr Harthorn and John W. Mohr, 19-36. London: Routledge.

Encyclopedia Entries

2010 Eisler, Matthew N. "Department of Energy (US)," "Nanotechnology in Manufacturing," "Occupational Safety and Health Enforcement," "Self-Assembly," "Science Policy," "Spintronics." *Encyclopedia of Nanoscience and Society*. SAGE.

2006 Eisler, Matthew N. "Nuclear Weapons," "Anti-Ballistic Missiles," "New Look Defense Policy." *Postwar America: An Encyclopedia of Social, Political, Cultural, and Economic History.* M.E. Sharpe.

2004 Eisler, Matthew N. "Nuclear Reactors: Fusion, Later Designs (Tokamak)." *Encyclopedia of Twentieth Century Technology*. Routledge.

Book Reviews

2013 Montgomery, Scott L. *The Powers That Be: Global Energy for the Twenty-First Century and Beyond.* In *Chemical Heritage* 30, no. 3: 42-43.

2010 Moody, Roger. *Rocks and Hard Places: The Globalization of Mining*. In *Labour/Le Travail* 66: 292-295.

2010 Johnson, Carol Siri. *The Language of Work: Technical Communication at Lukens Steel, 1810 to 1925*. In *Technology and Culture* 51, no. 1: 252-254.

2009 Hamilton, Shane. *Trucking Country: The Road to America's Wal-Mart Economy.* In *Business History Review* 83, no. 3.

2007 Bradford, Travis. *Solar Revolution: The Economic Transformation of the Global Energy Industry*; Podobnik, Bruce. *Global Energy Shifts: Fostering Sustainability in a Turbulent Age*. In *Chemical Heritage* 25, no. 3.

2005 Josephson, Paul R. *Industrialized Nature: Brute Force Technology and the Transformation of the Natural World*. In *H-Net: Humanities and Social Sciences Online.*

2004 Romm, Joseph J. *The Hype About Hydrogen: Fact and Fiction in the Race to Save the Climate*. In *Chemical Heritage* 23, no. 2.

2004 Offner, Arnold A. *Another Such Victory: President Truman and the Cold War, 1945-1953*. In *Canadian Journal of History* 34, no. 1: 193-195.

Teaching

Spring 2016 ISAT 131-01/02/03: Technology, Science, and Society (3 sections), James Madison University

January 2016 STS 2500-05/EVSC 2559-01: Organic Machines, Engineered Environments, and Hybrid Natures, University of Virginia

Fall 2015 ISAT 160-02: Problem Solving Applications in Science and Technology, James Madison University

ISAT 231-01/02: Political Economy of Technology and Science (2 sections), James Madison University

Spring 2015	STS 4600-023 (024/025/026): Engineering Ethics and Professional Responsibility (3 sections), University of Virginia
Fall 2014	STS 4500-025/101/102: STS and Engineering Practice (3 sections), University of Virginia
Spring 2014	STS 4600-020 (021/022): Engineering Ethics and Professional Responsibility (2 sections), University of Virginia
	USEM 1570-004: Intersections of Art and Science, University of Virginia
Fall 2013	STS 4500-101/102: STS and Engineering Practice (2 sections), University of Virginia
	USEM 1570-005: Intersections of Art and Science, University of Virginia
Spring 2013	STS 4600-014/015/016: Engineering Ethics and Professional Responsibility (3 sections), University of Virginia
Fall 2012	STS 4500-005/009: STS and Engineering Practice (2 sections), University of Virginia
Fall/Spring, 2008-09	History 4704E-001: Technology and Society in North America, University of Western Ontario
Spring 2008	History 112: Modern World History, Grant MacEwan College
Fall 2007	History 486 SEM A1: Understanding the Military Industrial Complex, University of Alberta
Summer 2007	History 115 LEC B1: Technology and History, University of Alberta
Spring 2007	History 115 LEC B1: Technology and History, University of Alberta

Oral Histories (conducted for the Chemical Heritage Foundation)

July 2013	John B. Goodenough, Virginia H. Cockrell Centennial Chair in Engineering, Cockrell School of Engineering, University of Texas at Austin
April 2012	Esther S. Takeuchi, Chief Scientist, Global and Regional Solutions Directorate, Brookhaven National Laboratory/SUNY Distinguished Professor, Stony Brook University, SUNY Buffalo
February 2012	Mihal E. Gross, Program Manager, Nanoscale Science Research Centers and E-beam Microcharacterization Centers, Office of Basic Energy Sciences, Department of Energy

Presentations

Invited Presentations

May 2016	"Emerging Energy Technologies and the Uses of Technofutures." Presented at the Program in the History of Science, Technology, and Medicine, University of Minnesota
April 2016	"Gender and Science and Technology Studies/History of Science and Technology." Presented at the Department of Integrated Science and Technology, James Madison University
February 2015	"Emerging Technoscience and the Uses of Technofutures." Presented at the Department of Science and Technology Studies, York University
March 2013	"You Say You Want a Revolution: Marginal Technoscience and the Promissory Economy of Sustainable Energy." Presented at the Science Technology and Innovation Studies Program, University of Edinburgh
April 2012	"Innovation and Ideology: Producing and Interpreting Facts from Lab to Policy Salon in the Energy R&D Sector." Presented at the Chemical Heritage Foundation
March 2012	"Boundaries of Science Policy Communication." Presented at the Eighth Laboratory History Conference, Georgia Institute of Technology
March 2012	"Paradoxes of a Prairie Petro-Metropolis: Energy Politics and Citybuilding in Calgary." Presented at the American Society for Environmental History, Madison
January 2012	"Innovation and Ideology: Producing and Interpreting Facts from Lab to Policy Salon in the Energy R&D Sector." Presented at the University of Puget Sound
May 2011	"Energy History as Social History." Presented at the Royal Institute of Technology, Stockholm
April 2010	"Paradoxes of a Prairie Petro-Metropolis: Energy Politics and Citybuilding in Calgary." Presented at the University of Houston
February 2009	"Subterranean Frontier: Transnational Hydrocarbon Pipelines and Energy Technopolitics in North America, 1947-1960." Presented at McMaster University

Selected Conference and Workshop Presentations

November 2016	"A Sense of Place: A Collaboration Between a Place-Based Marine Scientist, a Creative Writer, and an Environmental Historian." Breakout session accepted for presentation at the Alliance for the Arts in Research Universities, University of Colorado Denver
November 2015	"Powering the Personal Computer in the Age of Distributed Innovation." Presented at the Society for Social Studies of Science, Denver
October 2015	"Materiality, Super Batteries, and the Technopolitics of Electric Automobility." Presented at the Society for the History of Technology, Albuquerque
March 2015	"Methods in Contemporary History." Presented at the American Society for Environmental History, Washington, DC
March 2015	"Green Technopolitical Theatre and the Uses of Technofutures." Presented at the University of Virginia
July 2013	"The Lithium Economy, Distributed Industrialization, and the Managing of Power Source Heterodoxy." Presented at the International Congress of the History of Science, Technology and Medicine, University of Manchester, UK
November 2011	"Boundaries of Science Communication in the Era of Nanotechnology: The Department of Energy and the Discourse of Revolutionary Applied Science." Presented at the Society for the Study of Nanoscience and Emerging Technologies, Tempe, AZ
November 2011	"Boundaries of Science Communication in the Era of Nanotechnology: The Department of Energy and the Discourse of Revolutionary Applied Science." Presented at the Society for Social Studies of Science, Cleveland
September 2010	"Making Nanomaterials Work in Energy Conversion Technology." Presented at the Society for the Study of Nanoscience and Emerging Technologies, Darmstadt, Germany
October 2009	"Hydrogen Futurism in Environmental and Energy Technopolitics." Presented at the Society for the History of Technology, Pittsburgh
September 2008	"Battery vs. Fuel Cell: Electrochemical Power Sources and the Technopolitics of Green Automobility." Presented at the Sixth International Conference on the History of Transport, Traffic and Mobility, Ottawa, Ontario
June 2008	"Technological Metaphor and Fuel Cell Research and Development." Presented at the Canadian Society for the History and Philosophy of Science, University of British Columbia

October 2007	"Fuel Cells." Presented at the Society for the History of Technology, Washington, DC
October 2007	"Ballard Power Systems and the Rise and Fall of the Fuel Cell Automobile." Presented at the Canadian Science and Technology Historical Association, University of Toronto
August 2007	"Fueling Dreams of Grandeur: Fuel Cell Research and Development and the Pursuit of the Abundant Energy Machine, 1945-2000." Presented at the Institute of Electrical and Electronics Engineers Triennial Conference on the History of Electric Power, Newark, NJ
March 2006	"The Green Machine: Technological Utopia and the Discourse of the Hydrogen Fuel Cell." Presented at the American Society for Environmental History/Forest History Society, St. Paul, MN
November 2005	"Bringing it Down to Earth: The U.S. Army, NASA, and the Politics of Fuel Cell Research and Development, 1959-1970." Presented at the History of Science Society/Society for the History of Technology, Minneapolis

Awards and Honors

2007	Travel Grant, Society for the History of Technology
2007	J. Gordin Kaplan Graduate Student Award (University of Alberta)
2006	Beryl Steel Travel Award (University of Alberta)
2005	Travel Grant, Society for the History of Technology
2005-2006	Walter H. Johns Graduate Fellowship (University of Alberta)
2005	Travel Award, Churchill Foundation (University of Alberta)
2004-2006	Social Sciences and Humanities Research Council Graduate Scholarship (Government of Canada)
2004-2005	Walter H. Johns Graduate Fellowship (University of Alberta)
2004-2005	Province of Alberta Graduate Fellowship
2003-2004	Province of Alberta Graduate Fellowship
2001-2002	J.R. Schrumm Memorial History Prize (University of Alberta)

2000-2001	Merit-Based Bursary (University of Alberta)
1999-2000	University of Alberta Faculty of Arts/Scotiabank Scholarship
1999-2000	Millennium Scholarship (Government of Canada)
1999-2000	George Malcolm Smith Memorial Book Prize (University of Alberta)
1998-1999	Honorable Mention, History of Science Essay Prize (University of Alberta)

Professional Service

2016-2017	Finn-IEEE History Prize Committee Chair, Society for the History of Technology
2015-2016	Finn-IEEE History Prize Committee Member, Society for the History of Technology
2015-	Assessment Committee Member, ISAT Department, James Madison University
2015	"Technogoverning Sustainable Landscapes" Workshop Co-organizer, University of Virginia
2011	"Situating Emerging Technology" Panel Co-organizer, Society for Social Studies of Science
2011	Robinson Prize Committee Member, Society for the History of Technology
2011	Interdisciplinary Research Group 1 Seminar Series Organizer, Center for Nanotechnology in Society
2010	"Nanodays" Exhibit Guide, Center for Nanotechnology in Society
2009	"Chemical Trails" Panel Organizer and Chair, Society for the History of Technology
2007	"Putting Region in its Place" Workshop Co-organizer, University of Alberta
2004	First Annual CHF-SCI Innovation Day Rapporteur

2003-2004 *Past Imperfect: History and Classics Graduate Student Journal* 10
Associate Editor, University of Alberta

2002-2003 *Past Imperfect: History and Classics Graduate Student Journal* 9
Editor, University of Alberta

Manuscripts Refereed

2016 *The Man Who Saw Tomorrow: The Life and Inventions of Stanford Ovshinsky*, for The MIT Press

2016 "A Bibliometric Analysis of the Development of Next Generation Complex Engineered Nanomaterials," for *Journal of Nanoparticle Research*

2016 "What Happens to a Dream Deferred? The Emergence and Re-emergence of Concentrating Solar Power," for *Technology and Culture*

2015 "NSF Proposal 1556902: The Potential for Adoption of Nanotechnology for the Sustainable Treatment and Monitoring of Arsenic in Drinking Water," for National Science Foundation (Science, Technology, and Society Program)

2015 "Nanotechnology: The Secret of the Fifth Industrial Revolution," for *Nusantara Bioscience*

2013 "Running on Hydrogen: Visions of Alternative Mobility and the Hydrogen Hype, ca. 1970-2010," for *Journal of Transport History*

2012 "Energizing Technology: Expectations of Fuel Cells and the Hydrogen Economy, 1990-2005," for *History and Technology*

2010 "20 Golden Years of Battery R&D at CSIR (1974-1994): A Contribution to the History of Science in South Africa," for *South African Journal of Science*

2010 "Composing a Technology Delivery System for an Emerging Technology: The Case of Dye-Sensitized Solar Cells," for *Journal of Technology Transfer*

Media

2016 Subject of *JMU News* article: "How a JMU Professor is Filling the Knowledge Void About Battery-Powered Cars," 01/21/16

2015 Interview with Eric Gorton, Public Affairs Coordinator, James Madison University, 11/30/15

2015 Telephone interview with Alan Stahler, KVMR-FM (Nevada City, CA), 07/03/15