

# EMILY YORK

ASSISTANT PROFESSOR  
SOCIAL CONTEXTS OF SCIENCE & TECHNOLOGY

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## OVERVIEW

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I am an Assistant Professor in the School of Integrated Sciences at James Madison University (JMU). Drawing on the fields of Science and Technology Studies (STS), cultural studies, innovation studies, communication, and the scholarship of teaching and learning (SoTL), my research engages the societal dimensions of emerging technologies, practices of multidisciplinary collaboration and knowledge production, and methods of integrating ethical reasoning and critical inquiry into STEM curricula. I am the co-director of the STS Futures Lab at JMU, an innovative applied STS lab that aims to develop capacities for critical imagination and responsible innovation at the intersection of research and pedagogy. I also serve as an Associate Editor for the open access 4S journal *Engaging STS* as part of an editorial collective, in which my primary focus is to develop the journal's engagement with STS pedagogies.

The Bachelor of Science in Integrated Science and Technology program in which I teach is an ABET-accredited applied science program that integrates scientific method and content with systems-based approaches, holistic thinking, and a strong foundation in the social contexts of science and technology. I work with colleagues from engineering, natural sciences, social sciences, and humanities to develop innovative collaborations and rich learning experiences for undergraduate STEM students.

## EDUCATION

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<b>UNIVERSITY OF CALIFORNIA, SAN DIEGO</b>	<b>SAN DIEGO, CA</b>
Ph.D., Communication & Science Studies	2016
Dissertation: "Nano Dreams and Nano Worlds: The Emergence and Disciplinary Formation of Nanoengineering"	
<b>UNIVERSITY OF CHICAGO</b>	<b>CHICAGO, IL</b>
M.S. Computer Science	2001
<b>UNIVERSITY OF CHICAGO</b>	<b>CHICAGO, IL</b>
A.B. with honors, English Language & Literature	2000

## ACADEMIC APPOINTMENTS & EMPLOYMENT

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<b>JAMES MADISON UNIVERSITY, SCHOOL OF INTEGRATED SCIENCES</b>	<b>HARRISONBURG, VA</b>
Assistant Professor, Integrated Science and Technology	2016-Current
Courses Taught:	
<ul style="list-style-type: none"><li>• The Future of Learning at JMU</li><li>• Governance of Sociotechnical Systems</li><li>• Technology, Science and Society</li><li>• Ethical, Legal, and Societal Implications of Biotechnology</li><li>• Holistic Problem-Solving Workshop: Privacy in a Connected World</li><li>• STS Futures I, II, III</li><li>• Design Fiction</li></ul>	
<b>UNIVERSITY OF CALIFORNIA, SAN DIEGO</b>	<b>SAN DIEGO, CA</b>
Graduate Instructor of Record, Department of Communication	2013-16
Teaching Assistant, Writing Programs and Department of Communication	2011-13

**FRIEDRICH, KLATT & ASSOCIATES**

Managing Consultant, Software Development and Project Management, 2004-2010  
Consultant, Software Development and Project Management, 2001-2004

CHICAGO, IL

2001-2010

**SELECTED AWARDS, FELLOWSHIPS, GRANTS, HONORS**

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Madison Trust grant, "Collaborative Pedagogies Across the Curriculum: Imagining Justice"	2021
National Renewable Energy Laboratory Collegiate Wind Competition (Co-PI)	2019, 2020
National Science Foundation Grant (Co-PI), STS as a Critical Pedagogy Workshop	2019
Colonial Academic Alliance Innovation/Collaboration Grant (PI), "Ethical Reasoning in STEM Through Mutli-Disciplinary Collaborative Teaching" with Drexel University	2019
4-VA (Co-PI), "Toward T-Shaped Graduates: A Joint Capstone Program at the Nexus of Mechanical Engineering and Science and Technology Policy" With George Mason University	2019
4-VA (Co-PI), "STS and STEM in the Commonwealth: An Interdisciplinary Cross-Institutional Virginia Partnership" With University of Virginia, Virginia Tech, and Virginia Commonwealth University	2019
Accelerating Creative Teaching (ACT) grants, Libraries and Educational Technologies, JMU	2017, 2019
College of Integrated Science and Engineering Faculty Development Grants	2018, 2019
Excellence in Teaching & Learning with Technology Award, JMU	2018
NNCI Workshop on Responsible Innovation (Competitive, Funded)	2017
Engaged Teacher-Scholar Program (Competitive, Funded), Center for Faculty Innovation, JMU	2017-2018
Object Lessons Institute (Competitive, NEH Funded)	2017
Institute for Online and Blended Learning (Competitive, Funded), JMU	2017
Visiting Fellowship (Competitive, Funded), Innovation Society Today Research Group, Technical University Berlin	2014

**PUBLICATIONS**

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Shannon N. Conley, Emily York. 2020. "Public engagement in contested political contexts: reflections on the role of recursive reflexivity in responsible innovation." *Journal of Responsible Innovation*. 7:sup1, 1-12.

<https://doi.org/10.1080/23299460.2020.1848335>

Emily York, Shannon N. Conley. 2020. "Creative Anticipatory Ethical Reasoning with Scenario Analysis and Design Fiction." *Science and Engineering Ethics*. 26, 2985-3016. <https://doi.org/10.1007/s11948-020-00253-x>

Emily York, et al. 2019. "Co-Imagining the Futures of Implementation Precision Medicine Using Scenario Analysis and Design Fiction." *OMICS: A Journal of Integrative Biology*. 2019: 23 (7).

Emily York, Ahmad Salman. 2019. "Privacy in a Connected World: Integrating Ethical Reasoning into an Applied Science Curriculum Through Holistic Problem Solving." *Teaching Ethics*. 10:2. Fall 2019. <https://doi.org/10.5840/tej202091480>

Emily York, Shannon N. Conley. 2019. "Critical Imagination at the Intersection of STS Pedagogy and Research." Invited blog post for the Committee for the Anthropology of Science, Technology, and Computing. *Platypus: The CASTAC Blog*. 2019. <http://blog.castac.org/2019/11/critical-imagination-at-the-intersection-of-sts-pedagogy-and-research/>

## York Vitae

Emily York, Shannon N. Conley, Samuel Kodua. 2019. "The STS Futures Lab at James Madison University: Integrating Design Fiction, Experimental Pedagogy, and Anticipatory Research into STEM Education and Outreach". *Circe Magazine: STEAM Edition*, 2019, pp 81-85. <http://online.anyflip.com/mbnj/nkhc/mobile/index.html>

Emily York. 2018. "Doing STS in STEM Spaces: Experiments in Critical Participation." *Engineering Studies*, pp 1–19. [Web](#)

Emily York. 2015. "Smaller is Better? Learning an Ethos and Worldview in Nanoengineering Education." *NanoEthics* <http://link.springer.com/article/10.1007/s11569-015-0232-3> August 2015, Volume 9, Issue 2, pp 109-122.

Emily York. 2015. "Nanodreams and Nanoworlds: *Fantastic Voyage* as a Fantastic Origin Story." *Configurations*. <https://muse.jhu.edu/login?auth=0&type=summary&url=/journals/configurations/v023/23.3.york.html> Fall 2015, Volume 23, Number 3, pp. 263-299.

## PROFESSIONAL SERVICE

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### INTELLECTUAL COMMUNITY

Associate Editor, <i>Engaging STS</i>	2019-Current
Advisory Editor, <i>Engineering Studies</i> Journal	2017-2020
Manuscript Reviewer, <i>Engineering Studies</i>	
Manuscript Reviewer, <i>Social Studies For Science</i>	
Manuscript Reviewer, <i>NanoEthics</i>	

### JAMES MADISON UNIVERSITY, UNIVERSITY WIDE

Board Member, Institute for Creative Inquiry	Current
Advisory Board Member, Cohen Center for the Humanities	2017-19
Teaching Analysis Poll Consultant, Center For Faculty Innovation	2017-19
Facilitator, It's Complicated Freshman Orientation Workshop on Ethical Reasoning	2017-19
Speaker, Faculty Mentorship Roundtable, Center for Faculty Innovation	2017
Member, Dominion Speaker Selection Committee, Madison Caucus for Gender Equality	2017

### JAMES MADISON UNIVERSITY,

#### COLLEGE OF INTEGRATED SCIENCE AND ENGINEERING (CISE) & SCHOOL OF INTEGRATED SCIENCES (SIS)

Co-Chair, Assessment Committee, Integrated Science and Technology, SIS	2016-Current
Chair, CISE Faculty Council	2019-Current
Member, Student Evaluations Redesign Committee, School of Integrated Sciences	2016-2020
Alternate Member, College Faculty Leaves and Grants Committee	2018-19
Contributing organizer, CAPWIC Conference	2019
Member, Computing Taskforce, Integrated Science and Technology	2018
Member, Foundations Redesign Committee, Integrated Science and Technology	2016-18
Organizer, Science and Engineering Pedagogical Activity Exchange Event	2017
Member, ABET Accreditation Committee, Integrated Science and Technology	2017-18
Advisor, Theta Tau professional fraternity	2018-Current

## PRESENTATIONS AND INVITED TALKS

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2021

Invited Workshop “STS Pedagogies Workshop.”  
*Co-Facilitator Shannon N. Conley. STGlobal.*

2020

Invited Talk, “Creative Anticipatory Ethical Reasoning (CAER) in Context.”  
*Co-Author Shannon N. Conley. Colorado School of Mines.*

Invited Keynote Speaker, NSF-funded symposium on the “Futures of STS in Engineering and Polytechnic Universities”  
*Missouri S&T. Rolla, Missouri.*

2019

“Scenario Analysis as Pedagogy, Research, and Expert Engagement: Using Scenarios and Design Fiction to Imagine and Critique Climate Futures”  
*Co-Author Shannon Conley. Scenarios and the Politics of the Future at the Climate-Security Nexus. Funded. Hamburg, Germany.*

“The STS Futures Laboratory: Experimental Engagements at the Intersection of Science Fiction and Science Fact”  
*Co-Author Shannon Conley. Society for Science, Literature, and the Arts. Irvine, California.*

“The STS Futures Lab at the Intersection of Research and Pedagogy”  
*Co-Author Shannon Conley. Innovating STS Digital Exhibit. Society for the Social Studies of Science (4S). <https://stsinfrastructures.org/content/sts-futures-lab-intersection-research-and-pedaqogy/essay> New Orleans, Louisiana.*

“Cultivating Interdisciplinary Trading Zones and Building Interactional Competence: An Experiment in Co-Imagining Sociotechnical Futures with Contributory Experts”  
*Co-Author Shannon Conley, Sam Kodua (undergrad). Studies of Expertise and Experience Workshop. Funded. Helsinki, Finland.*

“Ecology, Difference, and Boundary-Crossing: Toward Radical Interdisciplinarity”  
*Association for the Study of Literature and Environment. Davis, California.*

“Le Guin in STEM Pedagogies: Bridging Science and Literature to Engage Undergraduate STEM Students in Critically Interrogating Plausible Futures”  
*Legacies of Ursula K. Le Guin: Science, Fiction and Ethics for the Anthropocene. Paris, France.*

Invited Talk: “Envisioning Futures Across Disciplines”  
*Co-Author Shannon Conley. Institute for Creative Inquiry, JMU. Harrisonburg, Virginia.*

“Anticipatory Ethical Reasoning”  
*Co-Author Shannon Conley. Conference on Higher Education Pedagogy. Blacksburg, Virginia.*

2018

“Integrating Ethics into an Applied Science Curriculum Through Holistic Problem Solving”  
*Co-Author Ahmad Salman. Society for Ethics Across the Curriculum Annual Meeting. Rochester, New York.*

York Vitae

“Critically Engaging the Future with Scenario Analysis and Design Fiction”  
*Conference on Higher Education Pedagogy. Blacksburg, Virginia.*

Invited Talk: “NanoEngineering As Translational Research”  
*STS Colloquium, University of Virginia. Charlottesville, Virginia.*

2017

“We Are All Completely Beside Ourselves as a Feminist STS Intervention”  
*International Communication Association Annual Meeting. San Diego, California.*

“Using Scenario Analysis in the Domain of Driverless Cars to Engage STEM Students in Ethical Reasoning”  
*Co-Author Shannon Conley. SIGCSE 2017 Computing & Society Workshop*

“A Future History of Nanoengineering”  
*NNCI Winter School on Responsible Innovation. Mesa, Arizona.*

“Autonomous Vehicles as Sensing Robots and As Forms of Life”  
*Co-Author Chase Collins\*, Charles Boyd\*, Shannon Conley. Social Studies of Science Annual Meeting. Boston, Massachusetts. \*Presenters.*

“Anticipating Autonomous Vehicles”  
*Co-Author Chase Collins\*, Charles Boyd, Shannon Conley\*. Society for the Study of New and Emerging Technologies Annual Meeting. Tempe, Arizona. \*Presenters.*