

Susan Spierre Clark, PhD

CAREER SNAPSHOT

- Secured over \$3M in funding from NSF as a co-author on sustainability and resilience related proposals
- Co-lead on a Climate Smart Communities Grant to Erie County, NY funded by the New York State Department of Environmental Conservation
- Co-PI on 5 proposals awarded for interdisciplinary science and engineering education research
- Published 13 peer-reviewed journal articles, as well as 8 refereed conference proceedings, 3 book chapters, and 5 digital publications including *Slate Magazine*.
- Instructor for 3 undergraduate, 2 graduate, and 1 online sustainability and resilience related courses
- Co-developed an experiential pedagogy for Sustainability Ethics with NSF support that has been adopted by over a dozen universities world-wide
- Organized and chaired 6 instructor workshops and professional development panels
- Traveled to Uganda, the Netherlands, Switzerland, France, the U.K., and the Caribbean for research activities and conferences
- Faculty advisor to several student clubs and organizations
- Served as Student Chapter President of the International Society of Industrial Ecology (ISIE)

EDUCATION

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| Sustainability Science, Ph.D. | Arizona State University | 2013 |
| Dissertation: <i>Examining a Sustainable Approach to Global Climate Policy</i> ; Advisor: Thomas P. Seager | | |
| Earth Science (Geochemical Systems), M.S. | University of New Hampshire | 2008 |
| Thesis: <i>Trends in Extreme Precipitation Events for New England</i> ; Advisor: Dr. Cameron Wake | | |
| Atmospheric Science, B.S. | University at Albany | 2006 |
| Minor in Geography, Earned a GIS certificate | | |

APPOINTMENTS

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| Policy, Planning & Sustainability Scientist , RENEW Institute, UB | 2017- |
| Vice President , Experiential Sustainability Ethics Training Games, Inc. | 2013- |
| Research Assistant Professor , School of Sustainable Engineering, ASU | 2014-2017 |
| Senior Sustainability Scientist , Global Institute of Sustainability, ASU | 2014-2017 |
| Affiliate Scholar , Consortium for Science, Policy and Outcomes, ASU | 2014-2017 |
| Managing Director , Sustainable Energy & Environmental Decision Sciences Studio | 2013-2017 |
| Faculty Associate , School of Sustainability, ASU | 2012-2014 |
| Post-Doctoral Scholar , School of Sustainable Engineering, ASU | 2013-2014 |
| Graduate Teaching Assistant | |
| School of Sustainability, ASU | 2010-2013 |
| Department of Geography, UNH | 2006-2008 |
| Graduate Research Assistant | |
| School of Sustainable Engineering, ASU | 2010-2013 |
| Climate Change Research Center, UNH | 2006-2008 |
| Research Associate , Clean Air Cool Planet, Portsmouth, New Hampshire | 2009 |
| Student Intern | |
| New York State Department of Environmental Conservation, Albany, NY | 2006 |
| National Weather Service, Albany, NY | 2005 |

PUBLICATIONS

Peer-Reviewed Journal Articles: (note that Spierre is my maiden name)

- Clark, S.S.**, Seager, T.P., Chester, M.V. A Capabilities Approach to the Prioritization of Critical Infrastructure. *Environment, Systems and Decisions*, in press.
- Mathias, J.D., **Clark, S.S.**, Onat, N., Seager, T.P. Integrated Dynamical Modeling Perspective for Infrastructure Resilience. *Infrastructures*, in press.
- Marchese, D., Reynolds, E., Bates, M. E., Morgan, H., **Clark, S. S.**, & Linkov, I. (2018). Resilience and sustainability: Similarities and differences in environmental management applications. *Science of the Total Environment*, 613, 1275-1283.
- Clark, S. S.**, Chester, M. V., Seager, T. P., & Eisenberg, D. A. (2018). The vulnerability of interdependent urban infrastructure systems to climate change: could Phoenix experience a Katrina of extreme heat?. *Sustainable and Resilient Infrastructure*, 1-15.
- McBurnett, L. R., Hinrichs, M. M., Seager, T. P., & **Clark, S. S.** (2018). Simulation Gaming Can Strengthen Experiential Education in Complex Infrastructure Systems. *Simulation & Gaming*, 1046878118767729.
- Clark, S. S.**, & Chester, M. V. (2017). A Hybrid Approach for Assessing the Multi-Scale Impacts of Urban Resource Use: Transportation in Phoenix, Arizona. *Journal of Industrial Ecology*, 21(1), 136-150.
- Clark, S.S.**, Berardy, A., Hannah, M., Seager, T.P, Selinger, E. & Mikanda, J.V. (2015). The Role of Tacit knowledge in Facilitating Globally Distributed Virtual Teams: Lessons Learned from Using Games and Social Media in the Classroom. *Connexions*. 3(1), 113-151.
- Clark, S.S.**, Seager, T.P., & Selinger, E. (2015). A Development-Based Approach to Global Climate Policy. *Environment, Systems and Decisions*. 35(1), 1-10.
- Sadowski, J., **Spierre, S.G.**, Seager, T.P., Selinger, E., Adams, E.A., & Berardy, A. (2014). Intergroup Cooperation in Common Pool Resource Dilemmas. *Science and Engineering Ethics*, 1-19.
- Hannah, M. A., Berardy, A., **Spierre, S.G.** & Seager.T.P. (2013). Beyond the 'T': Framing a model of participatory ethical decision-making for international engineering communication. *Connexions* 1(2),11-14.
- Spierre, S.G.**, Seager, T.P. & Selinger, E. (2013). The 2010 Human Development Index: Implications for Climate Policy and Sustainable Development. *Sustainable Development*, 6(6).
- Sadowski, J., Seager, T.P., Selinger, E., **Spierre, S.G.**, & Whyte, K. (2012). An Experiential, Game-Theoretic Pedagogy for Sustainability Ethics. *Science and Engineering Ethics*, 19(3), 1323-1339.
- Seager, T.P., Selinger, E., & **Spierre, S.G.** (2011). Determining Moral Responsibility for CO₂ Emissions: A Reply to Nolt. *Ethics, Policy & Environment*, 14(1), 39-42.

Conference Publications:

- Clark, S. S.**, Seager, T. P., Chester, M., Eisenberg, D. A., Sweet, D., & Linkov, I. (2014, December). Resilience Simulation for Water, Power & Road Networks. In *AGU Fall Meeting Abstracts*.
- Antaya, C.L., Adams E.A., **Clark, S.S.**, Seager, T.P. & Landis, A. (2014). Using Conation to Enhance Student Satisfaction with Teams in SOS110. *National Technical Association*, Atlanta, GA, September 24-26.
- Spierre, S.G.**, Seager, T.P., Selinger, E. (2013). A Development- Based Approach to Global Climate Policy. *Proceedings of the International Symposium on Sustainable Systems & Technologies*. Cincinnati, OH, May 15-17.
- Spierre, S.G.**, Martin, E.A., Sadowski, J., Berardy, A., McClintock, S., Augustin, S., Hohman, N., & Banna, J. (2012). An Experiential Pedagogy for Sustainability Ethics. *Proceedings of the American Society of Engineering Education*. San Antonio TX, June 10-13

Spierre, S.G., Seager, T.P. & Selinger, E. (2011). Using the Capability Approach to Address Climate Change and Human Development. *Proceedings of the 2011 Human Development and Capabilities Association*. Den Hague, Netherlands, September 6-8.

Spierre, S.G., Seager, T.P., Selinger, E., & Sadowski, J. (2011). Using Non-cooperative Games to Simulate Ethical Tensions in Climate Policy Negotiations. *Proceedings of the 2011 IEEE International Symposium on Sustainable Systems and Technology*, Chicago, IL

Spierre, S.G., Seager, T.P. & Selinger, E. (2010). Determining an Equitable Allocation of Global Carbon Dioxide Emissions. *Proceedings of the 2010 IEEE International Symposium on Sustainable Systems and Technology*. Arlington, VA

Seager, T.P., Selinger, E., Whiddon, D., Schwartz, D., **Spierre, S.G.**, & Berardy, A. (2010). Debunking the fallacy of the individual decision-maker: An experiential pedagogy of sustainability ethics. *Proceedings of the 2010 IEEE International Symposium on Sustainable Systems and Technology*. Arlington, VA

Book Chapters:

Seager, T. P., **Clark, S. S.**, Eisenberg, D. A., Thomas, J. E., Hinrichs, M. M., Kofron, R., ... & Alderson, D. L. (2017). Redesigning resilient infrastructure research. In *Resilience and Risk* (pp. 81-119). Springer, Dordrecht.

Snell, M.L., Eisenberg, D.A., Seager, T.P. **Clark, S.S.**, Joon Oh, Y., Thomas, J.E., McBurnett, L. (2016). A Multidimensional Review of Resilience: Resources, Processes, and Outcomes. In Linkov, I and Florin, M.V. (Eds.), *Resilience In And For Risk Governance*. In press.

Selinger E., Seager T.P., **Spierre S.G.**, & Schwartz D. (2011). Using sustainability games to elicit moral hypotheses from scientists and engineers. In P.H. Jespersen, S. Riis, & P. Almlund (Eds.), *Rethinking Climate Change Research: Clean-Technology, Culture and Communication*. Ashgate Publishing: Surrey UK

Scholarly Articles, Blogs & Digital Tools:

Clark, S. S., & Seager, T. P. (2017). [A Human-Centered Approach to the Prioritization of Critical Infrastructure Resilience](#). *The CIP Report*.

Seager, T.P. & **Clark, S.S.** (2016). [Pokémon Go Help Someone: How augmented reality games could connect people after disasters](#). Future Tense, Slate Magazine.

Clark, S.S. & Seager, T.P. (2015) [A Socio-Technical Approach to Critical Infrastructure Resilience](#). *The CIP Report*. Center for Infrastructure Protection & Homeland Security, George Mason University.

Spierre, S.G., Seager, T.P. & Selinger E. (2012). [Negative Externalities and the Coase Theorem](#). *Sustainability Ethics: Experiential Approaches to Moral Complexity*.

Spierre, S.G., Seager, T.P., Selinger, E., & Sadowski, J. (2012). [An Experiential Pedagogy for Sustainability Ethics: The Externalities Game](#). *Starting Point: Teaching Entry Level Geoscience*.

Reports:

Spierre, S.G. & Wake, C. (2010). [Trends in Extreme Precipitation Events for the Northeastern United States 1948-2007](#). *Carbon Solutions New England*.

Spierre, S. G., Sadowski, J., Berardy, A., McClintock, S., Augustin, S-A., Hohman, N., & Banna, J. (2012) [An Instructor's Guide to Teaching the Pisces Game for Sustainability Ethics](#). *The Tiktaalik Collection: Science through Transformation*. School of Sustainable Engineering & The Built Environment, Arizona State University: Tempe AZ.

Spierre, S.G. (2011). [Rural Electrification in Uganda](#). *The Tiktaalik Collection: Science through Transformation*, School of Sustainability, Arizona State University Tempe AZ.

PROPOSALS, FUNDING, & GRANTS

Funded Proposals:

- Climate Vulnerability Assessment for Erie County, NY. **Co-PI**. Funded by the New York State Department of Environmental Conservation, Climate Smart Communities Program. 2018. \$100,000.
- Developing thermal extreme indicators for vulnerability assessment & climate adaption. **Co-PI**. Seed Project funded by the RENEW Institute at UB. 2018. \$35,000.
- Integrated Modeling of Climate Change and Human Influence on Land Use and Hydrology With Remote Sensing. **Co-PI**. Seed Project funded by the RENEW Institute at UB. 2018. \$35,000.
- Vetern Engagement in the NEPTUNE Program: Resilience Processes in Positive Case Studies. **Co-PI**. Funded by the Office of Navel Research and ASU Lightworks. 2015. \$1,500,000.
- Resilience Simulation for Water, Power & Road Networks. **Research Scientist**. Funded by the National Science Foundation, Resilient Interdependent Infrastructure Processes and Systems (RIPS). 2014. \$2,500,000
- Advancing Infrastructure and Institutional Resilience to Climate Change for Coupled Water-Energy Systems. **Research Scientist**. Funded by the National Science Foundation, Water, Sustainability and Climate (WSC). 2014. \$600,000
- Sustainable New Product Development. **Co-PI**. Funded by the Ray C. Anderson Foundation. 2014. \$60,000
- International Game-Play for Climate-Policy Research. **PI**. Funded by the Ariona Board of Regents. 2013. \$5,000
- Social & Technical, Barriers & Burdens to Terawatt scale Photovoltaic Technology. **Co-PI**. Funded by the ASU Graduate Interdisciplinary Studies Education and Research (GISER). \$500
- Integrating Sustainability Grand Challenges via Experiential Learning Labs. **Co-PI**. Funded by the ASU Graduate Interdisciplinary Studies Education and Research (GISER). \$500
- Transforming Teamwork through Conative Awareness. **Co-PI**. Funded by the ASU Graduate Interdisciplinary Studies Education and Research (GISER). \$500
- An Experiential Pedagogy for Sustainability Ethics. **Graduate Research Assistant**. Funded by the National Science Foundation Division of Engineering Education and Centers. \$400,000

Declined Proposals:

- Collaborative Research: A System Dynamics Approach to Critical Infrastructure Resilience: Prioritizing Infrastructure Services to Support Human Needs. Submitted to NSF Infrastructure Management and Extreme Events. **PI**. \$600,000
- Advancing Institutional and Social Capacity to Improve Resiliency of Communities to Cascading Extreme Environmental Events in the Southwestern United States. Submitted to NSF Infrastructure Management and Extreme Events. **Co-PI**. \$500,000
- Critical Infrastructure Resilience Center of Excellence Partner Proposal (Northeastern is Center Lead). **Co-PI**. Submitted to Department of Homeland Security. \$20,000,000
- International Game-Play for Climate Policy Research. **PI**. Submitted to NSF Science Engineering and Education for Sustainability (SEES) Fellows. \$325,000
- Digital Ethics Network (DEN): An Online Habitat for Ethical Colloquy. Postdoctoral Researcher. Submitted to National Science Foundation Online Resource Center for Ethics Education in Science and Engineering. **Research Scientist**

CONFERENCE PRESENTATIONS

International Meetings:

- “A Human Centered Approach to the Prioritization of Critical Infrastructure Resilience”, 2017 International Resilience Colloquium: Urban Resilience: Research Gaps and Implementation Roadmap at the University of New Mexico Resilience Institute, August 7-8, Albuquerque, NM
- “A Capabilities Approach to Critical Infrastructure Resilience”, 2016 *International Symposium of Sustainable Systems and Technology*, May 16-18, Phoenix, AZ
- “Institutional Resilience of Coupled Water and Energy Systems to Climate Change in Phoenix, Arizona”, 2015 *International Symposium of Sustainable Systems and Technology*, May 18-20, Dearborn, MI
- “Multi-Scale Analysis of Phoenix Highway Transportation.” 2014 *International Symposium of Sustainable Systems and Technology*, May 19-21, 2014, San Francisco, CA
- “An Experiential Pedagogy of Sustainability Ethics.” 2014 *Society of Environmental Toxicology and Chemistry*, May 12-16, 2014, Basel, Switzerland
- “An Experiential Pedagogy of Sustainability Ethics.” 2013 *International Symposium of Sustainable Systems and Technology*, May 15-17, 2013, Cincinnati, OH
- “Understanding the 2010 Human Development Index Calculation.” 2012 *IEEE International Symposium on Sustainable Systems and Technology (ISSST)*, poster presentation, May 16-18, 2012, Boston, MA.
- “Using the Capability Approach to Address Climate Change and Human Development.” 2011 *Human Development and Capabilities Association (HDCA) Conference*, September 6-8, 2011, Den Hague, Netherlands
- “Determining an Equitable Allocation of Global Carbon Dioxide Emissions.” 2010 *IEEE International Symposium on Sustainable Systems and Technology (ISSST)*, May 17-19, 2010, Arlington, VA
- “Changing Trends in the Frequency and Variability of Extreme Precipitation Events in New England.” *American Geophysical Union: The Meeting of the Americas 2008 Joint Assembly*, poster presentation, May 27-30, 2008, Ft. Lauderdale, FL

Other Conference Presentations:

- “A Capabilities Approach towards Prioritization of Critical Infrastructure Resilience” 2017 *Frontiers in Resilience: Developing Innovative Resilience Solutions at the Interface of Science, Economics, and Policy*, May 10-11, Arlington, VA.
- “The Vulnerability of Interdependent Urban Infrastructure Systems to Climate Change: Could Phoenix Experience a Katrina of Extreme Heat?” *3rd National Symposium on Resilient Critical Infrastructure*, August 16-18, Chicago, IL
- “A Capabilities Approach to Critical Infrastructure Resilience”, ASCE and The Infrastructure Security Partnership’s 2016 *Critical Infrastructure Symposium*, April 3-5, Charleston, SC.
- “A Capabilities Approach to Resilience”, *2nd National Symposium on Resilient Critical Infrastructure*, August 18-20, 2015, Philadelphia, PA
- “Social Capital: The Key to Sustainable Development & Resilient Communities” the 2015 *Transformation Conflict Summit*, April 24, Panelist for the *Communication for Sustainability, Happiness, and Neighborhood Development Session*, Tempe, AZ
- “Socio-Technical Resilience of Critical Infrastructure” 2015 *Integrated Network for Social Sustainability Annual Conference*, April 8-10, Tempe AZ
- “Determining an Equitable Approach to Global Climate Change Policy.” 2012 *International Conference on Climate Adaptation*, May 29-31, 2012, Tucson, AZ

GUEST LECTURES AND INVITED TALKS

International talks:

- “Climate Change, Sustainability, and Resilience”, *Aruba Summer School* invited talk, June 1, 2015 at the University of Aruba
- “Climate Change and Human Development.” *Development Studies* class guest lecture, October 26 & 29, 2011, Makerere University, Kampala, Uganda

Invited talks:

- “A Service-based Approach to the Prioritization of Critical Infrastructure Resilience” Sandia National Laboratories, August 9, 2017, Albuquerque, NM
- “An Interdisciplinary Approach to Critical Infrastructure Resilience” *College of Natural Resources*, April 18, 2016, North Carolina State University, Raleigh, NC
- “An Interdisciplinary Approach to Critical Infrastructure Resilience” *Earth & Environment*, February 24, 2016, Boston University, Boston, MA
- “An Interdisciplinary Approach to Critical Infrastructure Resilience” *Earth and Environmental Studies*, January 28, 2016, Montclair State University, Montclair, NJ
- “Climate Change and Resilience” *Grand Challenges Scholars Program*, July 22, 2015, Arizona State University Tempe AZ
- “Climate Change, Games, and Resilience: A Sampling of Research by an Interdisciplinary Scholar”, *Consortium for Science, Policy & Outcomes*, April 8, 2015, Tempe, AZ
- “Infrastructure Resilience: Bringing the Social & Technical Together” *Walton Sustainability Solutions Initiatives*, March 10, 2015 at Arizona State University
- “Socio-Technical Resilience of Critical Infrastructure” *Center for Behavior, Institutions, and the Environment*, March 30, 2015 at Arizona State University
- “Experiential Pedagogy for Sustainability Ethics.” *GK-12 Fellows Seminar*, November 21, 2011, Arizona State University, Tempe, AZ
- “An Experiential Pedagogy of Sustainability Ethics” *Environmental Engineering Seminar*, March, 22, 2011, Arizona State University, Tempe, AZ

Guest Lectures:

- “A Capabilities Approach to Critical Infrastructure Resilience” *Resilient Infrastructure*, October 26, 2016, Arizona State University, Tempe, AZ
- “Walking Audit of Waste Management Practices on ASU Campus” *Sustainability Science for Teachers*, April 4, 2013, Arizona State University, Tempe, AZ
- “Cooperation for Climate.” *Sustainability Ethics*, September 19, 2012, Arizona State University, Tempe, AZ
- “Using the Capability Approach to Address Climate Change and Human Development.”, *Sustainability Ethics* August 30, 2011, Tempe, AZ
- “Cooperation for Climate” *Sustainability Ethics*, March 15, 2011, Rochester Institute of Technology, Rochester, NY

PROFESSIONAL DEVELOPMENT

- Using Social Media & Techonolgy in the Classroom** September, 2015
Participated in 2 webinars: 'Using Social Media without violating FERPA' & 'The Journey to Digital'.
- Leadership Program "Teaching Through Research"** April 16-18, 2015
Selected to participate in a week long workshop on innovative educational approaches at the Center for Interdisciplinary Research in Paris, France
- Being a Leader: an OPPT-in Approach to Pedagogy Workshop** October 17-19, 2014
Three day workshop about being a leader instead of learning about what leaders do. Organized by the Hugh Downs School Conflict, Transformation, and Wellness Initiative at ASU
- Social and Technical Issues of PV Technology Workshop** April 9, 2013
A student organized workshop devoted to bring together both engineers and social scientists to discuss the social and technical barriers and burdens of photovoltaic technology.
- R Statistical Computing Workshop** February 13, 2013
- Preparing Future Faculty Program, Arizona State University** August 2012- May 2012
A nationally recognized professional development program for doctoral students interested in pursuing a faculty position upon graduation or completion
- Playing Games with a Purpose, Arizona Science Center** September 27, 2012
Session exploring the power of games in creating more engaging and effective education models for youth
- Workshop on Communicating Climate Change** April 2-11, 2012
An online workshop for undergraduate faculty offered by the Climate Literacy and Energy Awareness Network (CLEAN)
- Sustainable Development Workshop, Columbia University, NY** April 20-21, 2012
Interdisciplinary Ph.D. Workshop in Sustainable Development
- Science Outside the Lab, Washington, DC** June 18-29, 2012
A two-week policy immersion program for science and engineering graduate students offered by the *Consortium for Science Policy and Outcomes*
- Sustainable Energy Systems for Developing Countries, Uganda** October, 2011
A community based, sustainable energy project to empower Ugandans to improve their energy access by teaching them how to build renewable and human powered electricity generating devices with locally available materials. I visited Uganda for two weeks where I assisted with teaching workshops and interacted with the local communities in promoting a 'design with', rather than 'design for' ethic of international energy development.

TEACHING EXPERIENCE

SOS 110, Sustainable World. Arizona State University

Large undergraduate course that covers the fundamental geological, biological, and social processes that create the world we live in and continue to maintain its viability for human life. The course is divided into three topic areas of sustainability: environmental, economic, and social systems. I developed the curriculum and taught 6 in-person sections, 1 hybrid version, and about a dozen sections online.

IND 464, InnovationSpace. Arizona State University

Co-instructor and Sustainability mentor for year-long capstone course with interdisciplinary team-based product development featuring applied projects for senior students from business, engineering, design, and sustainability. I supported this course for two years.

SOS 498, Sustainable iProjects. Arizona State University

Co-instructor for year-long capstone course where Sustainability students collaborate with Engineering students to integrate both Sustainability and Engineering practices into one methodology and apply the principles of Ray C. Anderson to sustainable manufacturing challenges. I supported this course for one year.

SOS 515, Industrial Ecology and Design for Sustainability. Arizona State University

Co-instructor for graduate level course focused on the conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture. I taught 1 section of this course.

SOS 598, Sustainability Ethics. Arizona State University

Teaching assistant for graduate level course that uses a game-based pedagogy to immerse students in the salient ethical problems of sustainability, including: environmental externalities, the Tragedy of the Commons, weak vs. strong sustainability, and intra-generational equity. Students formulate and test moral hypotheses via on-line collaboration with multiple Universities simultaneously. I supported 4 sections for this course.

HSD 598/CEE 598, Resilient Systems. Arizona State University

Graduate seminar class focused on integrating interdisciplinary resilience perspectives. The class is geared towards students working on projects related to socio-technical resilience from engineering, social science, sustainability, and computer science departments. I have taught 2 sections of this course.

GEOG 473, Elements of Weather. University of New Hampshire

Teaching assistant for an undergraduate course that covers the basic principles of weather phenomena and the physical processes underlying these phenomena. I ran 4 lab sections each week for four semesters.

WORKSHOPS

- Clark, SS. 2016. 'Resilient Summit' 2016 International Symposium of Sustainable Systems and Technology in Phoenix, AZ. The summit focused on creating a vision for a Multi-University Center for Resilient Infrastructure Systems. The objective was to identify key barriers to resilience as well as potential strategies for investigating and overcoming them from diverse disciplinary perspectives.
- Clark, SS. 2015. 'Interdisciplinary Resilience Summit', 2015 International Symposium of Sustainable Systems and Technology in Dearborn, MI. The summit featured an expert panel on various perspectives of resilience, as well as a working session geared towards identifying barriers to interdisciplinary resilience research.
- Clark, SS, Seager, TP. 2014. 'The Pisces Game', 2014 Society of Environmental Toxicology and Chemistry Annual Conference in Basel, Switzerland. The Pisces Game simulates the Tragedy of the Commons, which describes the overexploitation of 'common pool resources' such as fisheries, national parks, and global warming. In the game participants are organized by 'fishing villages' (by zodiac sign) that share a common lake for survival. Players fish from the shared lake and make decisions related to fish conservation, consumption, capital investment, trading, or other transfers via Twitter.
- Clark, SS, Seager, TP. 2013. 'Sustainability Game: Tragedy of the Commons Digital Game for Ethics Education', SETAC North America 34th Annual Meeting in Nashville, TN. This was an earlier version of 'The Pisces Game' workshop in Basel Switzerland, described above.
- Seager, TP, Selinger, ES, Clark, SS, Sadowski, J. 2011. 'Towards an Experiential Pedagogy of Sustainability Ethics Instructor Workshop,' Troy, NY. Instructors participated in a 2-day training workshop for successfully administering sustainability ethics games in the classroom.
- Clark, SS, Thiel, C. 2014. 'Structuring Critique: A workshop on how to effectively review a journal article', 2014 International Symposium of Sustainable Systems and Technology in Oakland, CA. The session offered students an opportunity to learn how to effectively and professionally peer-review a journal article.
- Clark, SS. 2012. 'ISIE Future Faculty Forum', 2012 International Symposium of Sustainable Systems and Technology in Boston, MA. A professional development session featuring a diverse panel of young faculty members that discussed their experience transitioning from being a graduate student to a becoming a faculty member.

STUDENTS MENTORED

Doctoral Students:

Lauren McBurnett, Sustainable Engineering, Arizona State University
Changdeok Gim, Human-Social Dimensions of Science & Technology Program, Arizona State University
Johnny Thomas, School of Sustainable Engineering, Arizona State University

Master's & Undergraduate Honor Students:

Kaitlin Vortherms, School of Sustainable Engineering, Arizona State University
Katie Phillips, School of Sustainability, Arizona State University
Albert Stanton, Sustainable Engineering, Arizona State University

Student Veterans:

Lucien Hollins, Astronautical Engineering, Arizona State University
Dustin Simmons, Biochemistry, Arizona State University
Matthew Rodriguez, Sustainability, Arizona State University

PROFESSIONAL SERVICE

- Active Member of UB's Sustainability Education Working Group** 2017-
 - Curriculum Development for Graduate Certificate in Sustainability
 - Program Planning for M.A. in Sustainable Leadership
- International Symposium of Sustainable Systems and Technology (ISSST)** 2013-
 - Chair of 'Resilient Infrastructure Systems' track for 2018 Symposium
 - Board of Directors & Faculty Advisor for ISSST student group
 - Session chair for resilience and education presentations
- Faculty Advisor** for Business Sustainability Club and Global Environmental Brigade, ASU 2015-2017
- Student Representative, International Society for Industrial Ecology (ISIE)** 2010-2012
 - Student Chapter President (2011-2012) & Student Chapter Board Member (2010-2011)
 - Initiated ISIE's NGO Accreditation with the United Nations for Rio+20 Conference
 - Member of Organizing Committee for the Symposium on Industrial Ecology for Young Professionals, June 11, 2011, Berkeley, CA
- Review Referee** for: Environment, Systems, and Decisions; Integrated Environmental Assessment and Management; Journal of Cleaner Production; PLOS one; Infrastructures;
- Editorial Board** for *Infrastructures* and Guest Editor for a Special Issue: Resilient Infrastructure Systems

ENTREPRENEURSHIP

Vice President, Curriculum Development, XSET Games, Inc.

Experiential Sustainability Ethics Training (XSET) Games offers a set of novel digital games designed for teaching ethics (both in the classroom and in corporate settings) that center participants in classic and irreconcilable sustainability problems, including the Tragedy of the Commons and Environmental Externalities. XSET Games is predicated on the NSF funded award 'An Experiential Approach to Sustainability Ethics'. For more information visit www.actionethics.com

PROFESSIONAL AFFILIATIONS

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| ISIE | International Society for Industrial Ecology |
| HDCA | Human Development and Capability Association |
| AGU | American Geophysical Union |
| SETAC | Society of Environmental Toxicology and Chemistry |
| AMS | American Meteorological Society |

HONORS & AWARDS

Travel Awards:

SETAC Europe travel support for running XSET Gmes workshop in Basel, Switzerland. Workshop Lead and Organizer. Funded by Society of Environmental Toxicology and Chemistry. \$4,500

Leadership Program on Teaching through Research. Participant. Funded by the Centre for Research and Interdisciplinarity, Paris. \$2,000

Academic Awards:

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| Annual Women in STEM Summit Panelist at UB | 2018 |
| Arizona State University, summa cum laude | 2013 |
| University of New Hampshire, magna cum laude | 2008 |
| University of New Hampshire, Teaching Assistant Fellowship | 2007 |
| University at Albany, magna cum laude & valedictorian of department | 2006 |

Athletic Awards:

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| University at Albany, Chancellor's Scholar Athlete Award | 2005 |
| America East Conference Scholar Athlete Award | 2005 |
| University at Albany, Commitment to Excellence Athletic Award | 2004 |
| Four-year starter, Division I Volleyball Athletic Scholarship to UAlbany | 2001 – 2005 |