

Nina McCurdy

PhD Candidate, SCI Institute
School of Computing, University of Utah

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Education

PhD in Computer Science: Graphics & Visualization *2013 – 2019 (expected)*
University of Utah. Salt Lake City, UT
Advisor: Prof. Miriah Meyer

B.S. in Applied Physics *2009*
University Honors, cum Laude
Highest Honors in the major
University of California Santa Cruz. Santa Cruz, CA

Awards

NSF Graduate Research Fellowship. University of Utah 2015

University Teaching Assistant Fellowship. University of Utah, 2015

The Ronald H. Ruby Memorial Scholarship for “promising young physicist.” University of California Santa Cruz, 2008

Selected Experience

Graduate Student Research Assistant *Aug 2013 – present*
Scientific Computing and Imaging Institute
University of Utah. Salt Lake City, UT

Data Visualization Intern *June – Aug 2017*
NASA Advanced Supercomputing Division
NASA Ames Research Center. Mountain View, CA

Data Visualization Intern *Nov. 2016 – May 2017*
Global Health Fellows Program II
Public Health Institute/USAID. Washington, DC

Public Outreach & Science Visualizations/ Webmaster *Jan. 2010 - July 2013*
The University of California High-Performance AstroComputing Center (UC-HiPACC).
Santa Cruz, CA

Scientific Illustrator *Dec. 2009 – May 2012*
Abrams and Primack, Inc. Santa Cruz, CA

Scientific Animator *July – Nov. 2009*
UC Santa Cruz, Santa Cruz Institute for Particle Physics (SCIPP). Santa Cruz, CA

Teaching

UGS/CS 2050 — Making Noise: Sound Art and Digital Media, University of Utah, Spring 2016
Teaching assistant. Undergraduate course designed to increase technological fluency in undergraduates from a range of backgrounds, through various electronic sound art projects involving programming, toy hacking, and basic circuit building.

PHYS 1 — Conceptual Physics, University of California Santa Cruz, Winter 2009

Undergraduate teaching assistant. Undergraduate general education course covering topics in classical and quantum physics and their relation to everyday physical phenomena.

Service

Publicity co-chair IEEE VIS 2016 Arts Program (VISAP'16)	2016
Workshop facilitator IEEE VIS Discovery Jam	2016, 2017
Reviewing SIGCHI DIS	2018
SIGCSE	2017
IEEE InfoVis	2016

Outreach

Circuit bending workshop facilitator Salt Lake City Public Library. Salt Lake City, UT	February 15, 2018
Circuit bending workshop co-leader The GREAT Camps University of Utah School of Computing. Salt Lake City, UT	June 7, 2016
Coding workshop co-leader Mind Riot The Leonardo Museum. Salt Lake City, UT	June 12-14, 2014; June 11-13, 2015
Tesla Coil demonstrator Santa Cruz Institute for Particle Physics @ Maker Faire. San Mateo, CA	May 22-23, 2010
Physics outreach demonstrator Alianza Elementary School. Watsonville, CA	May 2008

Peer-reviewed Publications

- **McCurdy, Nina**, Julie Gerdes, and Miriah Meyer. “A Framework for Externalizing Implicit Error Using Visualization.” *IEEE Transactions on Visualization and Computer Graphics (InfoVis'18)*, vol. 25, no. 1, 2019.
- Brunvand, Erik, and **Nina McCurdy**. “Making Noise: Using Sound-Art to Explore Technological Fluency.” *48th ACM SIGCSE Technical Symposium on Computer Science Education (SIGCSE'17)*, 2017. **Best Experience Paper Award.**
- **McCurdy, Nina**, Jason Dykes, and Miriah Meyer. “Action Design Research and Visualization Design.” *Proceedings of the Sixth Workshop on Beyond Time and Errors on Novel Evaluation Methods for Visualization (BELIV'16)*, pp. 10-18, 2016.
- **McCurdy, Nina**, Julie Lein, Katharine Coles, Miriah Meyer. “Poemage: Visualizing the Sonic Topology of a Poem.” *IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis 2015)*, vol. 22, no. 1, pp. 439-448, 2016.
- **McCurdy, Nina**, Vivek Srikumar, and Miriah Meyer. “Rhymedesign: A tool for analyzing sonic devices in poetry.” *Proceedings of NAACL-HLT Fourth Workshop on Computational Linguistics for Literature*, pp. 12-22, 2015.

Other Publications

- Lein, Julie Gonnering, **Nina McCurdy**, and Amanda Hurtado. "Deep in Poetry: Visualizing Texts' Sonic Depths in 3D." *Leonardo*, vol. 51, no. 1, pp. 80-82, 2018.
- Brunvand, Erik, and **Nina McCurdy**. "Making Noise: Using Sound-Art to Explore Technological Fluency." *ACM Inroads*, vol. 8, no. 2, pp. 87-92, 2017. **Reprint**.

Selected Talks and Presentations

- **What We've Learned From *Really* Listening to Our Domain Collaborators**
University of Vienna. November 12, 2018.
- **A Framework for Externalizing Implicit Error Using Visualization**
IEEE Vis 2018. Berlin, Germany. October 26, 2018.
- N. McCurdy and P. Moran. **Interactive Exploration of Solar Magnetic Field Lines**. NASA Exhibit. Supercomputing 2017 (SC17). Denver, CO. Nov 13-16, 2017.
- **Action Design Research and Visualization Design**. The Sixth Workshop on Beyond Time and Errors on Novel Evaluation Methods for Visualization (BELIV'16). Baltimore, MD. October 24, 2016.
- **Exploring New Theoretical Approaches for Applied Visualization Design**. Rocky Mountain Celebration of Women in Computing (RMCWiC) 2016. Salt Lake City, UT. September 23, 2016.
- **Making Poemage**. The Critical Visualization Event. GC, CUNY. New York, NY. June 9, 2016.
- **The Poemage project: exploring the true value of computation to poetry scholarship**. DH U1: The First Utah Symposium on the Digital Humanities. Utah Valley University. Orem, UT. February 26, 2016.
- K. Coles and N. McCurdy. **Developing and Sustaining Collaborative Research in the Humanities**. Panel Discussion. MLA2016. Austin, TX. January 8, 2016.
- N. McCurdy, J. Gonnering Lein, A. Hurtado. **Deep in Poetry: Improvisations in Tech, in Text, in Time**. IEEE VISAP2-15. Chicago, IL. October 27, 2015.
- **Poemage: Visualizing the Sonic Topology of a Poem**. IEEE Vis 2015. Chicago, Ill. October 28, 2015.
- **RhymeDesign: A Tool for Analyzing Sonic Devices in Poetry**. The Third Annual Computational Linguistics for Literature Workshop. Co-Located with the 2015 NAACL conference. Denver, CO. June 4, 2015.
- **Probing the Simulated Universe with zSpace**. zCon 2013. San Jose Computer History Museum. Mountain View, CA. April 22, 2013.
- **Simulating Galaxies and the Universe**. NASA Exhibit. Supercomputing 2012 (SC12). Salt Lake City. November 12-15, 2012.
- **Visualizing Simulations of Cosmology & Galaxy Formation**. VISIONS: Through Art to Science. Goethe Institute, San Francisco. October 20, 2012.
- **Visualizing Simulations of Cosmology and Galaxy Formation**. NASA Exhibit. Supercomputing 2011 (SC11). Seattle. November 14-17, 2011.
- **Visualizing the Evolution of the Large-Scale-Structure and the Multi-component Universe**. AstroViz 2011. UW, Seattle. June 4, 2011.
- **Visualizing Eternal Inflation with Autodesk Maya**. The Future of AstroComputing Conference. SDSC, San Diego. December 16, 2010.
- **Visualizing Simulations of Cosmology and Galaxy Formation**. NASA Exhibit. Supercomputing 2010 (SC10). New Orleans. November 15-18, 2010.

- **Astro-Computation, Visualization and Outreach.** Simulating and Visualizing the Universe Seminar. NASA Ames, Mountain View. September 20, 2010.
- **High-Resolution Simulations of Galaxy and Cosmological Structure Formation.** NASA Exhibit. Supercomputing 2009 (SC09). Portland. November 17-19, 2009.

Selected Published Visualizations & Illustrations

- **Data visualization:** Kay, Laura, Bradford Smith, George Blumenthal, and Stacy Palen. *21st Century Astronomy 4e*. New York: W W Norton & Co Inc., 2013. Print.
- **Data visualization:** Primack, Joel R. *The Cosmological Supercomputer: How the Bolshoi simulation evolves the universe all over again*. IEEE Spectrum, October 2012. Print.
- **Data visualization:** “Horizon: How Big is the Universe?” BBC Horizon BBC 2, Season 51, episode 5, August 27, 2012. Television.
- **Data visualization:** Primack, Joel R. and Trudy E. Bell. *Universe in a Box: Supercomputer modeling is transforming cosmology from a purely observational science into an experimental science*. *Sky & Telescope*, pp. 28-35, July 2012, Print.
- **Visualization partner:** “The Searcher.” The Adler Planetarium, 2011. Planetarium Production.
- **Illustrations:** Abrams, Nancy Ellen, and J. R. Primack. *The New Universe and the Human Future: How a Shared Cosmology Could Transform the World*. New Haven: Yale University Press, 2011. Print.
- **Visualization partner:** “Life: A Cosmic Story.” California Academy of Sciences, 2010. Planetarium Production.
- **EPO interactive:** “Gamma Rays in Deep Space”: VERITAS Education and Public Outreach interactive on gamma ray astronomy for the Alder Planetarium in Chicago, IL. 2009.

Salt Lake City, UT, November 27, 2018