Jimmy Moore

Resume

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Visualization Design Lab
Scientific Computing and Imaging Institute
University of Utah, Salt Lake City, UT 84112

Education

2021	**PhD**, *Computer Science*, University of Utah, Salt Lake City, UT.
	Emphasis: Data Visualization **Advisors:** M. Meyer & J. Wiese
2015	**MS**, *Applied Mathematics*, University of Delaware, Newark, DE.
2007	**BS**, *Physics, Applied Mathematics*, Pennsylvania State University, State College, PA.

Experience

2015–Present **Graduate Research Assistant**, University of Utah, Salt Lake City, UT.

2013–2015 **Teaching Assistant**, University of Delaware, Newark, DE.

2012–2013 **Professional Tutor**, Pennsylvania State University, Media, PA.

2007–2011 **Research Engineer**, Penn State Electro-Optics Center, Freeport, PA.
- Lead engineer on 3D imaging program: Responsible for architecture design, hardware selection, system programming, and characterization
- Systems engineer for hyperspectral imaging system: requirements definition for real-time processing hardware, algorithms, and data workflow
- Project manager and systems integrator for ground robotics platform: control and imaging hardware
- Automated laser machining experiments, reduced calibration and data collection times by 50%

Internships

Fa19,Fa-Su20 **UX Researcher**, NASA Jet Propulsion Laboratory, Pasadena, CA.
- Using qualitative methods to develop maneuver analysis tools for trajectory design engineers

Summer 2015 **Computational Scholar**, Lawrence Livermore National Lab, Livermore, CA.
- Characterized parallel algorithm stability using soft fault injection tools (KULFI, FlipIt)

Summer 2006 **Research Assistant**, Penn State Electro-Optics Center, Freeport, PA.
- Experimental design for defining operational parameters of a prototype 3D imaging system

Teaching

2017–2018 **Teaching Mentorship**, University of Utah, Salt Lake City, UT.
- CS 2050 :: Make Noise! Sound Art and Digital Media (SP18, Brunvand)
  - Undergraduate course for increasing non-STEM students' technological fluency via hands-on electronic and sound art projects. Provided lessons on physics principles, soldering, sound design, toy hacking, and circuit bending.
- CS 6540 :: Human-Computer Interaction (HCI) (FA17, Meyer)
  - Graduate survey course covering core HCI research methodologies and focus areas. Provided lessons on thematic analysis, grounded theory, and smart home applications.

2013–2015 **Teaching Assistant**, University of Delaware, Newark, DE.
- Co-developed and taught department's Mathematica lab curriculum, materials still in use

2012–2013 **Professional Tutor**, *Penn State University*, STEM Lab, Media, PA.
  ○ Standard college algebra and calculus sequence

Peer-Reviewed Publications

2021 **Jimmy Moore**, P. Goffin, J. Wiese, M. Meyer, "An interview method for engaging personal data", The Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), December 2021.

2021 **Jimmy Moore**, P. Goffin, J. Wiese, M. Meyer, "Exploring the personal informatics analysis gap: 'There's a lot of bacon' ", IEEE Transactions on Visualization and Computer Graphics (VIS), 2021.

2021 R. Patel, **Jimmy Moore**, J. Stuart, S. Hernandez, B. Alper, "I'll have the Porter: Interactively visualizing the results of statistical maneuver analysis", American Astronautical Society. 2021.

2020 **Jimmy Moore**, W. Wing, Z. Wilhelm, M. Dailey, K. Le, T. Sayahi, T. Becnel, R. Whitaker, M. Meyer, J. Wiese, P. Gaillardon, K. Kelly, A. Butterfield. "Engaging Pre-College Students in Hypothesis Generation using a Citizen Scientist Network of Air Quality Sensors", American Society for Engineering Education (ASEE)

2020 Shruti Hegde, Kyeong Min, **James Moore**, Philip Lundrigan, Neal Patwari, Scott Collingwood, Kerry E. Kelly "Indoor Household Particulate Matter Measurement Using a Network of Low-Cost Sensors", *Aerosol and Air Quality Research* 20 (2020): 381-394.

2018 **Jimmy Moore**, Pascal Goffin, Miriah Meyer, Philip Lundrigan, Neal Patwari, Katherine Sward, and Jason Wiese. 2018. "Managing In-home Environments through Sensing, Annotating, and Visualizing Air Quality Data". Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies. 2, 3, Article 128 (September 2018)

2018 Lundrigan, Philip, Kyeong T. Min, Neal Patwari, Sneha Kumar Kasera, Kerry Kelly, **Jimmy Moore**, Miriah Meyer et al. "EpiFi: An in-Home IoT Architecture for Epidemiological Deployments." In 2018 IEEE 43rd Conference on Local Computer Networks Workshops (LCN Workshops), pp. 30-37. IEEE, 2018.

Other Publications

2018 **Jimmy Moore**, Pascal Goffin, Miriah Meyer, and Jason Wiese. "Interpersonal Informatics: A Case Study of In-Home Air Quality", Computer-Supported Cooperative Work and Social Computing (CSCW2018)

2009 Campbell, Ben R., **J. A. Moore**, et al. "High Quality Machining of Non-Metals with a Picosecond Laser." ICALEO 2009

2009 Campbell, Ben R., L. A. Forester, **J. A. Moore**, et al. "A Study of Material Removal Rates for Shallow Drilling with an Ultrashort Pulse Laser." Laser Applications in Microelectronic and Optoelectronic Manufacturing VII 7201 (2009): 72010I-2010I-9. 24 Feb. 2009

Presentations

2021 VIS 2021, Virtual, *Exploring the Personal Informatics Analysis Gap: "There's a Lot of Bacon"*

2018 UbiComp 2018, Singapore, *Managing In-home Environments through Sensing, Annotating, and Visualizing Air Quality Data*

2014 MPI Workshop, New Jersey Institute of Technology, *Spatial Pattern Formation in Fused Silica Under UV Irradiation*

Volunteering & Service

Oct. 2020	**Student Volunteer**, IEEE VIS Conference (VIS2020), Virtual.
Oct. 2018	**Student Volunteer**, Ubiquitous Computing 2018 (UbiComp18), Singapore.
Feb. 2018	**Workshop Facilitator**, Design thinking meets computational thinking, Salt Lake City, UT, Public Library.
Nov. 2016	**Student Volunteer**, Supercomputing 2017 (SC17), Salt Lake City, UT.
June 2016	**Circuit Bending Workshop Co-Leader**, *The GREAT Camps*, University of Utah, Salt Lake City, UT.
2015-2016	**GradSAC Student President**, University of Utah, School of Computing, Salt Lake City, UT.
April 2015	**Student Volunteer**, *SIAM*, National Math Festival, Washington, DC.

Current Research Topics

Everyday Visualization, Characterizing how everyday users approach problem solving using their personal data to inform more intuitive interfaces and analytic tools.

User Studies, Deployed an in-home air quality monitoring system to better understand the needs and motivations of an asthmatic population.

Visualizing Simulation Data, Created an interactive interface and teaching materials for exploring how sensor distribution affects simulation output for a spatiotemporal air quality model. Presented to over 350 students across 8 local high schools, link to interface.

Application Interests

- Interactive interfaces	- User-centered design
- Educational outreach	- Data science
- Human-computer interaction	- Personal visual analytics

Programming

Basic	C\C++, Git, Mathematica
Intermediate	D3.js, Javascript, LaTeX, Linux, MATLAB, Python, React.js

Awards

2018	UbiComp/ISWC 2018 Student Travel Grant
2018	University Of Utah Graduate Student Travel Assistance Award
2015	University Of Utah Graduate Fellowship
2014	University of Delaware GEMS Research Grant
2006	Penn State Merit Scholarship
2003	PHEAA SciTech Scholarship