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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.  
o Standard college algebra and calculus sequence

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## Peer-Reviewed Publications

- (2021) **Jimmy Moore**, P. Goffin, J. Wiese, M. Meyer, “An interview method for engagement with personal sensor data”, The Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2021. (*Conditional acceptance*)
- 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.

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## 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

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## 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*

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## 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.

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## 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](#).

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## Application Interests

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

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## Programming

Basic C\C++, Git, Mathematica

Intermediate D3.js, Javascript,  $\LaTeX$ , Linux, MATLAB, Python, React.js

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## 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