Iris Howley

howley1@kenyon.edu

Interdisciplinary Computing Department
Kenyon College
103 College Drive
Gambier, OH
43022

ACADEMIC APPOINTMENTS

Assistant Professor 2026 – Present
Kenyon College, Interdisciplinary Computing Department Gambier, OH

Assistant Professor 2017 – 2026
Williams College, Department of Computer Science Williamstown, MA

Postdoctoral Research Fellow 2015 – 2017
Stanford University, Graduate School of Education Stanford, CA
Adviser: Candace Thille (Stanford University) & George Siemens (University of Texas Arlington)

EDUCATION

Carnegie Mellon University Graduated: 2015
Ph.D. in Human-Computer Interaction Pittsburgh, PA
Primary Adviser: Carolyn Penstein Rosé
Concurrent M.S. in Human-Computer Interaction, 2012
Dissertation: Leveraging Educational Technology to Overcome Social Obstacles to Help-seeking
Committee: Carolyn Rosé, Vincent Aleven, Stuart Karabenick, Bob Kraut, & Marsha Lovett

Drexel University Graduated: 2008
Bachelor of Science in Computer Science Philadelphia, PA
Minor in Arabic Language Cumulative GPA: 3.90

AWARDS

- Women in AI Ethics' 100 Brilliant Women in AI Ethics 2022
- *Drexel Magazine*'s "40 Under 40" 2022
- "Understanding Learning Analytics Algorithms in Teacher and Student Decision-Making"
  NSF CRII: IIS: RUI Grant ($150,000 over 2 years) 2019 - 2023
  https://www.nsf.gov/awardsearch/showAward?AWD_ID=1849984
- Consortium for the Science of Sociotech. Systems Summer Research Institute 2019
  Travel Award ($500)
- Workshop for New Computer Science Faculty at Teaching-focused Institutions 2018
  Travel Award ($700)
- International Conference of the Learning Sciences Early Career Workshop 2018
  Travel Award ($1,700)
- "Adaptable Learning Feedback for Instructors" 2017
  Stanford University VPTL Innovation Grant ($10,000)
- Human-Robot Interaction Conference Pioneer 2014
  Travel Award ($2,300)
- Program in Interdisciplinary Education Research Fellow 2008 - 2013
  Fellowship ($210,000 over 5 years)
- Drexel University Merit Scholarship 2003 - 2008
  Scholarship ($85,000 over 5 years)
- Girl Scout Gold Award 2002

REFEREED JOURNAL PAPERS

J.6 **Howley, I.** (2020). Adapting Guided Inquiry Learning Worksheets for Emergency Remote Learning. *Journal of Information and Learning Sciences*, 549-557.

J.5 **Howley, I.** & Rosé, C. P. (2016). Towards careful practices for automated linguistic analysis of group learning. *Journal of Learning Analytics*, 239-262.

J.4 Clarke, S. N., **Howley, I.**, Resnick, L., & Rosé, C. P. (2016). Student agency to participate in dialogic science discussions. *Learning, Culture and Social Interaction*, *10*, 27-39.

J.3 Shiomi, M., Kanda, T., **Howley, I.**, Hayashi, K., & Hagita, N. (2015). Can a social robot stimulate science curiosity in classrooms? *International Journal of Social Robotics*, *7*(5), 641-652.

J.2 Dyke, G., Adamson, D., **Howley, I.**, & Rosé, C. P. (2013). Enhancing scientific reasoning and discussion with conversational agents. *IEEE Transactions on Learning Technologies*, *6*(3), 240-247.

J.1 Kopena, J.B., Sultanik, E., Naik, G., **Howley, I.K**., Peysakhov, M., Cicerello, V.A., Kam, M., & Regli, W.C. (2005). Service-Based Computing on Manets: Enabling Dynamic Interoperability of First Responders. In *IEEE Intelligent Systems*, *20*(5),17-25.

REFEREED CONFERENCE PAPERS.

●Indicates undergraduate student author

C.20 ●Starkova, V., & **Howley, I.** (2026). CoAutoML: User Interface Framework for Machine Learning Novices using LLM-based AutoML and Test-Driven Machine Teaching. In *Proceedings of the 31st Annual Conference on Intelligent User Interfaces (IUI 2026)*.

C.19 ●Sneirson, M., ●Chai, J., & **Howley, I.** (2024). A learning approach for increasing AI literacy via XAI in informal settings. In *Proceedings of the 25th International Conference on Artificial Intelligence in Education (AIED 2024),* 336-343.

C.18 ●Yeh, C., ●Cowit, N., & **Howley, I.** (2023). Designing for Student Understanding of Learning Analytics Algorithms. In *Proceedings of the 24th Annual International Conference on Artificial Intelligence in Education (AIED 2023),* 528-540.

C.17 ●Zhou, T., ●Sheng, H., & **Howley, I.** (2020). Assessing Post-hoc Explainability of the BKT Algorithm. In *Proceedings of the Third Annual ACM/AAAI Conference on Artificial Intelligence, Ethics, and Society (AIES 2020)*, 407-413.

C.16 ●Do, Q., ●Campbell, K., ●Hine, E., ●Pham, D., ●Taylor, A., **Howley, I.**, & Barowy, D. W. (2019). Evaluating ProDirect manipulation in hour of code. In *Proceedings of the 2019 ACM SIGPLAN Symposium on SPLASH-E*, 25-35.

C.15 Bassen, J., **Howley, I.**, Fast, E., Mitchell, J., & Thille, C. (2018). OARS: exploring instructor analytics for online learning. In *Proceedings of the 5th ACM Conference on Learning at Scale (L@S 2018)*, 1-10.

C.14 **Howley, I.** & Rosé, C.P. (2018). Empirical Evidence for Evaluation Anxiety and Expectancy-Value Theory for Help Sources. In *Proceedings of the 13th International Conference of the Learning Sciences (ICLS 2018)*, 472-479.

C.13 Yang, D., Wen, M., **Howley, I.**, Kraut, R. & Rosé, C. P. (2015). Exploring the Effect of Confusion in Discussion Forums of Massive Open Online Courses. In *Proceedings of the 2nd ACM Conference on Learning at Scale (L@S 2015)*, 121-130.

C.12 Ferschke, O., **Howley, I.**, Tomar, G., Yang, D., & Rosé, C. P. (2015). Fostering Discussion across Communication Media in Massive Open Online Courses. In *Proceedings of the 11th International Conference on Computer Supported Collaborative Learning (CSCL 2015).*

C.11 **Howley, I.**, Kanda, T., Hayashi, K., & Rosé, C. (2014). Effects of Social Presence and Social Role on Help-Seeking and Learning. In *Proceedings of the 9th ACM/IEEE International Conference on Human-Robot Interaction (HRI 2014).*

C.10 **Howley, I.**, & Newman, T. (2013). Factors impacting community response in an interest-sharing network. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI 2013)*, 2283-2286.

C.10 Clarke, S., **Howley, I.**, Rosé, C., & Resnick, L. (2013). Understanding student engagement in classroom dialogue. In *Proceedings of the 15th Biennial Conference of the European Association for Research on Learning and Instruction (EARLI 2013)*.

C.9 Clarke, S. N., Chen, G., Stainton, C., Katz, S., Greeno, J.G., Resnick, L.B., Dyke, G., **Howley, I.**, Adamson, D, & Rosé, C.P. (2013). The impact of CSCL beyond the online environment. In *Proceedings of the 10th International Computer Supported Collaborative Learning Conference (CSCL 2013)*.

C.8 Dyke, G., **Howley, I.**, Adamson, D., Rosé, C.P. (2012). Towards academically productive talk supported by conversational agents. In *Proceedings of the 11th International Conference on Intelligent Tutoring Systems (ITS 2012)***,** Lecture Notes in Computer Science, 531-540.

C.7 **Howley, I.**, Adamson, D., Dyke, G., Mayfiled, E., Beuth, J., & Rosé, C.P. (2012). Group composition and intelligent dialogue tutors for impacting students' self-efficacy. In *Proceedings of the 11th International Conference on Intelligent Tutoring Systems (ITS 2012),* 551-556.

C.6 **Howley, I.**, Mayfield, E., Rosé, C.P. (2011). Missing something? Authority in collaborative Learning. In *Proceedings of the 9th International Computer Supported Collaborative Learning Conference (CSCL 2011)*, 336-373.

C.5 Kuznetsov, S., Trutoiu, L., Kute, C., **Howley, I.**, Siewiorek, D., & Paulos, E. (2011). Breaking boundaries: Mentoring with wearable computing. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2011)*, 2957-2966*.*

C.4 Chaudhuri, S., Kumar, R., **Howley, I.**, Rosé, C.P. (2009). Engaging collaborative learners with helping agents. In *Proceedings of the 14th International Conference on Artificial Intelligence in Education (AIED 2009)*, 365-372.

C.3 Ritchie, J.M., Sung, R.C.W., Rea, H., Lim, T., Corney, J.R. & **Howley, I**. (2008). The use of non-intrusive user logging to capture engineering rationale, knowledge and intent during the product life cycle. In *Proceedings of the Portland International Conference on Management of Engineering & Technology (PICMET 2008)*, 981-989.

C.2 Rea, H.J**., Howley, I.K**., Corney, J.R., Ritchie, J.M., Sung, R., & Salamon, C. (2007). CBBC BAMZOOKi as a tool for engineering design research. In *Proceedings of the Learning with Games Conference*.

C.1 Grauer, M.J., **Howley, I.K**., Kopena, J.B., & Regli, W.C. (2007). Towards a format registry for engineering data. In *Proceedings of the American Society of Mechanical Engineers International Design Engineering Technical Conference (IDETC 2007).*

BOOK CHAPTERS & INVITED PAPERS

B.7 **Howley, I.**, Peck, E., & Mir, D. (2022). Integrating AI Ethics Across the Computing Curriculum. *The Ethics of Artificial Intelligence in Education. Practices, Challenges, and Debates*, 225-270.

B.6 Rosé, C. P., **Howley, I.**, Wen, M., & Ferschke, O. (2017). Assessment of Discussion in Learning Contexts. *Innovative Assessment of Collaboration*, 81-94.

B.5 **Howley, I.**, Mayfield, E., & Rosé, C.P. (2013). A Multivocal process analysis of social positioning in study groups. In D. Suthers, K. Lund, C.P. Rosé, C. Teplovs, & N. Law (Eds.), *Productive Multivocality in the Analysis of Group Interactions*, Springer-Verlag Berlin, Heidelberg.

B.4 **Howley, I.**, Kumar, R., Mayfield, E., Dyke, G., & Rosé, C.P. (2013) Gaining insights from sociolinguistic style analysis for redesign of conversational agent based support for collaborative learning. In D. Suthers, K. Lund, C.P. Rosé, C. Teplovs, & N. Law (Eds.), *Productive Multivocality in the Analysis of Group Interactions*, Springer-Verlag Berlin, Heidelberg.

B.3 Dyke, G., **Howley, I.,** Kumar, R., & Rosé, C.P. (2013) Towards academically productive talk supported by conversational agents. In D. Suthers, K. Lund, C.P. Rosé, C. Teplovs, & N. Law (Eds.), *Productive Multivocality in the Analysis of Group Interactions*, Springer-Verlag Berlin, Heidelberg.

B.2 **Howley, I.**, Mayfield, E. & Rosé, C.P. (2013). Linguistic analysis methods for studying small groups. In C. Hmelo-Silver, A. O'Donnell, C. Chan, & C. Chin (Eds.) *International Handbook of Collaborative Learning*, Taylor and Francis, Inc, 184-202.

B.1 **Howley, I.** & Rosé, C.P. (2011). Modeling the rhetoric of human-computer interaction. *Proceedings of the 14th International Conference on Human-Computer Interaction*, 341-350.

REFEREED POSTERS, and WORKSHOP PAPERS

●Indicates undergraduate student author

P.12 ●Cowit, N., ●Yeh, C., & **Howley, I**. (2019). Tests, Memory, and Artificial Intelligence: How can we know what people know? Presentation at *IEEE VIS Workshop on Visualization for AI Explainability*.

P.11 ●Cho, Y., ●Mazzarella, G., ●Tejeda, K., ●Zhou, T., & **Howley, I**. (2018). What is Bayesian Knowledge Tracing? Poster presentation at *IEEE VIS Workshop on Visualization for AI Explainability*.

P.10 **Howley, I.** (2018). If an algorithm is openly accessible, and no one can understand it, is it actually open? Presentation at *Artificial Intelligence in Education Workshop on Ethics in AIED 2018.*

P.9 **Howley, I.**, Tomar, G., Yang, D., Ferschke, O., & Rosé, C. (2015). Alleviating the negative effect of up and downvoting on help seeking in MOOC discussion forums. In *Proceedings of Artificial Intelligence in Education 2015*, 629-632.

P.8 Yang, D., Piergallini, M., **Howley, I.**, & Rosé, C.P. (2014). Forum Thread Recommendation for Massive Open Online Courses. In *Proceedings of the 7th International Conference of Educational Data Mining*, 257-260.

P.7 **Howley, I.** & Rosé, C.P. (2014). Undergraduate Attitudes Toward Help-seeking. *The International Conference of the Learning Sciences (ICLS),* 1561-1562.

P.6 **Howley, I.** & Rosé, C.P. (2013). Social obstacles to seeking help and the technological affordances that alleviate them. In *Proceedings of the 11th International Conference on Computer Supported Collaborative Learning (CSCL 2013)*, 472-473.

P.5 **Howley, I.** & Rosé, C.P. (2010). Student dispositions and help-seeking in collaborative learning. In *Proceedings of the 10th International Intelligent Tutoring Systems (ITS 2010)*, 230-232.

P.4 **Howley, I.**, Chaudhuri, S., Kumar, R., Rosé, C.P. (2009). Motivation and collaborative behavior: An exploratory analysis. In *Proceedings of the 9th International Conference on Computer Supported Collaborative Learning*, 59-61.

P.3 Kumar, R., Chaudhuri, S., **Howley, I.**, Rosé, C.P. (2009). VMT-Basilica: An environment for rapid prototyping of collaborative learning environments with dynamic support. In *Proceedings of the 9th International Conference on Computer Supported Collaborative Learning (CSCL 2009)*, 192-194. (Best technical design award nominee)

P.2 **Howley, I.**, Chaudhuri, S., Kumar, R., Rosé, C.P. (2009). Motivation and collaboration on-line. In *Proceedings of the 14th International Conference on Artificial Intelligence in Education (AIED 2009)*, 743-745.

P.1 Santos, G., **Howley, I.**, Copenhaver, B., & Aleven, V. (2009). Integrating conceptual and procedural knowledge for middle-school math – A cognitive tutoring approach. In *Proceedings of the 14th International Conference on Artificial Intelligence in Education (AIED 2009)*, 787-788.

INVITED TALKS

Explaining Artificial Intelligence: What We Don't Know, Won't Hurt Us?

- Williams College Alumni Fund Leadership Weekend — May 2023
- Union College Computer Science Seminar Series — May 2021
- Williams College Office of Information Technology Staff Meeting — August 2019

Electronic Textiles: Course Offered Fall 2019 — March 2020
Williams College Staff Lunch Seminar Series

Data-Driven Feedback for Learning — February 2018
Williams College Science Center Lunch Seminar

Education Technology Interfaces for Better Social Learning & Instructor Decision-Making

- University of Vermont, Computer Science Department — January 2017
- Clemson University, Human-Centered Computing Department — January 2017
- Ursinus College, Computer Science Department — December 2016
- Penn. State University, College of Information Sciences & Technology — December 2016
- James Madison University, Computer Science Department — December 2016
- Bard College, Computer Science Department — November 2016

PRESS

- **S3x10 Primarily Undergraduate Institutions** by Dr. Kristin Stephens-Martinez in *The CS-Ed Podcast*, May 2023.
- **Creative Computing** by Julia Munemo in *Williams Magazine*, Spring 2020.
- **Why Asking an AI to Explain Itself Can Make Things Worse** by Will Douglas Heaven in *MIT Technology Review*, January 2020.
- **Computer Science Professor Iris Howley Wins NSF Grant** by Williams College Office of Communications, *Press Release*, May 2019.

RESEARCH EXPERIENCE

Kenyon College — 2026 - Present
Assistant Professor — Gambier, OH
Interdisciplinary Computing Department

Williams College 2017 - 2026
Assistant Professor Williamstown, MA
Department of Computer Science
- Recruited, trained, and lead a team of undergraduate research assistants in the user-centered design of interactive tutoring software
- Guided an undergraduate research team in the design of survey measures and experimental design for a Mechanical Turk study investigating algorithmic fairness and comprehension.
- Advised undergraduate honors theses developing machine learning models for classifying digital annotation log data and studying user perceptions of the model.
- Advised independent study projects with students and the Williams College Museum of Art exploring alternative ways to explore the collection through information visualization.

Stanford University 2015 - 2017
Postdoctoral Researcher Stanford, CA
Graduate School of Education
Mentors: Candace Thille, George Siemens
- Conducted interviews to investigate teacher interpretation of learning analytics dashboards
- Initiated cross-institutional research projects investigating data-driven teacher and student feedback tools
- Mentored students, collaborating on various projects from idea inception to meeting with stakeholders, data gathering, analysis, and publication

Carnegie Mellon University 2008 - 2015
Graduate Research Assistant Pittsburgh, PA
Human-Computer Interaction Institute, School of Computer Science
Mentor: Carolyn Penstein Rosé
- Implemented experiments exploring the impact of reputation systems on help seeking in massive open online course discussion forum and evaluated results
- Applied computer programming ability to support research learning interventions, resolve logistical constraints of performing experiments, and prepare data for analysis
- Analyzed data with a variety of methods including: statistical analyses, discourse analysis, and qualitative storytelling

Advanced Telecommunications Research Institute International Winter 2013
Research Intern Kyoto, Japan
Artificial Intelligence Department, Intelligent Robotics and Communication Laboratories
Mentor: Takayuki Kanda
- Examined how perceived and presented social status of human and robotic tutors affect student help-seeking and learning on a biology task
- Designed user studies examining how robot tutors affect help seeking and learning in biology
- Internship culminated in a full paper in proceedings of Human-Robot Interaction 2014

Microsoft Research, Future Social Experiences (FUSE) Labs Summer 2012
Research Intern Seattle, WA
Mentor: Todd Newman
- Performed log analyses to investigate user behavior in an interest-sharing social network
- Coordinated with an interdisciplinary team of engineers, designers, and social researchers.
- Published a short paper in proceedings of Human Factors in Computing Systems 2013

Heriot Watt University, Manufacturing Engineering Department Summer 2007
Undergraduate Research Intern Edinburgh, UK
Mentor: Jonathan Corney
- Developed Java software to parse and organize large quantities of generated log files
- Prototyped a data visualization program, displaying information as directed graphs

National Institute of Standards and Technology Summer 2006
Undergraduate Research Fellow Gaithersburg, MD
Mentor: Craig Schlenoff

- Expanded upon a large OWL ontology classifying Urban Search and Rescue robots
- Created an engine using JESS to reason over parameters of an ontology

Drexel University, Secure Wireless Agent Testbed 2004 - 2007
Undergraduate Research Assistant Camden, NJ
Mentor: William Regli

- Performed extensive work with Semantic Web services on a Mobile Ad-hoc Network
- Integrated existing software with a larger, external project

UNDERGRADUATE RESEARCH STUDENTS

- Valeria Starkova '25 (Winter-Spring 2024, Fall 2024-Spring 2025) – Honors thesis advisor
- Sofia Agyare '27(Summer-Fall 2023)
- Paul Kim '23 (Summer 2023-Spring 2024) – Honors thesis advisor
- Nathaniel Tunggal '25 (Summer 2022)
- Jason Lee '23 (Summer 2022)
- Josephine Chai '23 (Summer 2021-Fall 2021)
- Hannah Ahn '23 (Summer 2020, Fall 2020, Summer 2021)
- Minh Phan '23 (Summer 2020)
- Mira Sneirson '22 (Summer 2021-Spring 2022)
- Catherine Yeh ’22 (Summer 2019-Spring 2022) – Honors thesis advisor
- Amelia Chen ’22 (Fall 2019, Spring 2020)
- Kelsie Hao '22 (Summer 2020)
- Nyla Thompson '20 (Spring 2020)
- Noah Cowit '20 (Summer 2019, Fall 2019, Spring 2020)
- Tongyu Zhou '20 (Summer 2018-Spring 2020) – Honors thesis advisor
- Haoyu Sheng '20 (Fall 2018, Winter 2019, Winter 2020)
- Kelvin Tejeda '20 (Summer 2018)
- Alyssa Wang '20 (Fall 2019, Spring 2020)
- Nam Nguyen '19 (Fall 2018-Spring 2019) – Honors thesis advisor
- Grace Mazzarella '19 (Summer 2018, Spring 2019)
- Young Cho '19 (Spring 2018, Summer 2018)

TEACHING EXPERIENCE

Computer Science 0: Electronic Textiles Williams College
Assistant Professor of Computer Science W18, F19, S23, F25, S26

- *Combines programming, sewing, and digital circuits in a project-based format*
- Taught as: a 12-week semester for non-majors or a 4-week intensive for CS students
- Developed entire course curriculum and most materials from scratch
- Class occurs entirely in lab: interspersing lecture with hands-on activities

Computer Science 1 Williams College
Assistant Professor of Computer Science F17, F18, S19, S20, F22, F23

- *A broad introduction to CS concepts: data structures, OOP, complexity, searching, etc.*
- Taught three different versions of CS1: Objects, Events, and Graphics (Java); Diving into the Deluge of Data (Python); Introduction to Computer Science (Python)
- Developed a set of custom POGIL activities for the entire 12-week semester
- Filmed and maintained lecture videos for students who prefer lecturing
- Informed course curriculum design through various cycles and scaling experiments
- Co-taught with four different colleagues and three staff members

Computer Organization Williams College
Assistant Professor of Computer Science S26
- *How computer systems execute programs, store information, and communicate.*

Human-Artificial Intelligence Interaction Williams College
Assistant Professor of Computer Science F20, S21, F22, S24
- *Develops critical thinking through a focus on AI, identity, and Design Justice*
- Adapted curricular materials from Carnegie Mellon University to be fully flipped
- Content delivery is through lecture videos, class is hands-in activities & discussion
- Serves as CS majors' main introduction to technology, identity, and ethics
- Regularly updated assignment materials with constantly changing AI libraries

Human-Computer Interaction Williams College
Assistant Professor of Computer Science S18, F18, F19
- *A group project-based course on all the steps of the UX Research & Design process*
- Adapted curricular materials from University of Washington HCI class
- Transitioned course to mostly flipped, with readings as course content delivery
- Created new small group activities for most lecture sections

Independent Studies Williams College
Assistant Professor of Computer Science F18, F19, W23
- Supervising of 3 independent studies on information visualization and art museums
- Supported students developing their own syllabus & connecting to the museum
- Provided regular feedback and guidance through weekly one-on-one meetings

Pedagogy for Higher Education Instructors Stanford University
Professional Development Instructor 2017
- Co-organized & lead a "Teaching as Research Workshop" for higher education instructors
- Designed & Lead a Postdoc Pedagogy Journal Club discussion on 2-Stage Exams
- More details can be found here: www.irishowley.com/website/tHigherEd.html

Text Mining for Education Majors Stanford University
Guest Instructor of Graduate Students 2016
Supervisor: Professor Candace Thille
- Designed three 1.5-hour classroom lectures, discussions, and activities for fifteen students
- Created curricula to introduce machine learning and text mining to education students

Human-Computer Interaction Lab Instructor Carnegie Mellon University
Various instructor positions involving designing semester-long recitation sessions
- Programming User Interfaces: Prototyping (2013). Supervised by Prof. Anind Dey.
- User-Centered Research & Evaluation (2011). Supervised by Prof. Matt Kam.

PEDAGOGICAL TRAINING

Teaching Workshops Attendee Williams College
Rice Center for Teaching 2023
- Participated in the *Inclusive Teaching* (Hogan & Sathy, 2022) reading groups
- Attended various teaching worksheps, including: Jim Lang's Discussion of *Small Teaching* and the *Inclusive Teaching* reading group.

Cultural Competence in Computing Fellow, Cohort 1 Duke University
Dr. Nicki Washington 2021
- Read prep packet materials on diversity, equity, inclusion, intersectionality
- Attended 4-months of bi-monthly formal professional development sessions
- Implemented Human-AI Interaction course, centering on AI, identity, and design justice
- More details can be found here: identity.cs.duke.edu/fellows.html

Process Oriented Guided Inquiry Workshops Williams College
Drs. Clif Kussmaul & Rick Moog, Christopher Bauer 2019
- One-day and a half-day workshop on developing and facilitating POGIL activities in class
- More details can be found here: www.irishowley.com/pogil/

Workshop for New Teaching-focused CS Faculty NSF / UC San Diego
Drs. Leo Porter, Cynthia Lee, Beth Simon, Mark Guzdial 2018
- Two-day workshop of teaching training on best practices in teaching undergraduates
- Topics included: learning in lecture, peer instruction, collaborative learning, inclusivity, etc.
- More details can be found here: cacm.acm.org/magazines/2017/5/216317-preparing-tomorrows-faculty-to-address-challenges-in-teaching-computer-science

Postdoc Teaching Certificate Stanford University
Office of Postdoctoral Affairs 2017
- 70 hours of teaching training, including core requirements and electives
- 5 hours teaching practice with 15 hours teaching preparation
- More details can be found here: www.irishowley.com/website/tTeachingCertificate.html

2 MOOC Certificates on Enhancing STEM Education CIRTL
Center for the Integration of Research, Teaching, & Learning 2017
- An Introduction to Evidence-based STEM Undergraduate Teaching, with distinction
- Advanced Learning Through Evidence-based STEM Teaching, with distinction
- More details can be found here: www.irishowley.com/website/tCIRTL.html

Future Faculty Program Carnegie Mellon University
Eberly Center for Teaching Excellence 2011-2012
- Attended 11 seminars on: teaching first-year undergraduates, planning & delivering effective lectures, working well with small groups, encouraging intellectual development & critical thinking, problematic student behavior, etc.
- Observed in teaching twice, with feedback, by pedagogical experts
- More details can be found here: www.cmu.edu/teaching/graduatestudentsupport/futurefacultyprogram.html

Course on Educational Goals, Instruction, & Assessment Carnegie Mellon University
Dr. Sharon Carver 2009
- 14-semester course on research-based pedagogy
- Produced a Research-Based "Big Ideas" for Teaching final project
- More details can be found here: www.irishowley.com/website/tBigIdeasLS.html

PROFESSIONAL SERVICE

Article Reviewing Ongoing
- ACM Learning @ Scale, 2016-20, 23-25; ACM SIGCHI CHI, 2013, 2017, 2022-24; International Conference on Artificial Intelligence in Education, 2024-2025; International Journal of Artificial Intelligence in Education, 2015-2023; IEEE Transactions on Learning Technologies, 2015-2019, 2022; ACM SIGCHI Designing Interactive Systems 2023; SIGCSE 2017-2020; IEEE VIS VISxAI Workshop, 2018-2023; SOLAR Journal of Learning Analytics, 2016, 2017; International Conference of the Learning Sciences, 2018-2019.

Review Committee Member for L@S 2018-2020, 2022-2025
ACM Conference on Learning at Scale
- Participated in conversations shaping the future directions of the research community
- Reviewed submitted articles to inform decisions on acceptance to the conference

Research Proposal Panel Reviewer 2020
National Science Foundation

Workshop Organizer for ACM SIG on Computer Science Education 2019
- Collaborated with peers at primarily undergraduate institutions on a peer-reviewed workshop proposal
- Mir, D., **Howley, I**., Peck, E., Tatar, D. & Davis, J. (2019). "Make and Take an Ethics Module: Ethics Across the CS Curriculum" In *SIGCSE 2019: Workshops*.

Organizing Committee Member for aWear Conference 2016
Conference on Wearable Technology in Education
- Framed call for participation and website details for conference promotional materials
- Served as on-the-ground planning for attendee housing, catering, and venue preparation

OurCS Science Organizing Committee 2011, 2013
Conference on Opportunities for Undergraduate Research in Computer Science
- Served on poster review committee and produced poster of accepted poster titles & authors
- Participated in a panel on personal experience researching as an undergraduate

Pittsburgh Science of Learning Center Summer School Mentor 2010, 2011, & 2013
Carnegie Mellon University
- Supervised small group projects using dialogue tutors and applied machine learning
- Guided research projects and presentations over one-week workshop

Mentoring with the Lilypad Wearable Computer 2010
Gwen's Girls, Carnegie Mellon University
- Lead sessions on using textile Arduino computing with middle school girls in foster care camp

INSTITUTIONAL SERVICE

- Divisional Research Funding Committee, 2022-2024
- Honorary Degree Advisory Committee, 2022-2023
- RITE (Race, Image, Technology, and Equity) Organizing Committee, 2019-2020
- Committee for Office of Informational Technology, 2018-2020
- Academic Advisor, 2018-present

DEPARTMENTAL SERVICE

- Women in Computer Science Co-Advisor, 2017-2020, 2022-2024
- Faculty Hiring Search Committee, 2018-2024
- Computer Science Teaching Assistants Co-chair, 2020-2021
- Computer Science Colloquia Co-chair, 2018-2020
- Clare Boothe Luce Fellowship Representative, 2018-2019