Erika S. Mesh

https://esmesh.github.io · esmvcs@rit.edu

EDUCATION

Rochester Institute of Technology, Rochester, NY

Completed coursework & initial research, Ph.D., Computing & Information Sciences   2013 - 2018
- National Science Foundation Graduate Research Fellow, 2013 Awardee
- *Primary research areas:* Modeling and supporting SE process improvement decision-making, Software engineering for scientific research

M.S., Software Engineering   2012

Graduate Certificate, Systems Engineering   2006

B.S., Software Engineering   2002
- Minor in Mathematics
- National Merit Scholar
- RIT Kate Gleason Scholar

TEACHING

Lecturer   August 2019 - *Present*
School of Interactive Games & Media, RIT, Rochester, NY
- Game Development and Algorithmic Problem Solving I & II (IGME-105 & IGME-106)
- Game Development Processes (IGME-601)
- *Related skills:* C#, git, Visual Studio, MonoGame, Agile methodologies

Visiting Lecturer   August 2018 - May 2019
School of Interactive Games & Media, RIT, Rochester, NY
- Game Development and Algorithmic Problem Solving I & II (IGME-105& IGME-106)
- Game Development Processes (IGME-601)
- Programming for Designers (IGME-609)
- *Related skills:* C#, JavaScript, p5.js, git, Visual Studio, MonoGame, Agile methodologies

Adjunct Instructor   August 2017 - May 2018
Department of Software Engineering, Rochester, NY
- Introduction to Software Engineering (SWEN-261)
- *Related skills:* Java, Spark, Maven, GitHub, Trello, Scrum, OpenUP, OOD, Web architectures, IntelliJ IDEA, MetricsReloaded, Jacoco, JUnit, JSON

Adjunct Instructor   January 2016
Department of Computer Science, Rochester, NY
- Computational Problem Solving (CSCI-603: developed Intersession format)
- *Related skills:* Python, Computational complexity, Data Structures, Search and sort algorithms

Teaching Assistant   March 2012 - November 2012
Rochester Institute of Technology, Rochester, NY
- Engineering of Software Subsystems (now SWEN-262)
- *Related skills:* Java, OO design patterns

RELATED EXPERIENCE

SE Process Consultant   January 2014 - May 2014

Multiple cities in the US, France, Poland, and India
- Assisted with SE process assessment of multiple business units worldwide via review of process documentation and work products.
- *Related skills:* CMMi, Agile methodologies, Domain and requirements analysis

Graduate Assistant   July 2011 - August 2013

Laboratory for Environmental Computing and Decision Making
Rochester Institute of Technology, Rochester, NY
- Developed a web-based freight transportation cost and environmental impact analysis tool (WebGIFT).
- Mentored and supervised undergraduate research assistants.
- Coordinated with external stakeholders and contractors.
- *Related skills:* C#, .NET, VisualStudio, Git, ArcGIS, Windows

Sr. Software Engineer   June 2007 - July 2011

PAETEC, Rochester, NY
- Senior engineer on a team providing production support and new development for multiple in-house sales support applications.
- Worked routinely with other teams within IT and numerous business stakeholders including sales, account development, and product marketing.
- *Related skills:* Java, JBoss, Javascript, JRules, JSON, SOA, XML, Oracle, PL/SQL, SVN, Mercurial, JIRA, Linux

Sr. Software Engineer   September 2002 - May 2007

Harris Corporation, Rochester, NY
- Requirements analysis, project planning, system design, development, integration, and test for multiple embedded software defined radio waveform communication applications.
- Acted as an external technical contact for subcontractors, traveled to provide technical training and support, and helped to integrate with external customer frameworks.
- Training coordinator for the successful CMM Level 3 assessment of a team of 50+ engineers.
- *Related skills:* Embedded systems, C++, SVN, PVCS, Corba, CMM, *NIX

Software Engineering Co-ops   June 1998 - August 2001

Miscellaneous 6+ month positions
- Speech & Language Processing, BBN Technologies, Cambridge, MA
- VivaScope controls and calibration software, Lucid, Inc., Rochester, NY
- Data Cycle System (DCS) for the Stratospheric Observatory for Infrared Astronomy (SOFIA), Chester F. Carlson Center for Imaging Science, RIT, Rochester, NY
- Controls programmer, Gleason Works, Rochester, NY

PUBLICATIONS

[1] Erika S. Mesh, David M. Tolar, and J. Scott Hawker. Exploring process improvement decisions to support a rapidly evolving developer base. In *Proceedings of the 38th International Conference on Software Engineering − Visions of 2025 and Beyond (V2025)*, 2016.

[2] Erika S. Mesh. Supporting scientific SE process improvement. In *Doctoral Symposium of the 37th International Conference on Software Engineering*, 2015.

[3] Erika S. Mesh, Gabbie Burns, and J. Scott Hawker. Leveraging expertise to support scientific software process improvement decisions. *Computing in Science & Engineering*, 16(3):28–34, 2014.

[4] Erika S. Mesh and J. Scott Hawker. Scientific software process improvement decisions: A proposed research strategy. In *5th International Workshop on Software Engineering for Computational Science and Engineering*, 2013.

PRESENTATIONS

RIT Women in Computing: WiConnects   March 2018
  − Featured speaker: *What guides us [as women in computing]?*

Doctoral Symposium of the 37th Internations Conference on Software Engineering (ICSE)   May 2015
  − Poster: *Supporting Scientific SE Process Improvement*

CRA-W Graduate Cohort Workshop (CRA-W Grad Cohort)   April 2014
  − Poster: *Why do scientists developing software adopt SE best practices?*

New York Celebration of Women in Computing (NYCWiC)   April 2013
  − Panel: *The Many Paths of Computing Careers*
  − Panel: *Graduate Education*
  − Poster presentation: *Decision Support for Scientific Software Process Improvement*

ADVISORY BOARDS

RIT Graduate Student Advisory Committee   2012 - 2013
  − Chair, 2013

RIT Software Engineering Industrial Advisory Board   2008 - 2011
  − Senior Project Sponsor, 2009