

ACADEMIC VITA
Tammy VanDeGrift
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Shiley Hall Office 223
Shiley School of Engineering
University of Portland

CURRENT ACADEMIC RANK:

Associate Professor of Computer Science, Shiley School of Engineering; Tenured 2011

ACADEMIC APPOINTMENTS:

Graduate Research and Teaching Assistant, Computer Science & Engineering
University of Washington, 1999 – 2005
Instructor, Computer Science & Engineering, University of Washington, Autumn 2001
and Winter 2003, Non-tenure-track
Courses Taught: Teaching Assistant Training (CSE 590IT), Introduction to
Computer Programming (CSE 142)
Assistant Professor, Computer Science, Donald P. Shiley School of Engineering,
University of Portland, Tenure-Track, 2005 – 2011
Associate Professor, Computer science, Donald P. Shiley School of Engineering,
University of Portland, 2011 – current

COURSES TAUGHT AT UNIVERSITY OF PORTLAND:

Introduction to Engineering (EGR 110)
Multimedia Processing * (EE 111)
Introduction to Scientific Computing * (CS 201)
Introduction to Computer Science (CS 203)
Computer Science Lab (CS 273)
Data Structures (CS305)
Data Structures Lab (CS 373, no longer offered)
Theory of Computation (CS 357)
Computer Networks and Internetworking (CS 445/545)
Computational Biology * (CS 423/CS 523/BIO 423)
Analysis of Engineering Data (EGR 361)
Capstone Workshop (CS 083/CS 084/EGR 083)

*developed course for first-time offering

EDUCATION:

Gustavus Adolphus College, St. Peter, MN	1995-1999	B.A.
Honors Computer Science, Honors Mathematics		
University of Washington, Seattle, WA	1999-2001	M.S.
Computer Science & Engineering		
University of Washington, Seattle, WA	2001-2005	Ph.D
Computer Science & Engineering		
<i>Thesis:</i> Scheduling Protocols for Stream Merging in Media-on-Demand Systems		
<i>Advisor:</i> Richard E. Ladner		

ADMINISTRATIVE POSITIONS, PROFESSIONAL EXPERIENCE, CONSULTING:

Associate Dean, Donald P. Shiley School of Engineering, University of Portland, 2012 – 2015

National Science Foundation Panelist (grant proposal reviewer)
March 2007, July 2010, May 2014, January/February 2017

RESEARCH INTERESTS:

Computer science education, educational technology, multimedia processing, media delivery and networks, pedagogy, ethics, software engineering

SCHOLARLY WORK:

Grants Awarded:

Butine Faculty Development Grant, Studying the Design Processes of Novice Software Engineers, Funded by University of Portland, Summer 2007, \$3,594.00.

PI. National Science Foundation CCLI Phase I Grant 0736343, Commonsense Computing: What students know before we teach, 2008 – 2011, \$22,160.00.

Academic Technology Roundtable Grant, School of Engineering Resource Site for Engineering and Computer Science Professions, Funded by University of Portland, 2012 – 2013, \$2000.00.

Co-PI with Sharon A. Jones. National Science Foundation STEP 1317238: Increasing Retention in Engineering and Computer Science with a Focus on At-Risk First Year and Sophomore Students, 2013 – 2018, \$499,939.00.

Dundon-Berchtold Grant Recipient for 2014 - 2015. How engineering and computer science students' value diversity in their profession, with Ed.D. student Zulema Naegele, Funded by University of Portland, 2014 – 2015, \$2500.00.

Provost's Initiative for Undergraduate Research. Effect of NIK on Gene Expression in T cells of Mice, with undergraduate student Sara Perkins, Funded by University of Portland, Spring 2016, \$1,000.00.

Shiley Faculty Research and Development Grant. EdX Courses in Microsoft Certificate Program in Data Science, Funded by Shiley School of Engineering, 2017, \$516.00.

REFLECT STEM Innovation Fellow. National Science Foundation 1710735 (PI: Salomone), 2018, \$3,000.00 (fellow stipend).

Unfunded Grant Proposals:

PI. DDDAS-TMRP Collaborative Research: Media-on-Demand at Anytime, to Anyone, Anywhere. National Science Foundation 0538802. Requested funds: \$183,999.00. Submitted June 2005.

Co-PI with Jon Down. Program Development for the Kern Entrepreneurship Education Network (KEEN). Requested funds: \$74,500.00. Submitted July 2011.

Co-PI with Patricia Morrell, Julie Kalnin and Shaz Vijlee. REES: Robotics Education for Elementary-Aged Students. National Science Foundation 1759417. Requested funds: \$637,210.00. Submitted September 2017 to ITEST.

PI with Patricia Morrell and Julie Kalnin. DEEPEN: Developing Elementary-Aged Engineering Projects and Engineer-educator Networks. National Science Foundation 1812682. Requested funds: \$449,992.00. Submitted November 2017 to DRK12.

Publications (Peer-reviewed):

Acceptance rates provided if known
Student researcher indicated with #

1. **Tammy VanDeGrift** and Richard Anderson. Learning to Support the Instructor: Classroom Assessment Tools as Discussion Frameworks in CS 1. In *Proceedings of the 7th Annual Conference on Innovation and Technology in Computer Science Education*, 2002. [acceptance rate = 42%]
2. Sarah Schwarm and **Tammy VanDeGrift**. Using Classroom Assessment to Detect Students' Misunderstanding and Promote Metacognitive Thinking. In *Proceedings of the International Conference of the Learning Sciences*, 2002.
3. Laurie Murphy, Kenneth Blaha, **Tammy VanDeGrift**, Steven Wolfman, and Carol Zander. Active and Cooperative Learning Techniques for the Computer Science Classroom. *Journal of Computing Sciences in Colleges*, vol. 18, no. 2, December 2002.
4. Richard J. Anderson, Ruth Anderson, **Tammy VanDeGrift**, Steven Wolfman, and Ken Yasuhara. Interaction Patterns with a Classroom Feedback System: Making Time for Feedback. In *Proceedings of Computer Human Interaction (CHI)*, 2003. [acceptance rate interactive poster = 38%]
5. Richard J. Anderson, Ruth Anderson, **Tammy VanDeGrift**, Steven Wolfman, and Ken Yasuhara. Promoting Interaction in Large Classes with Computer-Mediated Feedback. In *Proceedings of Computer Support for Collaborative Learning (CSCL)*, 2003. [acceptance rate = 30%]
6. Richard J. Anderson, Ruth Anderson, **Tammy VanDeGrift**, Steven A. Wolfman, and Ken Yasuhara. Classroom Presentation from the Tablet PC. In *Proceedings of the 8th Annual Conference on Innovation and Technology in Computer Science Education*, 2003.
7. Sarah Schwarm and **Tammy VanDeGrift**. Making Connections: Using Classroom Assessment to Elicit Students' Prior Knowledge and Construction of Concepts. In *Proceedings of the 8th Annual Conference on Innovation and Technology in Computer Science Education*, 2003. [acceptance rate = 34.1%]
8. Richard Anderson, Jay Beavers, **Tammy VanDeGrift**, and Fred Videon. Videoconferencing and Presentation Support for Synchronous Distance Learning, In *Proceedings of Frontiers in Education Conference*, 2003.
9. **Tammy VanDeGrift**. Coupling Pair Programming and Writing: Learning About Students' Perceptions and Processes, In *Proceedings of the 35th Technical Symposium on Computer Science Education*, 2004. [acceptance rate = 28%]
10. Richard Anderson, Ruth Anderson, Beth Simon, Steven A. Wolfman, **Tammy VanDeGrift**, and Ken Yasuhara. Experiences with a tablet PC based lecture presentation system in computer science courses, In *Proceedings of the 35th Technical Symposium on Computer Science Education*, 2004. [acceptance rate = 28%]
11. Angela Linse, Jennifer Turns, Jessica M. Yellin, and **Tammy VanDeGrift**. Preparing Future Engineering Faculty: Initial Outcomes of an Innovative Teaching Portfolio Program. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2004.
12. Sally Fincher, Marian Petre, Josh Tenenber *et al.* A multi-national, multi-institutional study of student-generated software designs. In *Proceedings of the 4th Annual Finnish / Baltic Sea Conference on Computer Science Education*, 2004.

13. Ken Blaha, Alvaro Monge, Dean Sanders, Beth Simon, and **Tammy VanDeGrift**. Do Students Recognize Ambiguity in Software Design? A Multi-national, Multi-institutional Report. In *Proceedings of the 27th International Conference on Software Engineering (ICSE)*, 2005.
14. Josh Tenenberg, Sally Fincher, Ken Blaha, Dennis Bouvier, Tzu-Yi Chen, Donald Chinn, Stephen Cooper, Anna Eckerdal, Hubert Johnson, Robert McCartney, Alvaro Monge, Jan Erik Mostrom, Marian Petre, Kris Powers, Mark Ratcliffe, Anthony Robins, Dean Sanders, Leslie Schwartzman, Beth Simon, Carol Stoker, Allison Elliot Tew, and **Tammy VanDeGrift**. Students Designing Software: A Multi-National, Multi-Institutional Study. *Informatics in Education*, 4(1), 2005, pp. 143 – 162.
15. Amotz Bar-Noy, Richard E. Ladner, Tami Tamir, and **Tammy VanDeGrift**. Windows scheduling of arbitrary lengths on parallel machines. In *Proceedings of the 17th Annual ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, 2005, pp. 56 – 65.
16. Laurie Murphy, Brad Richards, **Tammy VanDeGrift**, and Brent Wilson. Models for Computer Science K-12 Outreach Activities. *The Journal of Computing Sciences in Colleges*, 21(1), 2005, pp. 274 – 276.
17. Amotz Bar-Noy, Justin Goshi, Richard E. Ladner, and **Tammy VanDeGrift**. Stream Merging for Live Continuous Broadcast with Time-Shifting. In *Proceedings of the Second (IEEE) International Conference on Broadband Networks (BROADNETS)*, 2005, pp. 953 – 962.
18. Jennifer Turns, Angela Linse, **Tammy VanDeGrift**, Matt Eliot, Jana Jones, Steve Lappenbusch. Using Diversity Statements to Promote Engagement with Diversity and Teaching. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2006.
19. **Tammy VanDeGrift** and Janet Davis. The Journey to a Teaching-Oriented Faculty Position: A Handbook of Advice for Graduate Students. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2006.
20. **Tammy VanDeGrift**, Sheryl Burgstahler, Richard Ladner, and Annemarie Poginy#. The Game of Life Workshop – Reaching Out to High School Students with Disabilities. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2006. [Won Best Paper Award (PIC IV)]
21. **Tammy VanDeGrift**, Beth Simon, Dean Sanders, and Ken Blaha. Do Students Recognize Ambiguity in Software Specifications? A Multi-national, Multi-institutional Report. *Software Engineering Education in the Modern Age*, Lecture Notes in Computer Science 4309, Paola Inverardi and Mehdi Jazayeri (editors), Springer, 2006.
22. **Tammy VanDeGrift**. Encouraging Creativity in Introductory Computer Science Programming Assignments. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2007.
23. Donald Chinn and **Tammy VanDeGrift**. Uncovering Student Values for Hiring in the Software Industry. In *Proceedings of the International Computing Education Research (ICER) Workshop*, 2007. [acceptance rate = 58%]
24. Donald Chinn and **Tammy VanDeGrift**. Uncovering Student Values for Hiring in the Software Industry. *Journal on Educational Resources in Computing*, 7(4), January, 2008.
25. Richard E. Ladner and **Tammy VanDeGrift**. The Game of Life – An Outreach Model for High School Students with Disabilities (Special Session). In *Proceedings of the 39th Technical Symposium on Computer Science Education*, 2008. [acceptance rate = 30.1%]

26. Donald Chinn and **Tammy VanDeGrift**. Gender and Diversity in Hiring Software Professionals: What Do Students Say?. In *Proceedings of the Fourth International Computing Education Research (ICER) Workshop*, 2008. [acceptance rate = 35%]
27. Donald Chinn and **Tammy VanDeGrift**. What Students Say about Gender in Hiring Software Professionals. In *Proceedings of the ACM Innovation and Technology in Computer Science Education Conference*, 2008. [acceptance rate = 40%]
28. **Tammy VanDeGrift** and Donald Chinn. An Exercise to Engage Computing Students in Discussions of Professional Issues, In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2009.
29. Robert McCartney, Dennis Bouvier, Tzu-Yi Chen, Gary Lewandowski, Kate Sanders, Beth Simon and **Tammy VanDeGrift**. Commonsense Computing (episode 5): Algorithm Efficiency and Balloon Testing. In *Proceedings of the Fifth International Computing Education Research Workshop*, 2009. [acceptance rate = 54%]
30. Dennis Bouvier, Tzu-Yi Chen, Gary Lewandowski, Robert McCartney, Kate Sanders, Beth Simon and **Tammy VanDeGrift**. Commonsense Understanding of Concurrency: Computing Students and Concert Tickets. *Communications of the ACM*, July, 2010.
31. **Tammy VanDeGrift**, Dennis Bouvier, Tzu-Yi Chen, Gary Lewandowski, Robert McCartney, Beth Simon. Commonsense Computing (episode 6): Logic is Harder than Pie. In *Proceedings of Koli Calling*, 2010.
32. Tamara Caruso#, Natalie Hill#, **Tammy VanDeGrift**, and Beth Simon. Experience report: Getting novice programmers to THINK about improving their software development process. In *Proceedings of the 42nd ACM Technical Symposium on Computer Science Education*, 2011. [acceptance rate = 34%]
33. Richard Ladner and **Tammy VanDeGrift**. Introduction to Special Issue (Part 1): Broadening Participation in Computing Education. *ACM Transactions on Computing Education (TOCE)*, 11:2, July 2011.
34. Richard Ladner and **Tammy VanDeGrift**. Introduction to Special Issue (Part 2): Broadening Participation in Computing Education. *ACM Transactions on Computing Education (TOCE)*, 11:3, October 2011.
35. Amotz Bar-Noy, Richard E. Ladner, Tami Tamir, and **Tammy VanDeGrift**. Windows scheduling of arbitrary-length jobs on multiple machines. *Journal of Scheduling*, 15, January, 2012, pp. 141 – 155.
36. Dennis Bouvier, Tzu-Yi Chen, Gary Lewandowski, Robert McCartney, Kate Sanders, and **Tammy VanDeGrift**. User Interface Evaluation by Novices. In *the Proceedings of the ACM Conference on Innovation and Technology in Computer Science Education*, 2012. [acceptance rate = 45%]
37. **Tammy VanDeGrift** and Jon Down. Leveraging University Entrepreneurship Center Programs as a Means to Enrich Engineering Education. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2014.
38. Sharon A. Jones, Zulema Naegele, and **Tammy VanDeGrift**. Increasing Retention in Engineering and Computer Science with a Focus on Academically At-Risk First Year and Sophomore Students. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2014.
39. **Tammy VanDeGrift**. Supporting Creativity and User Interaction in CS 1 Homework Assignments. In *Proceedings of the ACM Special Interest Group in Computer Science Education (SIGCSE) Symposium*, 2015. [acceptance rate = 36%]

40. Caitlin Cairncross, **Tammy VanDeGrift**, Sharon A. Jones, and Zulema Naegele. Building an Academic Success Program for At-Risk Engineering Students. In *Proceedings of the First Annual Mid Years Engineering Experience (MYEE) Conference*, 2015.
41. Caitlin Cairncross, Sharon A. Jones, Zulema Naegele, and **Tammy VanDeGrift**. Building a Summer Bridge Program to Increase Retention and Academic Success for First-Year Engineering Students. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2015.
42. Caitlin Cairncross, **Tammy VanDeGrift**, Sharon Jones, Lindsay Chelton. Best Practices for Advising At-Risk First-Year Engineering Students. In *Proceedings of the 7th First Year Engineering Experience Conference*, 2015.
43. **Tammy VanDeGrift**. Art in Theory of Computation. *Journal of Computing Sciences in Colleges*, vol 32, no 1, 2016, pp. 162 – 168.
44. Haiyan Cheng, **Tammy VanDeGrift**, Shereen Khoja, Brent Wilson. Computer science program evaluation and curriculum assessment: panel discussion. *Journal of Computing Sciences in Colleges*, vol 32, no 1, 2016, pp. 171 – 172.
45. **Tammy VanDeGrift**, Heather Dillon, and Loreal Camp[#]. Changing the Engineering Student Culture with Respect to Academic Integrity and Ethics. *Journal of Science and Engineering Ethics*, vol 23, no 4, 2016.
46. **Tammy VanDeGrift**. POGIL Activities in Data Structures: What do Students Value? In *Proceedings of the ACM Special Interest Group in Computer Science Education (SIGCSE) Symposium*, 2017. [acceptance rate = 30%]
47. **Tammy VanDeGrift** and Sherry Liao[#]. Helping First-Year Engineering Students Select a Major. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2017.
48. **Tammy VanDeGrift**. Implementation Projects in a Computing Theory Course. *Journal of Computing Sciences in Colleges*, vol 31, no 1, 2017, pages 148 – 155.
49. Haiyan Cheng, **Tammy VanDeGrift**, Shereen Khoja, Brent Wilson. Strategies for increasing undergraduate women in computer science. *Journal of Computing Sciences in Colleges*, vol 31, no 1, 2017, pages 129 – 130.
50. **Tammy VanDeGrift** and Tzu-Yi Chen. User Interface Evaluation: Comparison of Novices to Upperclass Computer Science Students. In *Proceedings of the 2018 STEM-STEAM Hawaii University International Conference*, 2018.
51. **Tammy VanDeGrift**. Compare and Contrast in Data Structures. *Journal of Computing Sciences in Colleges*, vol 34, no 1, 2018, pp. 195 – 201.

In press:

52. **Tammy VanDeGrift** and Richard E. Ladner. Optimal Stream Merging for Time Shifted Media Broadcasts. *Algorithmica*, vol xx, no xx, 2018, pp. xx – xx.

Publications (Not peer-reviewed):

- N1. Sharon A. Jones, Caitlin Cairncross, and **Tammy VanDeGrift**. Using Assessment to Continuously Improve the Retention & Persistence of At-Risk Engineering Students. In *Proceedings of the American Society for Engineering Education (ASEE) Annual Conference and Exposition*, 2017.

Presentations (external to UP):

- P1. Learning to Support the Instructor: Classroom Assessment Tools as Discussion Frameworks in CS 1. Seventh Annual Conference on Innovation and Technology in Computer Science Education (ACM ITICSE), June 2002.
- P2. Using Classroom Assessment to Detect Students' Misunderstanding and Promote Metacognitive Thinking. International Conference of the Learning Sciences (ICLS), October 2002.
- P3. Active and Cooperative Learning Techniques for the Computer Science Classroom. Fourth Annual Consortium for Computing Sciences in Colleges (CCSC) Northwestern Regional Conference, October 2002.
- P4. Classroom Presentation from the Tablet PC. Eighth Annual Conference on Innovation and Technology in Computer Science Education (ACM ITICSE), July 2003.
- P5. Making Connections: Using Classroom Assessment to Elicit Students' Prior Knowledge and Construction of Concepts. Eighth Annual Conference on Innovation and Technology in Computer Science Education (ACM ITICSE), July 2003.
- P6. Videoconferencing and Presentation Support for Synchronous Distance Learning. Frontiers in Education Conference (FIE), November 2003.
- P7. Coupling Pair Programming and Writing: Learning About Students' Perceptions and Processes. The 35th Technical Symposium on Computer Science Education (ACM SIGCSE), March 2004.
- P8. Preparing Future Engineering Faculty: Initial Outcomes of an Innovative Teaching Portfolio Program. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2004.
- P9. Models for Computer Science K-12 Outreach Activities. Seventh Annual CCSC Northwestern Regional Conference, October 2005.
- P10. The Journey to a Teaching-Oriented Faculty Position: A Handbook of Advice for Graduate Students. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2006.
- P11. The Game of Life Workshop - Reaching Out to High School Students with Disabilities. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2006.
- P12. Encouraging Creativity in Introductory Computer Science Programming Assignments. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2007.
- P13. Uncovering Student Values for Hiring in the Software Industry. The International Computing Education Research (ICER) Workshop, September 2007.
- P14. The Game of Life – An Outreach Model for High School Students With Disabilities (Special Session). The 39th Technical Symposium on Computer Science Education (ACM SIGCSE), March 2008.
- P15. An Exercise to Engage Computing Students in Discussions of Professional Issues. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2009.
- P16. Commonsense Computing (episode 5): Algorithm Efficiency and Balloon Testing. The International Computing Education Research (ICER) Workshop, August 2009.
- P17. Leveraging Commonsense Computing. Workshop at the 41st Technical Symposium on Computer Science Education (ACM SIGCSE), March 2010.
- P18. A First-Year Design Project Combining LEGO® MINDSTORMS® Kits and Other Materials. Pacific Northwest Section American Society for Engineering Education, March 2012.

- P19. Bonnie MacKellar, Margaret Menzin, Marc Smith, and Tammy VanDeGrift. Computer Scientists Put the Informatics into Bio, Health, and Medical Informatics Education. Presentation (BOF) at the ACM Symposium for the Special Interest Group on Computer Science Education (ACM SIGCSE), March 2013.
- P20. Supporting the success of multidisciplinary undergraduate computational biology teams through curriculum and pedagogy. Research in Computational Molecular Biology (RECOMB) -- Bioinformatics Education Conference, April 2014.
- P21. Leveraging University Entrepreneurship Center Programs as a Means to Enrich Engineering Education. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2014.
- P22. Increasing Retention in Engineering and Computer Science with a Focus on Academically At-Risk First Year and Sophomore Students. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2014.
- P23. Supporting Creativity and User Interaction in CS 1 Homework Assignments. ACM Special Interest Group in Computer Science Education (ACM SIGCSE) Symposium, March 2015.
- P24. Building a Summer Bridge Program to Increase Retention and Academic Success for First-year Engineering Students. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2015.
- P25. Increasing Retention in Engineering and Computer Science with a Focus on At-Risk First Year and Sophomore Students. At the ACM Special Interest in Computer Science Education (ACM SIGCSE) Symposium, NSF Project Showcase, March 2016.
- P26. Haiyan Cheng, Shereen Khoja, Tammy VanDeGrift, Brent Wilson. Panel Discussion: Computer Science Program Evaluation and Curriculum Assessment. Consortium for Computing Science in Colleges, October 2016.
- P27. Sara Perkins[#] and Tammy VanDeGrift. Effect of NIK on Gene Expression in T cells of Mice. Student poster competition at the Consortium for Computing Science in Colleges, October 2016. [won best student poster]
- P28. Art in Theory of Computation. Consortium for Computing Science in Colleges, October 2016.
- P29. POGIL in Data Structures: What do Students Value? ACM Special Interest Group in Computer Science Education (ACM SIGCSE) Symposium, March 2017.
- P30. Athina Petropulu, Rashaunda Henderson, Shelly Heller, Tammy VanDeGrift. Getting the Mentoring You Need to Succeed. Panel at the Launching Academics on the Tenure Track: an Intentional Community in Engineering Conference, May 2017.
- P31. Athina Petropulu, Shalinee Kishore, Suneeta Ramaswami, Tammy VanDeGrift. Navigating Organizations and Tenure. Panel at the Launching Academics on the Tenure Track: an Intentional Community in Engineering Conference, May 2017.
- P32. Eve Riskin, Katie Wilson, Shalinee Kishore, Tammy VanDeGrift. Mastering Teaching. Panel at the Launching Academics on the Tenure Track: an Intentional Community in Engineering Conference, May 2017.
- P33. Helping First-Year Engineering Students Select a Major. American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2017.
- P34. Using Assessment to Continuously Improve the Retention & Persistence of At-Risk Engineering Students (Poster). American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 2017.

- P35. Haiyan Cheng, Tammy VanDeGrift, Shereen Kjoa, Brent Wilson. Strategies for Increasing undergraduate women in computer science, Consortium for Computing Science in Colleges, October 2017.
- P36. Implementation projects in a computing theory course. Consortium for Computing Science in Colleges, October 2017.
- P37. User Interface Evaluation: Comparison of Novices to Upperclass Computer Science Students. STEM-STEAM Hawaii University International Conference, June 2018.
- P38. Aaron Banobi[#], Alex Hadi[#], Emily McClung[#], Mitchell Nguyen[#], Aitana Shough[#], and Tammy VanDeGrift. Locating CRISPR off-target sites with local sequence alignment. Student poster at the Northwest Quantitative Biology Conference, September 2018.
- P39. Compare and Contrast in Data Structures. Consortium for Computing Science in Colleges, October 2018.

Presentations (internal to UP):

- P40. Speaker, Technology Trends for Conference for High School Students, May 12, 2007.
- P41. Speech for Dr. Andrew Nuxoll's Promotion to Assistant Professor with Tenure, Faculty Gala, May 2013.
- P42. Panelist, Organized by Karen Eifler. Teaching Circles Workshop for University of Portland Faculty, January 2014.
- P43. Panelist, What Does the Future Hold. Orientation Weekend. August 23, 2014.
- P44. Invited Lecture, Bioinformatics. Genetics Course at UP. November 11, 2014.
- P45. Shiley School of Engineering Opportunities. Welcome Session for Clark College students. December 12, 2014.
- P46. Making the Engineering Classroom Welcoming for All. University of Portland TechTalk. January 23, 2015. Available at:
<https://sites.up.edu/techtalk/making-the-engineering-classroom-welcoming-for-all/>
- P47. Campus Climate in the School of Engineering. Presentation at the Dundon-Berchtold Dinner. University of Portland. April 19, 2015. Co-presenter: Zulema Naegele[#].
- P48. Mindset: Strategies for Teaching and Advising. Workshop for Faculty Development Day. May 2015. Co-presenters: Caitlin Cairncross, Julie Kalnin, Maria Erb.
- P49. Panelist, Graduate School Opportunities. Math Department Colloquium Series. September 24, 2015.
- P50. Campus Media in the Classroom. Information Services and the Library Demo Session. September 15, 2015. Co-presenter: Nikolene Schulz.
- P51. Freeing Up Class Time for Active Learning. University of Portland tech talk. November 6, 2015. Co-presenter: Nikolene Schulz. Available at:
<https://sites.up.edu/techtalk/freeing-up-class-time-for-active-learning/>
- P52. Panelist, Grit and student success. STEP Student Workshop. March 18, 2016.
- P53. Whistling Vivaldi: How Stereotypes Affect us and what we can do. Faculty Development Day. University of Portland. May 3, 2016. Co-presented with several faculty from education, nursing, and CAS.

STUDENT CAPSTONE AND RESEARCH PROJECTS SUPERVISED:

1. Lisa Eberle, Jason Favors, and Ben Foran. Project Santiam: Whenever Messenger. Co-advised with Steven Vegdahl. 2005 – 2006.
2. Annemarie Poginy. The Game of Life Workshop – Reaching Out to High School Students with Disabilities. Spring 2006.

3. Kristin Glanville and Ethan Prevost. Project Pilot Rock: Stanford's Lighting Schematic. 2006 – 2007.
4. Ken Lee, Michael Rumely, Vladimir Schvets, and Robert Vandermeulen. Yellowtooth: remote control via instant messenger. Co-advised with Andrew Nuxoll. 2007 – 2008.
5. William Dana, Mike Dillon, and John Guptill. Project eNVy: Network Visualization. 2008 – 2009.
6. Jeff Keagbine, Tim Meyer, Steven Rogers, and Kris Slavenski. Project Golden Spruce: Freshman Engineering Database for the University of Portland. 2009 – 2010.
7. Tamara Caruso, Natalie Hill, and Beth Simon (University of California San Diego). Getting novice programmers to think about improving their software development process. Summer 2010.
8. Alex Brotherston, Ashley Donahoo, Colton Hamm, and Matt Johnson. Project RNG: A Radiation-based Random Number Generator. Co-advised with Joseph Hoffbeck. 2010 – 2011.
9. Sam Burich, Kapua Chandler, and Kris Lewis. Project AdviseUP: Web-based scheduling and advising application. 2011 – 2012.
10. Ben Co and Tim Yandl. Research Project: Finding Motifs Associated with Neurological Disorders. Spring 2012.
11. Kekai Ariola, Eric Bergquist, and Megan Yamamoto. Project AdviseUP: Live Integration. 2012 – 2013.
12. Sherry Liao. Research Project: Developing Archival Resources for Introductory Engineering and Computer Science Students. 2012 – 2013.
13. Devon Griggs, Devin Helmgren, Emilia Holbik, and Janel Raab. Project Micromouse: Minitaur. IEEE APEC Micromouse Competition. Co-advised with Wayne Lu. 2013 – 2014.
14. Krismy Alfaro, John Liedtke, and Justice Nichols. UP Marketplace. 2014 – 2015.
15. Zulema Naegele (Ed.D student). How engineering and computer science students' value diversity in their profession. 2014 – 2015.
16. Bryce Matsuda, Caleb Piekstra, Triton Pitassi, and Jordan White. ANTS: Automated Nuxollian Team Scheduler (software for CS 368). 2015 – 2016.
17. Ryson Asuncion, Matthew Ong, Sean Pierson, and Joel Simard. An Android Tablet for Cerebral Palsy. 2015 – 2016.
18. Amelia Cole (M.A. Communication Studies student). The Humanization of Technology: An Exploration of Agenda-Setting Effects within Popular News Coverage of the Mobil Phone. Masters Committee Member. 2015 – 2016.
19. Sara Perkins. Research Project: Effect of NIK on Gene Expression in T cells of Mice. Spring 2016.
20. Parker Kimball, John Lien, Viet Phan, and Matthew Young. Human Paintbrush: An artistic virtual reality experience. Spring 2015 and Spring 2016.
21. Nerissa Lemon, DJ Milovic, Shilpa Nanja, and Jenna Phillips. Green Dot Simulation. Co-advised with Saikat Chakrabarti. 2016 – 2017.
22. Christine Chen, Matt Hino, Sara Meisburger, and Reece Teramoto. Holla-at-yo-gram: VR Hologram Display. Co-advised with Steven Vegdahl. 2016 – 2017.
23. Nicholas Accuardi, Michelle Lau, and Melanie Martinell. Global Emancipation Network Scraping Modules. 2017 – 2018. [*note: supervision of capstone projects started counting as teaching load in Fall 2017*]
24. Alex Baldwin, Danh Nguyen, and Elias Paraiso. TutorUP: A web-based tutor match. Spring 2018 and Spring 2019.

25. Adrian Low, David Jablonski, Noah Sperling, and Evan Sterba. Natural Language Processing for Academic Assessment. 2018 – 2019.

SERVICE:

University of Portland:

Current Service:

Member, Baccalaureate and Opening Mass Choir, Autumn 2005 – Current

Member, UP STEM Center, August 2015 – Current

Academic Senate:

Engineering Senator, April 2016 – Current

Chair, Committee on Committees, 2017 – Current

Member, Senate Executive Committee, 2017 – Current

Member, Standing Assessment Committee, Fall 2017 – Current

Member, University Core Curriculum Revitalization Committee, March 2018 – Current

Past Service:

UP Representative, Diversity in the Sciences Symposium, Seattle, October 2006

Blackjack Dealer, Residence Hall Casino Night, Spring 2006 – 2007, Spring 2009 - 2012

Group Leader, Building Community: Serving to Learn, Sept 2007 – Sept 2012, Sept 2014

Member, Presidential Advisory Council on Athletics (PACA), August 2008 – May 2010

Member, PACA Subcommittee: Rules and Compliance, August 2008 – May 2010

Chair, Strategic Plan Committee for Entrepreneurship, Franz Center for Leadership,

Entrepreneurship, and Innovation, August 2011 – August 2012

Member, Committee on Academic Regulations, August 2011 – May 2012

Engineering Representative, Academic Technology Roundtable, August 2012 – May 2013

Member, Academic Standing Committee, July 2012 – June 2015

Engineering Liaison, Office for Students with Disabilities, July 2012 – June 2015

Engineering Liaison, Honors Program, July 2012 – June 2015

Member, Franz Center for Leadership, Entrepreneurship, and Innovation Advisory

Committee (subgroup: Entrepreneurship), August 2012 – August 2015.

Faculty Panel Member, External Review for Career Services, May 2014

Assistant Marshal, Commencement, May 2016, May 2017, May 2018.

Member, Fulbright Committee, Fall 2016, Fall 2017

New Faculty Mentor, mentored Dr. Rajaa Alqudah (EE), 2017 – 2018

Dexheimer Leadership Fellow, completed course in Fall 2017

Faculty Representative, Orientation Parent Social, Fall 2018

Shiley School of Engineering:

Current Service:

Faculty Advisor, Society for Women Engineers Student Chapter, August 2011 – Current

Member, CS Faculty Search Committee, Fall 2018 – Current

Chair, Ad hoc committee for diversity and inclusion for Shiley School, 2017 – Current

Member, Capstone Design Standing Committee, 2017 – Current

Past Service:

Member, CS Faculty Search Committee, Autumn 2006 – Spring 2007, Autumn 2007 –

Spring 2008, November 2014 – July 2015, January – May 2015, July – Dec 2015,

January – March 2016, Autumn 2017 – Spring 2018

Chair, Academic Advisor Search Committee, May 2013, July 2013, November 2013,
June 2014, July 2014
EGR110 (Intro to Engineering) Course Coordinator, Summer 2007, Fall 2015
Panelist, EGR110 Program Information Session, Computer Science, Autumn 2005 – 2009
CS Web Content Creator, School of Engineering, Autumn 2006 – Spring 2007
Member, Engineering Computer Committee, School of Engineering, 2007 – 2011
MSDNAA (Microsoft Dev Network Academic Alliance) Representative, 2007 – 2011
Member, Space Utilization Committee, Autumn 2006 – Spring 2008
Acting Program Chair for computer science, Fall 2011
Chaperone, NW Women in Computing Conference, 2012, 2013, 2014, 2015, 2017
Member, International Engineering Programs Committee, August 2013 – Dec 2013
Member, Advisory Council for the Engineering School (ACES), August 2012 – June 2015
Teaching Circle Leader, organized monthly teaching and learning circles, 2012 – 2015
Faculty Representative, Weekend on the Bluff, 2013 – 2016, 2018
Faculty Representative, Junior Parents Weekend, 2013 – 2017
Faculty Representative, Engineering Admissions Open House, 2005 – 2014
Chaperone, STEP Summer Bridge Program field trips, 2014 – 2015
Chaperone, LPGA Today's Women in Science and Technology Conference, June 2016
Member, ABET Assessment Committee, August 2016 – December 2016
Chaperone, SWE National Conference in Austin, TX, October 2017
Chaperone, SWE National Conference in Minneapolis, MN, October 2018

Professional Community:

Current Service:

Associate Editor, ACM Transactions on Computing Education, 2012 – Current
UP Representative, AccessComputing, 2017 – Current
Partners and Speakers Chair, Conference Organizing Committee for Consortium for
Computing Science in Colleges 2018
Reviewer (all years 2005 – Current unless otherwise specified)
Conference Proceedings: ACM SIGCSE, ACM ITiCSE, ACM ICER, ASEE, CCSC-NW
Journals: Journal on Educational Resources in Computing, Journal of Systems
Architecture, Handbook of Computer Networks, Computer Science Education,
IEEE Transactions on Education, Journal of Engineering Education, ACM
Transactions on Software Engineering
EngageCSEdu, February 2016 – current

Past Service:

Workshop Developer, 25th Anniversary of Computer Science, Gustavus Adolphus
College, 2004, Developed and prepared materials for two workshops for the
CS reunion of the past 25. *Workshop titles:* "Using Computing Skills in
Community Service" and "Introduction to Contextual Design and Inquiry".
Workshop Leader and Organizer, DO-IT (Disabilities, Opportunities, Internetworking,
and Technology), University of Washington, July 2006, Organized and led
computer science workshop for high school students with disabilities.
Workshop title: "Game of Life and Image Processing"
SIGCSE 2008 Conference Local Arrangements Coordinator, 2007 - 2008
Mentor, MentorNet on-line community, mentored various graduate students
Session Chair, ACM SIGCSE Conference 2009, 2017

Co-editor, Special Issue on broadening participation in computing for ACM Transactions on Computing Education, Summer 2009 – October 2011
Reviewer, Scholarship applications: Grace Hopper Conference, 2009 – 2011
Advisory board member, CS camp for middle school girls, Pacific University, 2010 – 2013
Camp instructor for STEM, La Salle High School, July 2013
Holy Redeemer K-8 Science Fair Judge, March 2016
Judge, Congressional App Challenge – Congressman Earl Blumenauer, Fall 2016
UP Representative for CS, NCWIT Awards for Oregon high school students, 2016, 2018
Associate Editor for ACM Transactions on Computing Education, 2012 – Current
Partners Chair, Conference Organizing Committee for Consortium for Computing Science in Colleges 2017

Local Community:

First Immanuel Lutheran Church
Member, Church Council, 2016 – Current
Sunday School Substitute and Assistant Teacher, 2017 – Current
Vacation Bible School Teacher, 2008 – Current
Choir Member, 2007 – Current
Member, Congregational Life Committee, 2017 – Current
Member, Education Committee, 2016 – Current
Various Service Projects
Astor Elementary School Volunteer
Field trip chaperone
Classroom volunteer – taught CS to grades K - 2
Activities: field day, bike to school day, reading fair, used book fair, carnival
Teacher Captain, PTSO Auction Committee, 2017, 2018
Boys Basketball Coach (assistant in 2017-2018, lead in 2018-2019)

AWARDS, FELLOWSHIPS AND HONORS:

Phi Beta Kappa, 1999
Sigma Xi, The Scientific Research Society, 1999
National Science Foundation Graduate Student Fellowship, 1999 – 2002
Educator's Fellowship, Computer Science & Engineering, University of Washington, 2003 – 2004, *Awarded annually to one doctoral student in Computer Science & Engineering at the University of Washington*
Society of Women Engineers Outstanding Female Graduate Student in Computer Science & Engineering, 2004, *Awarded annually to one female student in each engineering discipline at the University of Washington*
American Society for Engineering Education Apprentice Faculty Grant Awardee, 2004, *Nationally awarded to four doctoral students or pre-tenured faculty in engineering each year*
American Society for Engineering Education Best Paper Award (PIC IV), June 2006, *Awarded to the best paper from all divisions in Program Interest Council IV.*
Who's Who Among America's Teachers, 2007
Shepard's Shepherd, Shepard Freshman Resource Center, University of Portland, 2015, 2018.

PROFESSIONAL MEMBERSHIPS:

American Society for Engineering Education (ASEE); *Divisions: Computers and Education, Educational Research and Methods, Electrical and Computer, Women in Engineering*

Association for Computing Machinery (ACM), *SIGs: Special Interest Group in Computer Science Education*

Awarded senior member status in ACM, June 2011

Sigma Xi, The Scientific Research Society

Society of Women Engineers

PROFESSIONAL MEETINGS ATTENDED:

While at the University of Portland:

Acronyms:

ACM Association for Computing Machinery

ASEE American Society for Engineering Education Annual Conference & Exposition

CCSC Consortium for Computing Science in Colleges

ICER International Computing Education Research

FYEE First Year Engineering Education

GHC Grace Hopper Celebration of Women in Computing

LATTICE Launching Academics on the Tenure-Track: an Intentional Community in Engineering

NWWIC Northwest Women in Computing

SIGCSE Special Interest Group in Computer Science Education

SWE Society of Women Engineers

TWIST Today's Women in Science & Technology

CCSC Northwestern Regional Conference, Bothell, Washington, October 2005

ASEE, Chicago, Illinois, June 2006

Diversity in the Sciences Symposium, Seattle, WA, October 2006

GHC, San Diego, California, October 2006

ACM SIGCSE, Covington, Kentucky, March 2007

ASEE, Honolulu, Hawaii, June 2007

A Statistics Bootcamp for CS Education Researchers, Atlanta, Georgia, September 2007

ACM ICER Workshop, Atlanta, Georgia, September 2007

ACM SIGCSE, Portland, Oregon, March 2008

ACM SIGCSE, Chattanooga, Tennessee, March 2009

ASEE, Austin, Texas, June 2009

ACM ICER Workshop, Berkeley, California, August 2009

ACM SIGCSE, Milwaukee, Wisconsin, March 2010

GHC, Portland, OR, November 2011

ACM SIGCSE, Raleigh, North Carolina, March 2012

Pacific Northwest ASEE Section Meeting, Portland, Oregon, March 2012

FYEE, Pittsburgh, PA, August 2012

Frontiers in Education, Seattle, WA, October 2012

NWWIC, Portland, Oregon, October 2012*

ACM SIGCSE, Denver, Colorado, March 2013

NWWIC, Portland, Oregon, October 2013*

CCSC Northwestern Regional Conference, Forest Grove, Oregon, October 2013

ACM SIGCSE, Atlanta, Georgia, March 2014

Research in Computational Biology Conference, Pittsburgh, Pennsylvania, April 2014
ASEE, Indianapolis, Indiana, June 2014
ACM SIGCSE, Kansas City, Missouri, March 2015
NWWIC, Hillsboro, Oregon, April 2015*
ASEE, Seattle, Washington, June 2015
ACM SIGCSE, Memphis, Tennessee, March 2016
TWIST LPGA, Portland, Oregon, June 2016*
CCSC Northwestern Regional Conference, Portland, Oregon, October 2016*
ACM SIGCSE, Seattle, Washington, March 2017
NWWIC, Hillsboro, Oregon, April 2017*
LATTICE, Bainbridge Island, Washington, May 2017
ASEE, Columbus, Ohio, June 2017
Pacific Northwest Quantitative Biology, Portland, Oregon, September 2017
CCSC Northwestern Regional Conference, Richland, Washington, October 2017
SWE National Conference, Austin, Texas, October 2017*
Hawaii STEM/STEAM Conference, Honolulu, Hawaii, June 2018
Pacific Northwest Quantitative Biology, Portland, Oregon, September 2018*
CCSC Northwestern Regional Conference, Bothell, Washington, October 2018
SWE National Conference, Minneapolis, Minnesota, October 2018*

*chaperoned student attendees