Laura Vonessen

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Research Interests

I'm interested in HCI for empowerment, whether through education, accessibility, or exploring cultural diversity. I haven't settled on a specific topic yet, so I'm open to new directions. The project I'm currently working on is in the area of CS education for general audiences.

Education

2016-present **University of Washington**, Seattle, WA
Computer Science & Engineering
First-year Ph.D. student
Cumulative GPA: 3.8/4.0

2012-16 **University of Arizona**, Tucson, AZ
Bachelor of Science, Magna Cum Laude, May 2016
Majors: Computer Science, Mathematics
Minor: French
Cumulative GPA: 3.758/4.0

2014-15 **Karlsruher Institut für Technologie**, Karlsruhe, Germany
Studied abroad for one academic year
Cumulative GPA using linear conversion: 3.37/4.0

Publications

2015 Sen, S.; Johnson, I.; Harper, R.; Mai, H.; Olsen, S. H.; Mathers, B.; **Vonessen, L.**; Wright, M.; and Hecht, B. (2015). "Towards Domain-Specific Semantic Relatedness: A Case Study in Geography." Proceedings of the 2015 Joint Conference on Artificial Intelligence, IJCAI 2015.

Posters

2015 Kobourov, S. G.; Mchedlidze, T.; and **Vonessen, L.** (2015). "Gestalt Principles in Graph Drawing." Poster at 23rd International Symposium on Graph Drawing & Network Visualization, GD 2015.
http://www.csun.edu/gd2015/posters/GD2015-Poster6.pdf

2015 Harper, R.; Mai, H.; Mathers, B.; Olsen, S. H.; **Vonessen, L.** (2015). "Spatial Knowledge and Relatedness." Poster at the 2015 Joint Mathematics Meetings.
http://www.cs.arizona.edu/people/lvonessen/GeographicRelatedness.pdf

2013 **Vonessen, L.**; Galbraith, J.; Drake, P.; and Chen, Y.-P. (2013). "Using Patterns to Play Computer Go." Poster at the 2013 John Rogers Summer Research Conference at Lewis & Clark College.
https://webdisk.lclark.edu/drake/publications/pattern-poster-2013.pdf

2013 Terenin, A.; **Vonessen, L.**; Levenick, S.; Johnson, K.; Galbraith, J.; Drake, P.; and Chen, Y.-P. (2013). "SHAPE: A Statistical Method for Efficient Storage of Patterns in Computer Go." Poster at the 2013 John Rogers Summer Research Conference at Lewis & Clark College.
https://webdisk.lclark.edu/drake/publications/shape-poster-2013.pdf

Academic Honors

2015 Scored in top 25% in William Lowell Putnam Mathematical Competition
Team placed 2nd in local ACM Collegiate Programming Contest
Goldwater Scholarship Honorable Mention
2014 German Academic Exchange Service (DAAD) 10 month scholarship
UA Honors College Study Abroad Scholarship
UA College of Science Galileo Circle Scholar
2013 Scored in top 10% in William Lowell Putnam Mathematical Competition

Teaching Experience

2017 Teaching Assistant for CSE 331 – Software Design & Implementation
- Led sections, held office hours, graded

Teaching Assistant for CSE 401 – Introduction to Compiler Construction
- Led some sections, held office hours, graded

2016 Teaching Assistant for CSE 311 – Foundations of Computing I
- Led sections, held office hours, graded

Research projects

2017-present Investigating the design space of micro-learning for general audiences in CS education. With: Emilia Gan, Professor Andy Ko (UW iSchool)

2017 Cross-cultural security project to find out what people's threat models are around the world. With: Camille Cobb, Eunice Jun, Professor Kurtis Heimerl (UW)

2016 Investigated differences in participant responses in their chosen language vs. English using two case studies on Lab in the Wild. With: Professor Katharina Reinecke (UW)

2015-16 Investigated links between methods of graph drawing and Gestalt principles, principles of psychology which describe how humans perceive groupings of objects (see posters). Worked on evaluating symmetry in graph drawing. With: Tamara Mchedlidze (KIT), Professor Stephen Kobourov, Nivan Ferreira (UA)

2014 Designed and conducted a survey on Mechanical Turk to evaluate the relationship between spatial knowledge and perceived relatedness of spatial concepts in Wikipedia (see posters, papers) as part of the Institute for Mathematics and its Applications' Maxima REU. With: Professor Shilad Sen (Macalester College), Professor Brent Hecht (University of Minnesota), et al

2014 Explored usage of stereo imaging to reduce reflection in images of whiteboards, among other problems. With: Professor Alon Efrat (UA)

2013 Worked on an AI to play computer *Go*, an ancient Chinese game of strategy and grand challenge problem in artificial intelligence (see posters). With: Professor Peter Drake, Professor Yung-Pin Chen (Lewis & Clark College), et al

Programming languages

Extremely comfortable in Java, JUnit, git, and LaTeX; comfortable in bash; familiar with html, css, JavaScript, GWT, python, JFlex, CUP; have seen C, MIPS

Activities/Leadership

2016-present UW Campus Philharmonia (first violist)

2012-16 Mathematics Problem Solving Seminar (UA)
2012-16 UA Philharmonic (viola)
2013-16 Ramblers (UA hiking club) (VP 2013-14, Secretary 2016)
2014-15 Sinfonieorchester des KIT (viola)