

Danielle Stewart | CV

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Education

University of Minnesota - Twin Cities <i>Ph.D. Student in Computer Science</i> Critical Systems Research Group Advisors: Dr. M. Heimdahl and Dr. M. W. Whalen	Minneapolis, MN, USA <i>2016–present</i>
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University of Minnesota, Duluth <i>Master in Applied and Computational Mathematics</i> Thesis: Even Harmonious Labelings of Disconnected Graphs Advisor: Dr. J. Gallian	Duluth, MN, USA <i>2013–2015</i>
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University of Minnesota, Duluth <i>Bachelor in Mathematics</i> Thesis: Generation of Pseudoprimes Advisor: Dr. J. Greene	Duluth, MN, USA <i>2011–2013</i>
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Lake Superior College <i>Associate of Arts</i>	Duluth, MN, USA <i>2008–2011</i>
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Bemidji High School (Homeschooled) <i>High School Diploma</i>	Bemidji, MN, USA <i>1998–2002</i>
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Research Interests

Safety analysis of systems, model based safety analysis, cyber-security, safety analysis applied to cyber-security, software verification, formal methods, model checking, model-based development, dependable and secure software development, software testing.

Work Experience

Formal Methods Consulting: Stottler Henke Associates, Inc. Applied compositional analysis verification using AGREE and AADL to a critical systems aviation project.	<i>Dec. 2017– April 2018</i>
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Course Development: Coursera: Software Engineering Assisted in course organization, exams, quizzes, and other course development activities.	<i>Sept. 2017– present</i>
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Research Assistant: Critical Systems Group, University of Minnesota	<i>Dec. 2016– present</i>
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Research in safety analysis for the NASA AMASE project.

Instructor: University of Minnesota, Duluth: Dept. of Maths

Aug. 2015– May. 2016

Instructor for Differential Equations, College Algebra, and Algebra I-II.

Teaching Assistant: University of Minnesota, Duluth: Dept. of Maths

Aug. 2013– May. 2015

Teaching assistant for Elementary Real Analysis, Calculus II, and Approximation & Quadrature.

Publications

- [1] Danielle Stewart, Michael W Whalen, Darren Cofer, and Mats Heimdahl. Architecture modeling and analysis for safety engineering. In *IMBSA2017: 5th International Symposium on Model-Based Safety and Assessment*, 2017.
- [2] Joseph A. Gallian and Danielle Stewart. Even harmonious labelings of disjoint graphs with a small component. *AKCE International Journal of Graphs and Combinatorics*, 12(2):204 – 215, 2015.
- [3] Joseph A. Gallian and Danielle Stewart. Properly even harmonious labelings of disconnected graphs. *AKCE International Journal of Graphs and Combinatorics*, 12(2):193 – 203, 2015.
- [4] Joseph Gallian and Danielle Stewart. Properly even harmonious labelings of disjoint unions with even sequential graphs. *Journal of Graph Labelings*, 1(1), 2015.

Poster Presentations.....

- o Critical Systems Research, Code Freeze 2018, January, Minneapolis, MN, USA
- o Properly Even Harmonious Graphs, IWOCa 2014, October, Duluth, MN, USA

Honors and Awards

2016: Awarded College of Science and Engineering Graduate Fellowship, University of Minnesota

2015: SCSE Outstanding Teaching Assistant Award, University of Minnesota, Duluth

2016: UMD Mathematics Departmental Teaching Assistant Award, University of Minnesota, Duluth

2014: Summer Research Fellowship, Dept. of Mathematics, University of Minnesota, Duluth

2013: Undergraduate Research Opportunities Grant, University of Minnesota, Duluth

2013: Duane E. Anderson Memorial Fellowship, University of Minnesota, Duluth

2012–2014: Pi Mu Epsilon Honor Society, University of Minnesota, Duluth: Dept. of Mathematics

2011–2012: Martha Lahti Scholarship, University of Minnesota, Duluth

2010: Student of the Year Award, Lake Superior College, Duluth, MN

2009: Student of the Year, Biology Dept. Award, Lake Superior College, Duluth, MN

Professional Activities

Peer Reviewer.....

- o FM 2018: International Symposium on Formal Methods
- o NFM 2018: 10th NASA Formal Methods Symposium
- o ASE 2017: 32nd IEEE/ACM International Conference on Automated Software Engineering

- o SETTA 2017: 3rd Symposium on Dependable Software Engineering
- o MEMOCODE 2017: 15th International Conference on Formal Methods and Models for System Design

Service.....

- o Graduate Council Student Representative, University of Minnesota, Duluth: 2014-2015

Selected Course Projects

- o Sequent Calculus Proof Checker (OCaml)
 - Topics in Computation and Deduction, 2016
- o Device Driver for Linux OS
 - Operating Systems Course, 2016
- o Phishing Detection Using Natural Language Processing Techniques
 - Computer Security Course, 2016
- o Lexer, Parser, Evaluator, and Type-Checker for Imperative Language in OCaml
 - Programming Languages Course, 2014

Computer skills

Programming Languages: Java, Perl, OCaml, Python, C++, LaTeX, Prolog, MIPS Assembly

Modeling Languages: AADL, Lustre

Tools: AGREE, Simulink

References

- o Mats Heimdahl
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- o Michael W. Whalen
 - Department of Computer Science & Engineering, University of Minnesota, MN, USA.
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- o Joseph Gallian
 - Department of Mathematics, University of Minnesota Duluth, MN, USA.
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