Paul Gustafson
pgustafs@math.tamu.edu

Technical Skills

Programming Languages
Java (4 years of experience + coursework), Python, Haskell, C, MATLAB, NetLogo
Coq, Agda

Miscellaneous
LaTeX, Git, HTML

Work Experience

Graduate Teaching Assistant Fall 2013 - Present
Texas A&M University, Math Department

- Instructor of record for 60-student Calculus class
- Grader for Algebraic Topology I
- Led Calculus recitations and MATLAB labs

Programmer Analyst Fall 2008 - Spring 2012
Knowledge Based Systems, Inc.

- Built Wireless Sensor Network simulator in Java and NetLogo
- Authored user manuals and other documentation

Counselor Summer 2009, Summer 2010
SMaRT Camp, Texas A&M University

- Mentored mathematically-inclined high schoolers in elementary number theory

Github Repository

stringnet December 2016 - Present

- A Haskell library for quantum mapping class group representations

Publications and Preprints

Paul Gustafson. "Finiteness for Mapping Class Group Representations from Twisted Dijkgraaf-Witten Theory", arXiv:1610.06069, 2016.

Ronald Fernandes; Biyan Li; Kalyan Vadakkeveedu; Ajay Verma; Paul Gustafson, et al. "Agent-based analysis of trustworthiness in wireless sensor networks", Proc. SPIE 8407, Multisensor, Multisource Information Fusion: Architectures, Algorithms, and Applications 2012, 84070W (May 1, 2012); doi:10.1117/12.920781.

Gustafson, Paul; Savir, Nathan; Spears, Ely (2006-11-14), "A Characterization of Refinable Rational Functions", American Journal of Undergraduate Research 5 (3): 11-20.

Education

PhD candidate Fall 2013 - Present
Texas A&M University, Math Department

- Advisor: Eric Rowell
- Field of study: Mapping class group representations from TQFTs

Bachelor of Science in Mathematics Spring 2013
Texas A&M University