

Paul Gustafson

<https://github.com/PaulGustafson>

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(979)774-9184

Interests

Functional programming, formal verification, category theory, topological quantum computation, machine learning

Programming Languages

Haskell, Java, Python, C, Agda, Coq, MATLAB, NetLogo

Work Experience

Texas A&M University

2013 – Present

PhD Candidate, Department of Mathematics

- Proved conjecture on anyon suitability for topological quantum computation
- Created Haskell library for computing with quantum mapping class group representations
- Mentored four undergraduates in conducting research projects
- Taught 60-student Calculus class

Knowledge Based Systems, Inc.

June 2011 – September 2012

Programmer Analyst

Summer 2008, Summer 2010

- Co-secured \$825,000 Phase II SBIR grant by developing a wireless sensor network cybersecurity simulator in Java and NetLogo
- Researched, designed, and implemented simulation features for various network topologies, routing protocols, attack types, power consumption profiles, and anomaly detection systems

Education

Texas A&M University

2013 – Present

Doctor of Philosophy in Mathematics

May 2018 (Expected)

- Field of study: Quantum mapping class group representations
- Advisor: Eric Rowell

Texas A&M University

2012 – 2013

Bachelor of Science in Mathematics

2013

- Madhava Prize in Analysis

Princeton University

2007 – 2011

- Manfred Pyka Memorial Prize in Physics