

RÉSUMÉ OF QUALIFICATIONS

Silvio Mayolo
MERCERENIES@COMCAST.NET

Objective

An academic career in teaching and research; research interests are mathematics and computer science, specifically category theory, formal language theory, and abstract algebra.

Education

2018-Present: PhD Mathematics (GPA 3.9), Purdue University, Expected Graduation: 05/2025

2014-2018: BS Math/Computer Science (GPA 3.9), Tennessee Technological University, Graduation Date: 05/2018

Relevant Experience

- **2018-Present: Teaching Assistant, Department of Mathematics, Purdue University**

Teaching Assistant and Recitation Instructor for various levels of Calculus; taught weekly and biweekly recitation classes; designed and graded quizzes for course sections; tutored and provided assistance to struggling students.

- **Summer 2017: Research Assistant, Center for Research in Extreme Scale Technologies (CREST)**

Assisted with development of the Dynamic Adaptive System for Hierarchical Multipole Methods (DASHMM); responsible for optimizing the memory management scheme by improving the efficiency of the pipeline and designing an abstraction layer to eliminate dependencies on the runtime engine; assisted with integration of DASHMM into Poisson-Boltzman solver.

- **2014-2018: Research Assistant, Dr. David Elizandro, Tennessee Technological University**

Designed and developed sample problems to demonstrate functionality of DEEDS, a discrete event simulation modeling platform; provided the student perspective by assisting with editing several chapters of a manuscript for a discrete event simulation textbook.

- **2014-2018: Teaching Assistant, Department of Computer Science, Tennessee Technological University**

Tutor/Teaching Assistant in various topics including as discrete mathematics, automata theory, and discrete simulation modeling.

- **Summer 2016: Software Intern, eviCore Healthcare**

Analyzed and developed software now used as the front-end of the eviCore client interface; worked with several Information Technology departments; assisted with design of team management software for internal use; planned and designed company-wide security awareness presentations; helped with database management and server inventory management.

- **2016-2018: Programming Language Development for Latitude**

Designing and developing a general-purpose open-source prototype-oriented programming language, for use as an experimental tool for language developers.

Publications and Books

- DASHMM accelerated Adaptive Fast Multipole Poisson-Boltzman Solver on Distributed Memory Architecture
- Performance Evaluation of Industrial Systems (Publication Pending)

Memberships and Activities

- 2015-2017: President, Tennessee Tech Functional Programming Club
- 2014-2018: Member, Tennessee Tech Association of Computing Machinery chapter
- 2014-2018: Member, Tennessee Tech Honors College
- 2016-2018: Member, Tennessee Tech Kappa Mu Epsilon chapter