Daniel **Raies**

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Education

The University of Akron — *Akron, OH*
BS and MS in Mathematics (GPA: 3.94) — *May 2012*

The University of Oregon — *Eugene, OR*
PhD in Mathematics (GPA: 4.04) — *Expected June 2019*

Employment History

The University of Oregon — *Eugene, OR*
Graduate Teaching Fellow — *Fall 2012 – Present*
- Courses Taught: Linear Algebra, Real Analysis, Introduction to Proof, Precalculus, Calculus, Math for Elementary School Teachers, etc.
- Research in the areas of homological algebra and homotopy theory; specifically focused on Mackey functors.

The University of Akron — *Akron, OH*
Graduate Assistant — *Fall 2010 – Spring 2012*
- Courses Taught: Intermediate Algebra, Precalculus, and Business Calculus.
- Computational research in character theory of finite groups and linear algebra over finite fields.

Meggitt Aircraft Braking Systems — *Akron, OH*
Co-op Engineer (Mechanical/Software) — *Spring and Fall 2008*
- Responsibilities included lab work, finite element analysis, and software development in Java and Visual Basic.
- Wrote several small pieces of software designed for daily use in lab work and for automating repeated analyses.
- Worked with teams of engineers to evaluate the performance of various brake parts and to determine their viability.

Northern Arizona University — *Flagstaff, AZ*
Research Experience for Undergraduates — *Summer 2008*
- Wrote MATLAB software designed to find solutions to a specific system of differential equations through linear approximation.
- Worked as part of a team in an effort to understand and solve a large, complex problem.

Major Projects

Profile Evaluation Software Toolkit — *Java, Visual Basic, Microsoft Excel*
Software Written for Lab Equipment
- Engineers at Meggitt Aircraft Braking Systems built a machine designed to measure wear patterns for carbon fiber brake disks which uses this software to interpret, analyze, and display those measurements.
- Challenges included sanitizing data, overcoming hardware limiations, and providing analytics that were meaningful and accessible.

Master's Thesis Research — *Java*
A Computational Linear Algebra Project
- The software written for this project uses combinatorics and linear algebra to test certain cases of a specific conjecture.
- Major challenges included understanding complex source material, finding creative solutions to memory limitations, and implementing various linear algebra algorithms efficiently in Java.

Functions, Trigonometry, and their Applications — *LaTeX*
A Textbook Written for a Precalculus Course (Published by Hayden McNeil)
- This textbook was written in 2016 and is used at the University of Oregon for Math 112. (ISBN 978-0-7380-9210-2)

Skills

Programming: Java, Python, MATLAB, Haskell
Technical: HTML/CSS, LaTeX, Git, Linux/Unix
General: Mathematics, Probability/Statistics, Problem Solving, Critical Thinking