

# Thomas Kaldahl

thomaskaldahl.com ↗

github.com/ei14 ↗

## Math Courses

**Algebra** Algebra I–IV (grad. level),  
Intro Operator Theory,  
Intro Category Theory,  
Honors Linear Algebra

**Analysis** Honors Real Analysis I,  
Real Analysis II,  
Complex Analysis

**Calculus** Intro Diff'l Geometry,  
Honors Calculus I–IV,  
Differential Equations

## Other Courses

**Comp. Sci.** Algorithm Analysis,  
Discrete Math,  
Mainframe Computing

**Physics** Intro Relativity &  
Quantum Mech.,  
Honors Mechanics,  
Honors Electromech.

## Programming

**Very familiar:** Python, C, JS

**Familiar:** Bash, Java, C++

**Used:** z/OS COBOL,  
x86 Assembly

## Misc. Skills

Japanese language training

LaTeX typesetting

Parametric CAD & Part design

3D Modeling & Animation

Electronics, PCB design

Woodworking, Welding experience

## Education

- Rice University *Aug. '20 – Dec. '24*
  - Bachelor of Science in Mathematics
  - Cumulative GPA: 3.682

## Research

- Coronavirus Genetic Analysis *Summer '22 & '23*
  - Investigated effective subsampling methods for accurately summarizing geographic viral transmission
  - Used Bayesian analysis software: BEAST
  - Worked with Dr. Andrew Kitchen, University of Iowa
- Graph Combinatorics *Summer '21*
  - Towards: Categorization of tree graphs which admit a node-labeling, avoiding a certain class of local patterns
  - Conjectured: All unlabelable trees contain, as a sub-tree, one of a finite set of minimally unlabelable trees.
  - Worked with Dr. Peter Blanchard, University of Iowa

## Leadership

- Math Teaching Assistant in CompSci dept. *Spring – Fall '24*
  - Discrete math course, intro proof writing course
  - Assisted students in class, and outside in office hours
  - Graded student homework and exams
- Co-President of Rice AWM ↗ *Fall '23 – Spring '24*  
AWM: Association for Women in Mathematics
  - Invited two women mathematicians to meet undergraduate women interested in math
  - Organized Integration Bee, ~100 undergrad attendees
  - Hosted weekly math study / social session

## Awards

- Putnam Math Competition – Top 27% *Fall '23*  
Top 21% *Fall '22*
- Rice University Hackathon *Fall '21 & '22*
  - 2nd place overall in 2022 – team of 4
    - \* Crisis aversion app/network for university students to seek acute care for mental health emergencies ↗
  - 3rd place in 2021 – 1st among “First Timers” – team of 3
    - \* Disability accessibility interface for motor-impaired people to navigate YouTube ↗
- Rice University Scholarship, full tuition *Spring '20*
- Trinity University: Tower Scholarship, full tuition *Spring '20*
- Science Olympiad team, 6th place nationally *Spring '17*