# 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**  Point-Set Topology,
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

- University of Arizona                                    *Aug. '25 – Now*
  - PhD student in Mathematics
- 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
    * Mental health support app for Rice Univ. students [↗]
  - 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*