

EDUCATION

California Polytechnic State University*M.S. in Mathematics (Applied Math Specialization)*

- GPA: 3.77 / 4.00

San Luis Obispo, CA

(expected) June 2025**California Polytechnic State University***B.S. in Mathematics (Applied Math Concentration)*

- Minors in Statistics, Anthropology & Geography
- GPA: 3.53 / 4.00
- 7-time Dean's List

San Luis Obispo, CA

June 2023

RESEARCH
INTERESTS

Applied mathematics; specifically, the intersection between mathematics and biological, ecological, or social systems. Discrete models on social networks, or continuous models with SIR-adjacent framework.

RESEARCH
EXPERIENCE**Graduate Research Assistant — Supervisor: Dana Paquin***Mathematically Modeling Chronic Myelogenous Leukemia*

June 2024 - Present

- Developed MATLAB scripts to simulate system of delay-differential equations and find time to remission, minimum cancer/maximum T-cell concentration
- Constructing goodness-of-fit metric comparing simulated T-cell curve to patient data
- Co-authoring a paper on a parameter analysis of the DDE model under continuous treatment and treatment interruptions

Undergraduate Research Assistant — Supervisor: Ryan Tully-Doyle*Graph-Theoretic Interpretations of the Nevanlinna Representation*

June 2023 - Sep 2023

- Coded Mathematica functions to generate graph products, adjacency matrices and representing functions to keep track of possible paths
- Proved two-variable representing function results for graphs joined at common vertex

Undergraduate Senior Project — Advisor: Elena Dimitrova*Exploring Community Structure in Online Discourse with Python*

Apr 2023 - Sep 2023

- Constructed mention-based network from vaccination-related tweets with NetworkX
- Ran Louvain algorithm and calculated degree centrality across communities
- Used sentiment analyzer from nltk library in Python to quantify and compare tweet sentiment within communities

Undergraduate Research Assistant — Supervisor: Joyce Lin*Using Machine Learning to Improve Targeting for Farmer Training*

Jan 2023 - June 2023

- Used Pandas and NumPy libraries in Python to clean Cambodian survey data (baseline and endline), construct income features

Undergraduate Research Assistant — Supervisor: Jeffrey Liese*Characterizing Non-Singular Graphs with Games*

June 2022 - Sep 2022

- Generated graphs, adjacency matrices, optimal strategy vectors using Mathematica
- Proved non-singularity for four graph families by partitioning vertices, finding optimal strategy on adjacency matrix game

PAPERS	Gross, L., Stewart, A., Thai, G. , Paquin, D. (2024) <i>Numerical Analysis of Critical Values for Remission During Imatinib Treatment of Chronic Myelogenous Leukemia</i> . In revision.	
	Tully-Doyle, R., Adlin, L., Thai, G. , Tiscareno, S. (2023) <i>Pick Functions as Cauchy Transforms of Colored Graphs</i> . Preprint. https://arxiv.org/abs/2410.10695 .	
AWARDS AND HONORS	Graduate Assistant Fellowship	Sep 2024
	– Awarded to fund master’s thesis in collaboration with math faculty member.	
	Frost Undergraduate Research Fund	June 2024/2023/2022
	– Awarded to fund summer research projects in collaboration with mathematics faculty.	
	Edward van Duyne Scholarship	June 2024
	– Awarded to all class levels of Mathematics students with minimum 3.0 GPA.	
	Cal Poly Beacon Research Grant	Jan 2023
	– Awarded to underrepresented students to fund research projects with faculty member.	
POSTERS AND PRESENTATIONS	Paquin, D., Gross, L., Stewart, A., Thai, G. (2024) <i>Mathematically Modeling Chronic Myelogenous Leukemia</i> . Upcoming talk in Jan 2025 at the Joint Mathematics Meetings in Seattle, WA.	
	Tully-Doyle, R., Adlin, L., Thai, G. , Tiscareno, S. (2023) <i>Graph Theoretic Interpretations of the Nevanlinna Representation</i> . Poster presented in Jan 2024 in the PME Poster Session, at the Joint Mathematics Meetings in San Francisco, CA.	
	Tully-Doyle, R., Adlin, L., Thai, G. , Tiscareno, S. (2023) <i>Graph Theoretic Interpretations of the Nevanlinna Representation</i> . Talk given in Nov 2023 at the 2 nd CSU Mathematical Sciences Conference in Bakersfield, CA.	
	Lin, J., Ellwein, S., Thai, G. (2023) <i>Using Machine Learning to Improve Treatment Targeting in Farmer Training</i> . Poster presented in June 2023 at the Cal Poly Beacon Research Symposium in San Luis Obispo, CA.	
	Liese, J., Klig, C., Lane, R., Moscot, M., Thai, G. (2022) <i>Characterizing Singular Graphs with Games</i> . Poster presented in June 2023 at the Cal Poly Bailey College Student Research Conference in San Luis Obispo, CA.	
	Liese, J., Klig, C., Lane, R., Moscot, M., Thai, G. (2022) <i>Characterizing Singular Graphs with Games</i> . Talk given in Nov 2022 at the 1 st CSU Mathematical Sciences Conference in Northridge, CA.	
TEACHING EXPERIENCE	Graduate Teaching Associate — Instructor of Record	MATH 118, 119
	<i>California Polytechnic State University, San Luis Obispo</i>	Jan 2024 - June 2024
	<ul style="list-style-type: none"> • Created lecture material, in-class worksheets, quizzes and exams for a 35-student class each academic quarter, across two quarters • Graded weekly homework assignments/assessments, held office hours twice a week • Attended Graduate Teaching Seminar to discuss best teaching practices 	
	Instructional Student Assistant	MATH 476
	<i>California Polytechnic State University, San Luis Obispo</i>	Apr 2023 - June 2023
SOFTWARE	Programming: Python, MATLAB, Mathematica, R	
	Python Libraries: Pandas, Numpy, Matplotlib, NetworkX	
	Typesetting: L ^A T _E X (Beamer, TikZ)	