

# Theresa Migler

---

Department of Computer Science  
California Polytechnic State University  
Frank Pilling Building, 14-226  
San Luis Obispo, CA, 93407  
tmigler@calpoly.edu

## EDUCATION

*Ph.D.*, Computer Science, June 2014  
Oregon State University, Corvallis  
Major: Computer Science  
Minor: Mathematics  
Advisor: Glencora Borradaile

*MS*, Computer Science, June 2013  
Oregon State University, Corvallis  
Major: Computer Science

*MS*, Mathematics, December 2006  
California Polytechnic University, San Luis Obispo  
Major: Mathematics

*BS*, Mathematics, June 2004  
California Polytechnic University, San Luis Obispo  
Major: Mathematics  
Minor: Philosophy

## EXPERIENCE

*Assistant Professor* Fall 2018 - Present  
California Polytechnic State University, Computer Science Department

- CSC 348 - Discrete Structures
- CSC 349 - Design and Analysis of Algorithms
- CSC 549 - Advanced Algorithm Design and Analysis
- CSC 570 - Advanced Algorithmic Graph Theory

*Visiting Professor* Fall 2018 - Winter 2019  
Munich University of Applied Science, Computer Science and Mathematics

- Algorithms and Datastructures I
- Graduate Graph Theory

*Lecturer* Fall 2015 - Spring 2018  
California Polytechnic State University, Computer Science Department

- CPE 101, 103 - Fundamentals of Computer Science
- CSC 348 - Discrete Structures
- CSC 349 - Design and Analysis of Algorithms
- CSC 448 - Bioinformatics Algorithms

*Lecturer* Fall 2014 - Spring 2015  
University of California Santa Cruz, Jack Baskin School of Engineering

- CMPS 5P - Introduction to Python
- CMPS 10 - Introduction to Computer Science
- CMPS 17 - Social Networks

- Lecturer* Summer 2012, 2014  
Oregon State University, EECS Department
- CS 325 - Undergraduate Algorithms
- Teaching Assistant* Fall 2010 - Spring 2014  
Oregon State University, EECS Department
- CS 325 - Undergraduate Algorithms
  - CS 381 - Undergraduate Programming Languages
  - CS 515 - Graduate Algorithms
- Teaching Assistant* Fall 2008 - Spring 2010  
Oregon State University, Math Department
- MATH 111, 112, 251 - Calculus and Pre-Calculus
- Lecturer* Fall 2006 - Spring 2008  
California Polytechnic State University, Math Department
- Math 116, 117, 118, 119, 141, 142, 143 - Calculus and Pre-Calculus
- Lecturer* Fall 2006 - Spring 2008  
Cuesta Community College, Math Department
- Math 23, 27, 32 - College Algebra and Pre-Calculus
- Teaching Associate* Fall 2004 - Spring 2006  
California Polytechnic State University, Math Department
- Math 116, 117, 118, 119 - Pre-Calculus

**PEER-  
REVIEWED  
PUBLICATIONS**

- Lauren Nakamichi, Theresa Migler, Zoë Wood
- An Analysis of Four Academic Department Collaboration Networks with Respect to Gender *International Conference on Complex Networks and Their Applications*, 2020
- Kirsten Mork\*, Theresa Migler, Zoë Wood
- Introducing Computing to a Cohort of Incarcerated Youth *SIGCSE '20: Proceedings of the 49th ACM Technical Symposium on Computer Science Education*, 2020
- Conor Carroll\*, Nupur Garg, Theresa Migler, Barbara Walker, and Zoë Wood
- Mapping and Visualization of Publication Networks of Public University Faculty in Computer Science and Electrical Engineering *Proceedings of 35th International Conference on Computers and Their Applications*, 2020
- Logan McNichols\*, Gabriel Medina-Kim\*, Viet Lien Nguyen\*, Christian Rapp\*, Theresa Migler
- Gender's Influence on Academic Collaboration in a University-Wide Network *International Conference on Complex Networks and Their Applications*, 2019
- Christopher Siu\*, Theresa Migler
- Vaccination Strategies on a Robust Contact Network *International Conference on Complex Networks and Their Applications*, 2019
- Sean Gonzales\*, Theresa Migler
- The Densest k Subgraph Problem in b-Outerplanar Graphs *International Conference on Complex Networks and Their Applications*, 2019

Glencora Borradaile, Theresa Migler, and Gordon Wilfong.

- Density Decompositions of Networks *Journal of Graph Algorithms and Applications*, 2019

Iris Kohler\*, Theresa Migler, Foaad Khosmood.

- Composition of Basic Heuristics for the Game 2048 *FDG '19 Proceedings of the 14th International Conference on the Foundations of Digital Games* 2019

Theresa Migler, Glencora Borradaile, and Gordon Wilfong.

- Random Network Models Based on Density *Complex Networks* 2018

Theresa Migler.

- Lower Bounds for Testing Digraph Connectivity with One-Pass Streaming Algorithms. *IEEE Letters of the Computer Society* 2018

Theresa Migler, Lizabeth Schlemer.

- Engagement in Practice: Teaching Introductory Computer Programming at County Jails *ASEE* 2018

Theresa Migler, Glencora Borradaile, and Gordon Wilfong.

- Density Decompositions of Networks *CompleNet* 2018

Glencora Borradaile, Jennifer Iglesias, Theresa Migler, Antonio Ochoa, Gordon Wilfong, and Lisa Zhang.

- Egalitarian Graph Orientations. *Journal of Graph Algorithms and Applications*, 2017

Theresa Migler, Kent Morrison, Mitchell Ogle.

- How Much does a Matrix of Rank  $k$  Weigh? *Mathematics Magazine* 2006

## GRANTS

“Center for Computational Mathematical Biology An Interdisciplinary Hub for High Impact Research and Training”

Co-PI (Elena Dimitrova Co-PI, Jean Davidson Co-PI, Joyce Lin Co-PI)

Strategic Initiatives (internal, rejected - under new consideration) \$500,000

“Governance, Norms and Values Research on the Future Internet”

Co-PI (Bruce DeBruhl PI, Zachary Rentz Co-PI)

Knight Foundation (external, pending decision) \$168,284

“Comparing academic collaboration networks (with a lens on diversity)”

Co-PI (Zoë Wood Co-PI)

Research, Scholarly, and Creative Activities Grant Program (internal, awarded 2020-2021) \$18,000

“Bioinformatics Cross-Disciplinary Studies Minor”

Co-PI (Edward T. Himelblau, PI)

Center for the Advancement of Women in Technology (external, awarded 2017-2021) \$400,000

## STUDENT SUPERVISION

*Current MS Students*

- Joshua Boe
- Stephen Hung
- Iris Kohler
- Viet Nguyen
- Ryan Solorzano

*Current Senior Project and Independent Study Students*

- Jiwon Lee
- Logan McNichols
- Eric Newcomer

*MS Students Defended*

- Lauren Nakamichi *Analyzing Gender in the Cal Poly Collaboration Network* Spring 2020
- Christopher Siu *Simulating Epidemics and Interventions on High Resolution Social Networks* Spring 2019
- Michael Cantrell *Observations of the Copenhagen Networks Study* Spring 2019
- Siddhant Kahal *Bird Abundance at Bird Feeders in Response to Temperature, Wind Speed, and Precipitation during the Winter Season* Spring 2018

*SURP 2020 Students*

- Pranshul Lakhanpal
- Jonathan Schreiber

*SURP 2019 Students*

- Logan McNichols
- Gabriel Medina-Kim
- Viet Nguyen
- Christian Rapp

*Past Senior Projects and Independent Studies*

- Andrew Keshishian
- Jasmine Patel
- Sreelakshmi Kariyadan
- Nicole Hill
- Nicholas Balestrino
- Nicole Griffith
- Evan Shui
- Selynna Sun
- Ryan Zesch
- Viet Nguyen
- Joshua Boe
- Ryan Solarzano
- Alexander Bailey
- Samuel Chase
- Sean Gonzales
- David James
- Sharon Kuang
- Mitchell Overfield
- Jonathan Pautz
- Dmitriy Timokhin
- Collin Wong
- Samuel Chase
- Daniel Yao
- Timothy Jyung
- Lohit Vankineni

*Students Involved in Jail Project*

- Cassie Hamilton
- Caleb Kim
- Yusuf Bahadur
- Terry Wambolt
- Larry Hu
- Chris Moranda
- Abby Schmiedt
- Hayley Cushing

**SERVICE**

- Hack4Impact Faculty Advisor* Fall 2019 - Present
- WISH Faculty Advisor* Fall 2020 - Present
- BEACoN Mentor* Fall 2019 - Present

*CSSE Colloquium (Banquet) Committee Chair* Fall 2019 - Present

*Diversity and Inclusion Committee Member* Fall 2019 - Present

*Newman Center Board Member* Fall 2019 - Present

*Creator of Computer Program at Local Jails* Summer 2015 - Present

- Proposed a new program for the Men's and Women's jails, and the Men's and Women's honor farms.
- Created materials for an Introduction to Programming with Python course - a course similar to the first 4 weeks of CPE101.
- Taught this course four times.
- Involved 10 Cal Poly students in creating materials and assisting in teaching at the jail.

*Indian Student Association Faculty Advisor* Fall 2016-2017

*Wikipedia Author/Editor* 2011-Present

*Maryknoll Lay Volunteer* Summer 2012

- Volunteer math teacher to Mon refugees at Wat Prok in Bangkok, Thailand.
- Collaboratively developed and taught an introductory programming course using Python.

*Get on the Bus- Bus Coordinator* 2007-2008

**AWARDS AND HONORS** SWE "Most Supportive Professor" Nominee Fall 2015

M. Lehman Mathematics Educator Scholarship Recipient 2006

National Science Foundation Scholarship Recipient 2005-2006

College of Science and Mathematics Senior Recognition Award Contributions to the Objectives and Public Image of the University 2004