

# MITCHELL EITHUN

eithunmi@msu.edu, egr.msu.edu/~eithunmi

## EDUCATION

---

**Michigan State University (East Lansing, Michigan)**  
Ph.D. in Computational Mathematics, Science and Engineering  
University Fellow

*Started August 2017*

**Ripon College (Ripon, Wisconsin)**  
B.S. in Mathematics, Computer Science, Minor in Music  
Summa Cum Laude

May 2017

## ACADEMIC PAPERS

---

- 1 Isolating phyllotactic patterns embedded in the secondary growth of sweet cherry (*Prunus avium* L.) using magnetic resonance imaging, with Elizabeth Munch, Daniel H. Chitwood, Gregory Lang and James Larson. (2019). [[arXiv:1812.03321](#)]
- 2 An all-encompassing global convergence result for processive multisite phosphorylation systems, with Anne Shiu. *Mathematical Biosciences*, vol. 291, pp. 1-9 (2017). doi.org/10.1016/j.mbs.2017.05.006 [[arXiv:1608.07259](#)]
- 3 Long-term versus short-term strategy in the game of *Monopoly*, with McKenzie Lamb and Andrea Young. *Journal of Undergraduate Mathematics and Its Applications*, vol. 38, issue 1, pp. 35-57 (2017).

## AWARDS

---

- Michigan State University Graduate Fellowship (Aug 2017)
- Raymond P. and Marie M. Ginther Graduate Fellowship (Aug 2017)
- Ripon College Mathematics Award (Apr 2017)
- Ripon College Computer Science Award (Apr 2017)
- Student Leadership Award (Apr 2016, Apr 2017)
- Student Paper Award at MAA MathFest, Pi Mu Epsilon (Aug 2016)
- Ripon College Mathematics and Computer Science Award (Apr 2016)
- Lucile Mosling Grams Music Award (Apr 2016)
- Clifford Crump Phi Beta Kappa Award (Apr 2016)
- AP Scholar With Distinction (Jul 2013)

## PRESENTATIONS

---

### Conference Talks

*An All-Encompassing Global Convergence Result for Multisite Processive Phosphorylation Systems.* The Joint Mathematics Meetings, Atlanta, GA, January 2017

*An All-Encompassing Global Convergence Result for Multisite Processive Phosphorylation Systems.* Pi Mu Epsilon Regional Conference, St. Norbert College, De Pere, WI, November 2016

*An All-Encompassing Global Convergence Result for Multisite Processive Phosphorylation Systems.* MAA-MathFest, Columbus, OH, August 2016

*Modeling Monopoly with Monte Carlo Simulations.* MAA-Wisconsin Spring Meeting, Ripon College, Ripon, WI, April 2015

*The Oz-Some Power of Linear Algebra,* with Allwin McDonald. MAA-Wisconsin Spring Meeting, Ripon College, Ripon, WI, April 2015

*Modeling Monopoly with Monte Carlo Simulations.* The Joint Mathematics Meeting, Ripon College, San Antonio, TX, January 2015

*Modeling Monopoly with Monte Carlo Simulations.* MAA-Wisconsin Spring Meeting, University of Wisconsin-Whitewater, Whitewater, WI, April 2014

## Posters

*Computational Plant Morphology.* IMPACTS Symposium, Michigan State University, East Lansing, MI, August 22, 2018

*An All-Encompassing Global Convergence Result for Multisite Processive Phosphorylation Systems.* Annual Ripon College Research Symposium, Ripon, WI, April 11, 2017

## Other Talks

*Bringing Computational Science to Collegiate Education.* Computational Education Brown Bag Seminar, Michigan State University, East Lansing, MI, November 28, 2018

*Bread for the World: Modern Christian Communities in Western Europe.* Learning Abroad Conference, Michigan State University, East Lansing, MI, November 16, 2018

*Harry Potter and The Sacred Text.* MSU Wesley, East Lansing, MI, February 2018

*Life Well-Loved.* Ripon College Baccalaureate Service, First Congregational Church, Ripon, WI, May 2017

*A Neuroevolutionary Approach to Super Mario Bros. AI.* Computer Science Senior Seminar, Ripon College, Ripon, WI, April 2017

*The Discrete Curve-Shortening Flow.* Mathematics Senior Seminar, Ripon WI, November 2017

## TEACHING EXPERIENCE

---

**Teaching Assistant** Fall 2018  
*Michigan State University*

- TA for CMSE 801: Introduction to Computational Modeling.
- Facilitated in-class group work, ran office hours, graded homework, projects and exams.

**Mathematics Department Assistant** Jan 2014 — May 2017  
*Ripon College*

- Mentored students during drop-in tutoring sessions.

**Student Support Services Tutor** Oct 2014 — Dec 2015  
*Ripon College*

- Tutored students one-on-one in Calculus I and Calculus II.

**Course Assistant** Spring 2014  
*Ripon College*

- Helped lead activities in Calculus I and led an end-of-semester review session.

**Private Math Tutor** Mar 2012 — May 2014

- Helped several students with Middle School Math, Algebra and Algebra II.
- Taught all of Algebra I to a student entering a competitive high school. (2013)
- Provided free tutoring services for a low-income student. (2012 – 2013)

## OUTREACH

---

- President of the Ripon Math Club. Awarded a “20 for ‘16” grant from Ripon College to host mathematician George Hart. Organized outreach events, including movie showings, geometric construction workshops and campus collaborations. Charter President of Pi Mu Epsilon at Ripon College. (2015 – 2016)

- Annual IT volunteer for Badger Boys State, a one-week citizenship camp for high school boys. Duties include editing video content, taking pictures and archiving media. (2013 – 2015)

## OTHER PUBLISHED WORK

---

### Handbell Music

- “Reflections on Beach Spring” for 3-6 octave handbells. Lorenz: 2020. *Forthcoming*.
- “There is a Happy Land” for 3-5 octave handbells. SoundForth: 2020. *Forthcoming*.
- “Go to Dark Gethsemane” for 3-5 octave handbells. Concordia Publishing House: 2019. *Forthcoming*.
- “Christmas Don’t Be Late” for 3-5 octave handbells. Alfred. *Forthcoming*.
- “Shepherd’s Hey” for 3-6 octave handbells. From the Top. *Forthcoming*.
- “Freedom March” for 2-3 octave handbells. Chorister’s Guild. *Forthcoming*.
- “Processional on He Is Born” for 3-5 octave handbells. Overtones: Fall 2018
- “Communion Quartet” for 3 octave handbells. Overtones: Fall 2018
- “Waltz on Hyfrodol” for 3-6 octave handbells. Lorenz: Fall 2018
- “Mystic Spirit” for 3-7 octave handbells. Beckenhorst Press: Fall 2018
- “Lift Up the Gates Eternal” for 3-7 octave handbells. Beckenhorst Press: Spring 2018
- “On This Day Earth Shall Ring” for 3-6 octave handbells. Overtones: Fall 2017
- “Allegro Molto Appassionato” for 3-5 octave handbells. Choristers Guild: Fall 2017
- “Joyful Acclamation” for 3-5 octave handbells. AGEHR Music: Fall 2017
- “Joy Abounds” for 3-5 octave handbells. Handbells Magazine: Spring 2017
- “A Lincolnshire Dance Song” for 4-7 octave handbells. Beckenhorst Press: Fall 2016

### News Articles

*Ripon College students sit in on Democratic debate, meet Woodruff*, Ripon Commonwealth Press, February 17, 2016

## SKILLS

---

**Languages**     $\LaTeX$ , Python, C/C++, Matlab, Maple  
**Software**    Adobe Premiere Pro CS5, Sibelius 7, MS Office, Wordpress