

# Kelly L. Sovacool

✉ [sovacool@umich.edu](mailto:sovacool@umich.edu)

📄 [sovacool.dev](http://sovacool.dev)

🌐 [kelly-sovacool](https://www.linkedin.com/in/kelly-sovacool)

🐦 [kelly-sovacool](https://twitter.com/kelly-sovacool)

🌐 [kelly-sovacool](https://www.github.com/kelly-sovacool)

## Education

- 2018-present **PhD Bioinformatics**, *University of Michigan*,  
Dept. of Computational Medicine and Bioinformatics
- 2014-2018 **BS Biology**, *University of Kentucky*,  
Dept. of Biology, Minor: Computer Science

## Research Experience

- 2019-present **Graduate Student Researcher**, [Schloss Lab](#),  
Dept. of Microbiology and Immunology, University of Michigan
- Developing bioinformatics tools & pipelines for microbial ecology.
  - 16S rRNA sequence and tandem mass spectrometry data analysis.
- 2018-2019 **Rotation Student Researcher**, *Program in Biomedical Sciences*,  
University of Michigan
- 2015-2018 **Undergraduate Lab Assistant**, [Moseley Bioinformatics Lab](#),  
Dept. of Molecular and Cellular Biochemistry, University of Kentucky
- Developed a computational tool for identifying sets of orthologous and paralogous gene products in whole genomes to facilitate collinearity analysis and detection of gene duplication events.
- 2016-2018 **BIO395 Independent Research Student**, [Weisrock Lab](#),  
Dept. of Biology, University of Kentucky
- Developed scripts and a SNP calling pipeline for amplicon sequence data.
  - Population structure analysis of the *Ambystoma tigrinum* species complex.
  - Bayesian species delimitation of the *Desmognathus fuscus* species complex.
- 2015-2016 **Undergraduate Lab Assistant**, [Jaromczyk Lab](#),  
Dept. of Computer Science, University of Kentucky
- Maintained the *Epichloë festucae* genome project database.
  - Analyzed RNA-seq data of *Chenopodium quinoa* and coffee ringspot virus.

## Awards

### Grants & Fellowships

- 2020 **Conference Travel Grant**, *Rackham Graduate School*, (\$800)  
University of Michigan

- 2019-2021 **NIH T32 Bioinformatics Training Program Fellow**  
University of Michigan
- Dec 2017 **Oswald Research & Creativity Award**, *UK Office of Undergraduate Research*, 2nd place in the Biological Sciences category (\$200)  
University of Kentucky
- May-Aug 2017 **Summer Research Grant**, *UK Office of Undergraduate Research*, (\$2,000)  
University of Kentucky
- 2014-2018 **Presidential Scholarship**, (out-of-state full tuition)  
University of Kentucky
- Honors
- May 2018 **Graduated Cum Laude with Departmental Honors in Biology**  
University of Kentucky
- May 2018 **Biology Undergraduate Research Award Nominee**  
University of Kentucky
- 2014-2018 **Lewis Honors College**  
University of Kentucky

---

## Service

- 2019-present **Graduate Student Coordinator**, *Data Analysis Networking Group*,  
University of Michigan, [um-dang.github.io](https://um-dang.github.io)
- Organize monthly meetings & a one-day symposium for researchers to sharpen their data analysis skills.
  - Funded by a Rackham Interdisciplinary Workshop grant.
- 2018-present **Executive Committee Member**, *Girls Who Code at UM-DCMB*,  
University of Michigan, [github.com/gwc-dcmb](https://github.com/gwc-dcmb)
- Plan, apply for funding, develop curriculum, & facilitate collaborative development of our resources to teach introductory programming & data science to high school women.
- 2009-present **Live Sound Engineer**, *for various churches and non-profit organizations*.
- Set up, maintain, repair, and operate front of house, monitor, and recording systems during sound checks, rehearsals, services, and concerts.
  - Train new sound techs in the art and science of live sound.

---

## Teaching Experience

- 2018-present **Software Carpentry instructor**, *U-M Software Carpentry*, [umswc.github.io](https://umswc.github.io)
- 06-07 Jan 2020. Lead instructor for [U-M WISE](#)-sponsored workshop.
  - 01-02 July 2019. Workshop instructor.
  - 22-23 May 2019. Workshop helper.
  - 01 Mar 2019. Workshop helper.
  - 17-18 Dec 2018. Workshop helper.

- 2019-2020 **Facilitator & Capstone Project Mentor**, *Girls Who Code at UM-DCMB*, Weekly GWC Club for high school women, University of Michigan
- 15-19 July 2019 **Facilitator & Capstone Project Mentor**, *Girls Who Code at UM-DCMB*, Data Science Summer Experience, Detroit, MI
- 25 Apr 2019 **DNA Day Ambassador**, *MI DNA Day*, Epigenetics & scientific journeys, Ann Arbor, MI
- 20 Mar 2019 **Workshop helper**, *Graduate Society of Black Engineers and Scientists*, Data visualization with Python workshop, University of Michigan
- 16 Mar 2019 **Capstone Activity Leader**, *Females Excelling More in Math, Engineering, & Science*, Binary numbers through Ozobots with GWC at UM-DCMB, University of Michigan
- Jan-May 2019 **Capstone Project Mentor**, *Girls Who Code at UM-DCMB*, Weekly GWC Club for high school women, University of Michigan
- 2012-2018 **Tutor**, *freelance*, for high school and college students in Biology, Calculus, Chemistry, Computer Science, and Bioinformatics.

## --- Presentations

- Jun 2020 **ASM Microbe**, *OptiFit: a fast method for fitting amplicon sequences to existing OTUs*, Poster, Cancelled due to COVID-19. Chicago, IL
- Apr 2018 **Showcase for Undergraduate Scholars**, *Developing a Global Homology Analysis for Comparative Genomics*, Poster, University of Kentucky
- Apr 2018 **Systems Biology & Omics Integration Seminar**, *Developing a Global Homology Analysis for Comparative Genomics*, Talk, University of Kentucky
- Apr 2018 **National Conference on Undergraduate Research**, *Developing a Global Homology Analysis for Comparative Genomics*, Poster, University of Central Oklahoma
- Apr 2016 **Showcase for Undergraduate Scholars**, *Processing RNA-seq Reads of Plants Infected with the Coffee Ringspot Virus*, Poster, University of Kentucky
- Apr 2016 **UT-KBRIN Bioinformatics Summit**, *Processing RNA-seq Reads of Plants Infected with the Coffee Ringspot Virus*, Poster, Cadiz, KY
- Apr 2015 **Showcase for Undergraduate Scholars**, *The Effect of Meditation on Performance*, Poster, University of Kentucky

## --- Continuing Education

- 27-30 Jan 2020 **Building Tidy Tools workshop at rstudio::conf**, *RStudio*, PBC San Francisco, CA

- 17-19 Dec 2019 **Winter School in Research Software Engineering**, [US Research Software Sustainability Institute](#)  
Seattle, WA
- 03-04 Jun 2019 **Software Carpentry Instructor Training**, *The Carpentries*  
University of Michigan
- 01-05 May 2019 **PyCon Education Summit & Conference**, *Python Software Foundation*  
Cleveland, OH
- 24-26 Apr 2019 **MICROBIOL 612.2**, *Riffomonas minimalR workshop*  
University of Michigan