

# Kelly Sovacool

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## Education

- 2014-2018 **BS Biology**, *University of Kentucky*
- Minor: Computer Science
  - 4-year full tuition Presidential Scholarship
  - Lewis Honors College
  - Honors Biology Scholar

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## Research Experience

- 2015-present **Undergraduate Lab Assistant**, *Moseley Bioinformatics Lab*,  
Dept. of Molec. & Cell. Biochemistry, University of Kentucky
- Developing a computational tool for identifying sets of orthologous and paralogous gene products across any set of whole genomes to facilitate collinearity analysis and detection of gene duplication events.
- 2016-present **BIO395 Independent Research Student**, *Weisrock Lab*,  
Dept. of Biology, University of Kentucky
- Population structure analysis of the *Ambystoma* tiger salamander complex.
  - Bayesian species delimitation of the *Desmognathus* dusky salamander complex.
  - Writing Bash and Python scripts for managing sequence data.
  - Developing a SNP calling pipeline for amplicon sequence data.
- 2015-2015 **Undergraduate Lab Assistant**, *Jaromczyk Lab*,  
Dept. of Computer Science, University of Kentucky
- Maintained the *E. festucae* genome project database.
  - Applied methods of processing RNA-seq data to *C. quinoa* and the Coffee ringspot virus.

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## Awards

- Dec 2017 **Oswald Research & Creativity Award**, *University of Kentucky*
- Awarded a \$200 prize for second place in the Biological Sciences category.
  - Manuscript title: "Developing a Global Homology and Collinearity Analysis Framework for Identifying Gene Duplication Events."
  - Advisor: Prof. Hunter NB Moseley.

- May 2017 **Summer Research Grant**, *University of Kentucky*
- Awarded a \$2,000 grant by the UK Office of Undergraduate Research to work full time on a research project during the summer.
  - Project title: "Developing a Global Homology and Collinearity Analysis Framework for Identifying Gene Duplication Events."
  - Advisor: Prof. Hunter NB Moseley.

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## Presentations

- Apr 2018 **Developing a Global Homology Analysis Framework for Comparative Genomics**, *Advisor: Prof. Hunter NB Moseley*
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky
  - Oral, *Systems Biology & Omics Integration Seminar*, University of Kentucky
  - Poster, *National Conference on Undergraduate Research*, University of Central Oklahoma
- Apr 2016 **Processing RNA-seq Reads of Plants Infected with the Coffee Ringspot Virus**, *Advisor: Prof. Jerzy W Jaromczyk*
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky
  - Poster, *UT-KBRIN Bioinformatics Summit*, Cadiz, KY
- Apr 2015 **The Effect of Meditation on Performance**, *Advisor: Prof. Bruce O'Hara*
- Poster, *Showcase of Undergraduate Scholars*, University of Kentucky

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## Other Work

- 2012-2017 **Tutor**
- Tutored high school and college students in Biology, Calculus, Chemistry, Computer Science, and Bioinformatics.
- 2009-present **Sound Technician**
- Setting up, maintaining, repairing, and operating audio equipment for bands, churches, and other non-profit organizations.
  - Operating the front of house, monitor, and recording systems during sound checks, rehearsals, services, and concerts.
  - Training new sound techs in the art and science of live sound.

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## Publications

M. M. Goodin, M. Farman, H. Inocencio, C. Jang, J. W. Jaromczyk, N. Moore, and K. Sovacool. Processing rna-seq data of plants infected with coffee ringspot virus. In *Proceedings of the 15th Annual UT-KBRIN Bioinformatics Summit 2016*, volume 17, page 297, Aug 2016.