Christopher Hann-Soden

213 Hillside Ave, Piedmont, CA, 94611

(925)872-2716 • channsoden@gmail.com
https://github.com/channsoden

Computational Biologist and Bioinformatician
I earned my PhD for developing statistical and machine learning algorithms to compare genomes. I'm interested in developing algorithms and pipelines to solve hard problems.

Experience

UC Berkeley **Berkeley, CA**
Domain Consultant, Berkeley Research Computing *Jan 2018–Present*

Key Skills: communication, HPC, Unix systems, Git, cloud computing, collaboration.

- Provided technical support and consulting services to researchers in data-driven domains.
- Developed training and documentation for campus IT services and infrastructure, including HPC and cloud services.

UC Berkeley **Berkeley, CA**
Graduate Student Researcher, Taylor Lab *Jul 2012–Dec 2018*

Key Skills: NGS, phylogenetics, genomics, population genetics, Python, R, HPC, writing, oral presentation.

- Independently developed a statistical framework and efficient algorithm for measuring genomic rearrangement rates.
- Used statistical and machine learning methods of population and comparative genomics to investigate the evolutionary consequences of breeding system transitions in *Neurospora*.
- Modeled the transcriptional response of *Neurospora* to acclimation and adaptation to warmer temperatures.
- Administered and maintained the laboratory's Linux server.

UC Berkeley **Berkeley, CA**
Instructor *2014–2018*

Key Skills: oral presentation, information synthesis, communication, teamwork.

- Introduction to Programming for Bioinformatics (Summers 2014-2017, Winters 2016-2018)
- General Biology (Spring 2015, Spring 2018)
- Microbiology Laboratory (Spring 2014)

UC Berkeley **Berkeley, CA**
Laboratory Assistant I, Glaunsinger Lab *Aug 2011–May 2012*

Key Skills: molecular biology, cell culture, time management, neatness, organization, teamwork.

- Systematically mapped interactions between human and viral proteins.
- Developed and implemented work flows for cloning, heterologous gene expression, coimmunoprecipitation, and blotting.

Education

- **UC Berkeley** — **Berkeley, CA**
  Microbiology, Doctorate of Philosophy — *2012–2018*
  Philomathia Scholars Graduate Fellowship — *2015–2017*
  Webmaster, Microbiology Student Group — *2016*
  Symposium Chair, Microbiology Student Group — *2015*

- **Humboldt State University** — **Arcata, CA**
  Biology & Zoology, Bachelor of Science — *2008–2010*
  cum laude

Publications

Christopher Hann-Soden, Lilliam A. Montoya, Pierre Gladieux, and John W. Taylor. New reproductive and ecological diversity in the model genus, neurospora. in prep.

Christopher Hann-Soden, Lilliam A. Montoya, Pierre Gladieux, and John W. Taylor. Lack of linkage and efficient selection evince outcrossing in self-fertile neurospora. in prep.

Christopher Hann-Soden, Ian Holmes, and John W. Taylor. Estimation of rearrangement break rates across the genome. in prep.

Pierre Gladieux, Fabien De Bellis, Christopher Hann-Soden, Jesper Svedberg, Hanna Johannesson, and John W Taylor. Neurospora from natural populations: Population genomics insights into the life history of a model microbial eukaryote. in press.

Arturo Casadevall, Joudeh B. Freij, Christopher Hann-Soden, and John Taylor. Continental drift and speciation of the cryptococcus neoformans and cryptococcus gattii species complexes. *mSphere*, 2:e00103–17, 2017.

Pierre Gladieux, Benjamin A. Wilson, Fanny Perraudeau, Liliam A. Montoya, David Kowbel, Christopher Hann-Soden, Monika Fischer, Iman Sylvain, David J. Jacobson, and John W. Taylor. Genomic sequencing reveals demographic, historical, and selective factors associated with the diversification of the fire-associated fungus neurospora discreta. *Molecular Ecology*, 24:5657–75, 2015.

John W. Taylor, Christopher Hann-Soden, Sara Branco, Iman Sylvain, and Chris Ellison. Clonal reproduction in fungi. *PNAS*, 112(29):8901–8, 2015.

Other Skills & Projects

Dancify - A web app to tag and visually explore your music using Spotify data.

Cryptyx - A free and open source block chain ticketing protocol and web service.

Martial Arts - Shorinji Kempo, 12 years.
Partner Dancing - Blues & fusion, 5 years.