LINNEA BAVIK

Doctoral student in the Department of Physics at Emory University, working in the area of population genetics and evolution. Longtime passion for computational modeling and strong desire to gain mastery in computational tools for real-world data analysis.

SKILLS

- **Programming Language Fluency**: C, Python, Wolfram Mathematica
- **Modeling Experience:**
  - Population Dynamics via Wright Fisher model of Evolution
  - Nucleation and Growth of Thin Films via Kinetic Monte Carlo simulations
  - Diffusion of Monomer in Solution via finite difference equations
  - Computational Fluid Dynamics via OpenFOAM
- **Analysis Experience:**
  - Machine Learning: SVM, Random Forest, Neural Networks, Dimensional Reduction via pre-existing Python packages
  - Dynamic data visualization via Mathematica and Python

PUBLICATIONS

- *Island Size Distribution in Extended Growth Models.*(Poster presented during the Conference for Undergraduate Women in Physics 2016)
- *Island Size Distribution in Systems with Large Critical Cluster Size.*(Poster presented during APS March Meeting 2017)
- *Effects of large critical cluster size in thin-film nucleation and growth models: Deviation of island- and capture- zone sizes from standard models.* (Talk given at Western Washington University 2017)
- *Evolution of Phenotype-Based Cooperation.* (Poster given during the Physics of Living Systems Annual Meeting 2019)
- *Evolution of Cooperation through Continuous Phenotype Similarity.* (Talk given at Emory University 2019)

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