

Christian Cunningham

Graduate Researcher in Physics

Education

- 2018–2022 **B.S. Physics.**
Arizona State University with Barret Honors
- 2018–2022 **B.S. Mathematics.**
Arizona State University with Barret Honors
- 2022–2025 **M.S. Physics.**
Oregon State University
- 2022– **Ph.D. Physics, Candidate as of 2025.**
Oregon State University

Prior Employment

- 2017-2022 **I.T. Technician, Northern Wasco County PUD, The Dalles, OR.**
- 2019 **Undergraduate Research Assistant, Arizona State University, Tempe, AZ.**
- 2022- **Graduate Student Research Assistant, Oregon State University, Corvallis, OR.**

Research Projects

- 2022 **Barrett Honors Thesis, ASU, Cunningham & Shrivastava.**
Making a Real-Time Operating System for the Raspberry Pi 2B
- 2023 **Publication, Physical Biology, Eddy, Naylor, Cunningham, & Sun.**
Facilitating cell segmentation with the projection-enhancement network
- 2025 **Publication, Physical Biology, Cunningham & Sun.**
Representation of high-dimensional cell morphology and morphodynamics in 2D latent space

Talks

- 2024 **APS March Meeting, Minneapolis, MI.**
On the Topology and Dynamics of Breast Cancer Cell Morphologies
- 2025 **Oregon State University AI Week, Corvallis, OR.**
The Latent Representation of Breast Cancer Cell Shapes
- 2025 **APS March Meeting, Anaheim, CA.**
Visualizing Cellular Context: Improved Interpretability through Latent Embeddings of Cancer Cell Morphology

Skills

- Code ARM Assembly, x86 Assembly, IEC 61131-3, C, C++, Rust, Python, Lisp, Clojure
- HDL Verilog and VHDL Experience
- Markup HTML, Markdown, Org, \LaTeX
- Software Git, Emacs, Neovim, openBLAS, LAPACK, PyTorch, Tensorflow, Docker, Gitea Actions
- Git <https://git.ccrl.dev/> and <https://github.com/TerminalCursor/>