Michael Lingelbach
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Education

- **Stanford University** Stanford, CA
  Ph.D. Computational Neuroscience - Stanford Vision and Learning Lab *2018 - Present*
  - Regina Casper Fellow

- **University of Virginia** Charlottesville, VA
  B.Sc. Chemistry *2011 - 2015*
  - GPA: 3.98/4.0
  - Graduated with distinction as a member of the Raven Honor Society

Research and Work Experience

- **Stanford Vision and Learning Lab - Stanford University** Palo Alto, CA
  Graduate Student *Summer 2020 - Present*
  - Co-advised by Dr. Jiajun Wu and Dr. Fei-Fei Li
  - Authored five papers submitted to NeurIPS, ICLR, Cognitive Science, ICRA

- **Bock Lab - Janelia Research Campus** Ashburn, VA
  Janelia Undergraduate Scholar *June 2015 - August 2015*
  - Developed Python software packages for converting serialized skeletal reconstructions of the *Drosophila* mushroom body derived from transmission electron microscopy to directed graphs
  - Implemented a graph-based substructure pattern mining algorithm to quantify circuit motifs associated with dopaminergic feedback to the mushroom body output neuron-kenyon cell interface
  - Presented lecture on my research at the Janelia Undergraduate Scholar Symposium and poster session

Publications

- Michael John Lingelbach, Damian Mrowca, Nick Haber, Li Fei-Fei, and Daniel LK Yamins. "Towards Curiosity-Driven Learning of Physical Dynamics". In: *ICML Workshop* (2020)

- Chengshu Li*, Fei Xia*, Roberto Martín-Martín*, Michael Lingelbach, Sanjana Srivastava, Bokui Shen, et al. "iGibson 2.0: Object-centric simulation for robot learning of everyday household tasks". In: *Conference on Robot Learning* (2021)

- Sanjana Srivastava*, Chengshu Li*, Michael Lingelbach*, Roberto Martín-Martín*, Fei Xia, Kent Vainio, et al. "BEHAVIOR: Benchmark for Everyday Household Activities in Virtual, Interactive, and Ecological Environments". In: *Conference on Robot Learning* (2021)

- Chuang Gan, Jeremy Schwartz, Seth Alter, Martin Schrimpf, James Traer, Julian De Freitas, et al. "Threedworld: A platform for interactive multi-modal physical simulation". In: *NeurIPS 2021 Datasets and Benchmarks Track* (2021)

- George Kachergis, Samaher Radwan, Bria Long, Judith Fan, Michael Lingelbach, Daniel M Bear, et al. "Predicting children's and adults' preferences in physical interactions via physics simulation". In: *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.* (2021)

- Barbara Calabrese, Steven Jones, Yoko Yamaguchi-Shiraishi, Michael J Lingelbach, Uri Manor, Tatyana M Svitkina, et al. "INF2-mediated actin filament reorganization confers intrinsic resilience to neuronal ischemic injury". In: *bioRxiv* (2021)

Awards

- **Stanford Graduate Fellow:** The multi-year Stanford Graduate Fellowship in Science and Engineering (SGF) supports exceptional incoming and continuing doctoral students in the natural and social sciences, education, engineering, and the basic sciences in the School of Medicine.

- **Janelia Undergraduate Scholar:** One of 18 scholars from a pool of 400 international applicatants awarded full funding for a summer research program at the Janelia Research Campus

- **Echols Ingrassia Family Research Grant:** Awarded $1500 to fund research into deploying optogenetics to accelerate network development in hiPSC derived neurons via introduction of exogenous patterned network stimulation

- **Rodig Scholar:** One of two student awarded a $4000 summer research award for the development of microfluidic devices for the culture of human induced pluripotent stem cell derived neurons

- **Echols Scholar:** Selected for the University of Virginia's honors program as one of the top 5% of the class

- **Raven Society:** Selected as one of the top 2% of the class for membership of the oldest honor society at the University based on academic achievement, student leadership, and contribution to the University community

- **University of Virginia Excellence Award - Chemistry Department:** Selected as one of four students to be honored for academic achievement at graduation by the department

- **Intermediate honors:** Awarded to the top 20% of students in the College of Arts and Sciences based on academic performance

Skills

- **Applied Computation and Mathematics:** Machine Learning Frameworks (TensorFlow, PyTorch), probabilistic programming (Pyro, Edward, PYMC3), Data Mining, Linear Algebra, Data Structures

- **Programming Languages:** Python, Julia, Lua, C/C++, CUDA, Matlab