

Alexander Fung

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Pre-doctoral researcher interested in mathematical principles of low-level neural computations.

EDUCATION

2019 – 2023	B.S. in Electrical Engineering & Computer Science B.A. in Molecular & Cellular Biology GPA: 3.99	UNIVERSITY OF CALIFORNIA, BERKELEY
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PROFESSIONAL EXPERIENCE

2023 – present	Research Assistant <i>Fedorenko Lab McGovern Institute for Brain Research</i> <ul style="list-style-type: none">Computational and neuroimaging approaches investigating the neural basis of language.	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
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2022 – 2023	Undergraduate Researcher <i>Bouchard Lab Lawrence Berkeley National Laboratory</i> <ul style="list-style-type: none">Learning stimulus-evoked response properties in rat auditory cortex.	BERKELEY LAB
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2021 – 2023	Undergraduate Researcher <i>Song Lab Department of Electrical Engineering & Computer Science</i> <ul style="list-style-type: none">Characterizing of protein folding patterns, unsupervised protein structure prediction.	UNIVERSITY OF CALIFORNIA, BERKELEY
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2021	Research Intern <i>Glenn Research Center Space Communications and Navigation Program</i> <ul style="list-style-type: none">Learning signal reliability metrics for delay-tolerant networks.	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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HONORS & AWARDS

2024	SPOT Award	MCGOVERN INSTITUTE FOR BRAIN RESEARCH
2023	NSF Graduate Research Fellowship*	NATIONAL SCIENCE FOUNDATION
2021	Intern Spotlight	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
2021	Leslie Lipson Essay Prize	UNIVERSITY OF CALIFORNIA, BERKELEY
2019	HealthHack \$10,000 Grand Prize	SACRAMENTO SCHOOL OF AI

*Declined.

PUBLICATIONS

Papers

1. **Fung, A.***, Koehl, A.*, Jagota, M., Song, Y. (2022). The Impact of Protein Dynamics on Residue-Residue Co-evolution and Contact Prediction. Preprint.
2. Dudukovich, R., Gormley, D., Kancharla, S., Wagner, K., Short, R., Brooks, D., Fantl, J., Janardhanan, S., **Fung, A.** (2022). Towards the Development of a Multi-Agent Cognitive Networking System for the Lunar Environment. *IEEE Journal of Radio Frequency Identification*.
3. Koehl, A.* , Jagota, M.* , Erdmann-Pham, D.* , **Fung, A.**, Song, Y. (2021). Transferability of Geometric Patterns from Protein Self-Interactions to Protein-Ligand Interactions. *Pacific Symposium on Biocomputing*.

Posters

4. **Fung, A.***, Zhuang, C.* , Piantadosi, S., Andreas, J., Fedorenko, E. (2024). Word-Order Error Detection Helps Data-Efficient Language Models Learn Syntax [Poster Presentation]. *Cognitive Computational Neuroscience 2024*.
5. Kean, H., **Fung, A.**, Rule, J., Tenenbaum, J., Piantadosi, S., Fedorenko, E. (2024). Deductive and Inductive Processing Dissociate in the Human Brain [Poster Presentation]. *Cognitive Computational Neuroscience 2024*.

*Equal contribution.