Stanford

Sophia Sanborn

Assistant Professor (Research)of Ophthalmology and, by courtesy, of Neurology

Bio

ACADEMIC APPOINTMENTS

- Assistant Professor-Research, Ophthalmology
- Assistant Professor-Research (By courtesy), Neurology and Neurological Sciences
- Member, Wu Tsai Neurosciences Institute

Publications

PUBLICATIONS

- **Functional bipartite invariance in mouse primary visual cortex receptive fields.** *Nature neuroscience*
  Ding, Z., Tran, D., Ponder, K., Ding, Z., Froebe, R., Ntanavara, L., Fahey, P. G., Cobos, E., Baroni, L., Diamantaki, M., Wang, E. Y., Chang, A., Papadopoulos, et al
  2026
- **A wireless subdural-contained brain-computer interface with 65,536 electrodes and 1,024 channels** *NATURE ELECTRONICS*
  Jung, T., Zeng, N., Fabbri, J. D., Eichler, G., Li, Z., Zabeh, E., Das, A., Willeke, K., Wingel, K. E., Dubey, A., Huq, R., Sharma, M., Hu, et al
  2025
- **Beyond Euclid: an illustrated guide to modern machine learning with geometric, topological, and algebraic structures.** *Machine learning: science and technology*
  Papillon, M., Sanborn, S., Mathe, J., Cornelis, L., Bertics, A., Buracas, D., J Lillemark, H., Shewmake, C., Dinc, F., Pennec, X., Miolane, N.
  2025; 6 (3): 031002
- **Dual-feature selectivity enables bidirectional coding in visual cortical neurons.** *bioRxiv : the preprint server for biology*
  Franke, K., Karantzas, N., Willeke, K., Diamantaki, M., Ramakrishnan, K., Elumalai, P., Restivo, K., Fahey, P., Nealley, C., Shinn, T., Garcia, G., Patel, S., Ecker, et al
  2025
- **Stable, chronic in-vivo recordings from a fully wireless subdural-contained 65,536-electrode brain-computer interface device.** *bioRxiv : the preprint server for biology*
  Jung, T., Zeng, N., Fabbri, J. D., Eichler, G., Li, Z., Zabeh, E., Das, A., Willeke, K., Wingel, K. E., Dubey, A., Huq, R., Sharma, M., Hu, et al
  2025
- **Exploring the hierarchical structure of human plans via program generation.** *Cognition*
  Correa, C. G., Sanborn, S., Ho, M. K., Callaway, F., Daw, N. D., Griffiths, T. L.
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