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- Organizations: UC Berkeley/Georgia Tech
- Lead Investigator: Bruno Olshausen, UCB
- Current Team Members:
  - Chris Rozell, Georgia Tech (electrical engineering)
  - Fritz Sommer, UC Berkeley (neuroscience)
  - Trevor Darrell, UC Berkeley (computer vision)

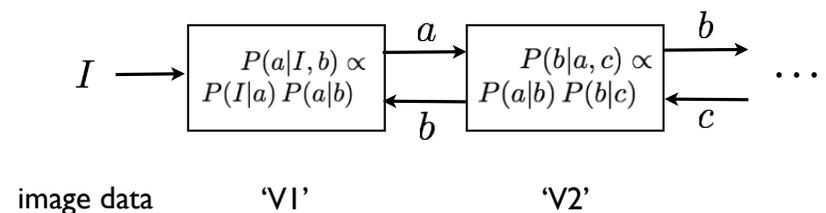
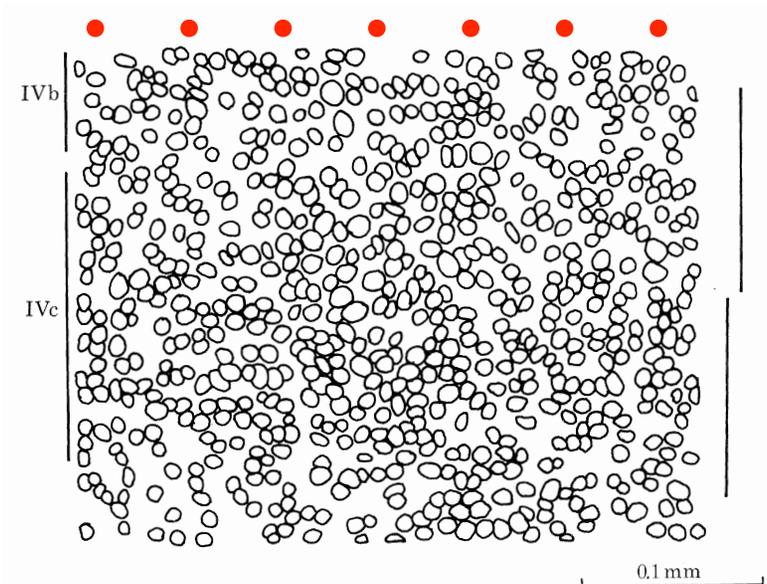


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## Research areas of interest

- Sparse coding models of V1 informed by fine-grained anatomy and physiology.
- Models of hierarchical inference in the thalamo-cortical visual pathway.





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## **Unique qualifications and capabilities**

- Sparse coding models and unsupervised learning algorithms.
- Biophysically realistic, mechanistic models.
- Analysis of neurophysiological data.
- Bayesian inference in generative models.
- Signal processing and compressed sensing.
- Computer vision and image analysis.



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## Needs

- Connectomics data on V1: thalamo-cortical projections, cortical microcircuits, and feedback projections from V2.
- Large-scale physiological recording data from V1 populations, especially layer 4 – e.g., two-photon  $\text{Ca}^{++}$  imaging.
- Expertise in handling and interpretation of connectomics data.



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# Contact Information

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