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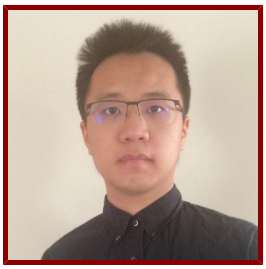

Xuehao Ding

Ph.D. Student in Applied Physics, admitted Autumn 2018

Bio

EDUCATION AND CERTIFICATIONS

- B. S., School of Physics, Peking University , Physics (2018)

LINKS

- My personal website: https://sites.google.com/view/maxsnow
- My Lab Site: https://baccuslab.stanford.edu/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am an Applied Physics PhD candidate in Baccus lab co-advised by Surya Ganguli. My research focuses on building encoding models of the retina with various biophysical properties especially for natural scenes and answering scientific questions based on computational models. I believe that the core problem in the field of sensory systems is to understand the representation manifold and I am achieving this goal with methods of differential geometry, deep learning, statistical physics, etc.

LAB AFFILIATIONS

- Stephen Baccus, Baccus's lab (1/7/2019)

Publications

PUBLICATIONS

- **Information Geometry of the Retinal Representation Manifold.** *bioRxiv : the preprint server for biology*
  Ding, X., Lee, D., Melander, J. B., Sivulka, G., Ganguli, S., Baccus, S. A.
  2023
- **A mechanistically interpretable model of the retinal neural code for natural scenes with multiscale adaptive dynamics.** *Conference record. Asilomar Conference on Signals, Systems & Computers*
  Ding, X., Lee, D., Grant, S., Stein, H., McIntosh, L., Maheswaranathan, N., Baccus, S.
  2021; 2021: 287-291
- **A mechanistically interpretable model of the retinal neural code for natural scenes with multiscale adaptive dynamics** *2021 55th Asilomar Conference on Signals, Systems, and Computers*
  Ding, X., Lee, D., Grant, S., Stein, H., McIntosh, L., Maheswaranathan, N., Baccus, S. A.
  2021
- **Measurement-driven single temperature engine** *PHYSICAL REVIEW E*
  Ding, X., Yi, J., Kim, Y., Talkner, P.
  2018; 98 (4)