

## **Advance Theory Seminar Spring 2020**

Organized by Rainer Engelken

**Meetings:** Wednesdays, 10.15 - 11.45am

See course website for updated schedule

### **Control Theory and Reinforcement Learning**

- 1/29/2020      Examples of control theory in neuroscience  
(Bettina Hein, Laureline Logiaco)
  
- 2/5/2020      Methods in control theory  
(Bettina Hein, Laureline Logiaco)
  
- 2/12/2020     Reinforcement learning  
(James Murray)
  
- 2/19/2020     From optimal control theory to reinforcement learning  
(Samuel Muscinelli)
  
- 2/26/2020     COSYNE Break
  
- 3/4/2020      COSYNE Break

### **Latent Variable Models**

- 3/11/2020      Hidden Markov Models  
(Matt Whiteway)
  
- 3/18/2020      Latent Dynamical Systems  
(Josh Glaser)
  
- 3/25/2020      Gaussian Processes  
(Rainer Engelken)
  
- 4/1/2020       Modeling of Behavior  
(Juri Minxha)
  
- 4/8/2020       Hackathon on Latent Variable Models

### **Miscellaneous**

- 4/15/2020      Phenomenological Renormalization Group  
(Serena Di Santo)
  
- 4/22/2020      Additional and diverse perspectives in neuroscience  
(Laureline Logiaco, Matt Whiteway, Juri Minxha)

4/29/2020

Introduction to replica theory  
(SueYeon Chung)

5/6/2020

Classification and Geometry of General Perceptual Manifolds  
(SueYeon Chung)