

Special Virtual Edition, Summer/Fall 2020

Meetings: Wednesdays, 10.00 am

Location: Zoom, contact re2365@columbia.edu for details

Schedule:

- 7/15/2020 Time-dependent mean-field theory for mathematical streetfighters (**Rainer Engelken**)
- 7/22/2020 Predictive coding in balanced neural networks with noise, chaos, and delays, [Article](#) (**Everyone**)
- 7/29/2020 A solution to the learning dilemma for recurrent networks of spiking neurons, [Article](#) (**Everyone**)
- 8/5/2020 Canceled
- 8/12/2020 Artificial neural networks for neuroscientists: A primer, [Article](#) (**Robert Yang**)
- 8/19/2020 A mechanism for generating modular activity in the cerebral cortex (**Bettina Hein**)
- 8/26/2020 Dynamic representations in networked neural systems, [Article](#) (**Kaushik Lakshminarasimhan**)
- 9/2/2020 Network principles predict motor cortex population activity across movement speeds (**Shreya Saxena**)
- 9/9/2020 Modeling neurophysiological mechanisms of language production (**Serena Di Santo**)
- 9/16/2020 How single rate unit properties shape chaotic dynamics and signal transmission in random neural networks, [Article](#) (**Samuel Muscinelli**)
- 9/23/2020 Shaping dynamics with multiple populations in low-rank recurrent networks, [Article](#) (**Laureline Logiaco**)
- 9/30/2020 Deep Graph Pose: a semi-supervised deep graphical model for improved animal pose tracking, [Article](#) (**Anqi Wu**)
- 10/7/2020 Decoding and mixed selectivity, [Article](#), [Article](#), [Article](#) (**Fabio Stefanini**)
- 10/14/2020 Theory of gating in recurrent neural networks, [Article](#), [Article](#) (**Kamesh Krishnamurthy**)
- 10/21/2020 Decentralized motion inference and registration of neuropixel data (**Erdem Varol**)

- 10/28/2020 Decision, interrupted (**NaYoung So**)
- 11/4/2020 Abstract rules implemented via neural dynamics (**Kenny Kay**)
- 11/11/2020 Canceled for Holiday
- 11/18/2020 "Rodent paradigms for the study of volition (free will)" (**Cat Mitelut**)
- 11/25/2020 Gaussian process inference (**Geoff Pleiss**)
- 12/2/2020 Canceled
- 12/9/2020 Structure and variability of optogenetic responses in multiple cell-type cortical circuits (**Agostina Palmigiano**)
- 12/16/2020 Manifold GPLVMs for discovering non-Euclidean latent structure in neural data, [Article](#) (**Josh Glaser**)