Gulf Coast Consortium for Theoretical and Computational Neuroscience

a research consortium of the Gulf Coast Consortia for Quantitative Biomedical Sciences

13th Annual GCC Conference on Theoretical and Computational Neuroscience

Agenda

Thursday, February 11
UT Medical School, 6431 Fannin, Room MSB 3.0001.

4:00 pm — Keynote Talk:
Using Neural Codes to Develop New Kinds of Prosthetic Devices
Sheila Nirenberg, PhD, Professor of Physiology and Biophysics, Weil Medical College of Cornell University

Friday, February 12
BioScience Research Collaborative, 6500 Main, First Floor Auditorium

8:30 am — Poster Set-up and light breakfast

9:00 — Welcome

9:10-10:00 — *Microcircuits for Short-term Memory Storage and Neural Integration*
Mark Goldman, PhD, Professor, Neurobiology, Physiology and Behavior UC-Davis Center for Neuroscience

10:00-10:20 — *Inference by Reparameterization using Neural Population Codes*
Rajkumar Vasudeva Raju, Electrical and Computer Engineering, Rice University

10:20-10:40 — Coffee/Networking Break

10:40-11:20 — *Symmetries Constrain Dynamics in a Family of Balanced Neural Networks*
Andrea Barreiro, PhD, Assistant Professor, Mathematics, Southern Methodist University

11:20-12:20 — Poster Session and Poster Judging

12:20-1:00 — Lunch and Posters

1:00-1:50 — *The Emergence of Symbolic Cognition from Sensory-Motor* Dynamics
Randall O'Reilly, PhD, Professor, Psychology and Neuroscience, University of Colorado Boulder

1:50-2:10 — *Three Principles Governing the Assembly of Cortical Microcircuit*
Xiaolong Jiang, PhD, Assistant Professor, Neuroscience, Baylor College of Medicine

2:10-2:25 — Coffee/Networking Break

2:25-3:05 *A Probabilistic Theory of Deep Learning: How Convnets Work and why they are Relevant for Neuroscience*
Ankit Patel, PhD, Assistant Professor, Neuroscience, Baylor College of Medicine

3:05-3:40 Group Discussion

3:40 - 3:50 Poster Awards and Closing Remarks

4:00 - 5:00 Keynote/Keck Seminar Speaker:
Listening with Two Ears
Catherine Carr, PhD, Professor, Biology, University of Maryland, College Park

5:00 - 5:45 Reception