

KITP Conference: Timescales of Plasticity and Underlying Mechanisms

(Jul 10-13, 2023)

Coordinators: Jozsef Fiser, Mate Lengyel, and Jennifer Raymond

Monday, Jul 10, 2023

Synaptic cooperativity/independence, Chair: Peter Latham (UCL)

- 8:50am Lars Bildsten (KITP) [Welcome\[Video\]](#)
- 9:00am Thomas O'Dell (UCLA Medical) [Behavioral Timescale Cooperativity and Competitive Synaptic Interactions\[Video\]\[CC\]](#)
- 9:45am Mathieu Letellier (U Bordeaux) [Local translation of synaptopodin as a synaptic-tagging mechanism for input-specific homeostatic plasticity\[Video\]\[CC\]](#)
- 10:30am **Morning break**
- 11:00am All participants [Perspectives & Discussion: Synaptic cooperativity/independence\[Slides\]\[Video\]\[CC\]](#)
- 12:30pm **Lunch break**

Behaviorally relevant synaptic plasticity rules, Chair: Johnatan Aljadeff (UCSD)

- 2:00pm Christine Grienberger (Brandeis U) [A directed form of synaptic plasticity produces experience-dependent hippocampal representations\[Video\]\[CC\]](#)
- 2:45pm Jennifer Raymond (Stanford) Adaptive tuning of the timing rules for plasticity to circuit properties[Embargoed]
- 4:00pm **Afternoon break**
- 4:00pm Alison Barth (CMU) [Input- and Target-Specific Synaptic Plasticity in Neocortical Networks During Sensory Learning\[Video\]\[CC\]](#)
- 4:45pm All participants [Perspectives & Discussion: Behaviorally relevant synaptic plasticity rules\[Video\]\[CC\]](#)
- 5:30pm **RECEPTION**
- 6:00pm **SPECIAL EVENTS DINNER**
- 8:00pm **SHUTTLE TO BWSCI**

Tuesday, Jul 11, 2023

Metaplasticity, Chair: Cristina Savin (NYU)

- 9:00am Rich Kramer (UC Berkeley) [Interrogating the role of GABA_A receptors in meta-plasticity\[Video\]\[CC\]](#)
- 9:45am Cliff Abraham (U Otago) [Pathway-specific TNF-mediated metaplasticity in the hippocampus\[Slides\]\[Video\]\[CC\]](#)
- 10:30am **Morning break**
- 11:00am Dean Buonomano (UCLA) [Decoding time with long-term plasticity of short-term plasticity\[Video\]\[CC\]](#)
- 11:45am All participants [Perspectives & Discussion: Metaplasticity\[Video\]](#)
- 12:30pm **Lunch break**
- 2:00pm **SHUTTLE TO BWSCI**

Wednesday, Jul 12, 2023

Systems Consolidation, Chair: Peter Dayan (MPI-BK)

- 9:00am Leslie Griffith (Brandeis U) [Diverse mechanisms and time-scales of local CaMKII synthesis\[Video\]\[CC\]](#)

9:45am Steve Lisberger (Duke)	Principles of operation of a cerebellar learning circuit[Slides][Video][CC]
10:30am	Morning break
11:00am Yasunori Hayashi (Kyoto U)	Stepwise synaptic plasticity events drive the early phase of memory consolidation[Slides][Video][CC]
11:45am Azahara Oliva (Cornell)	Hippocampal network mechanisms of memory consolidation[Video][CC]
12:30pm	Lunch break
	Discussion
2:00pm All participants	Perspectives & Discussion: Systems consolidation[Video][CC]
3:30pm	Afternoon break
4:00pm All participants	General discussion: What data are needed to drive conceptual advances about learning?[Video]
5:30pm	RECEPTION
6:00pm	SPECIAL EVENTS DINNER
8:00pm	SHUTTLE TO BWSCI

Thursday, Jul 13, 2023

Memory updating, Chair: Andrew Saxe (UCL)

9:00am Megha Seghal (UCLA)	Role of dendritic plasticity in memory organization[Slides][Video][CC]
9:45am Mate Lengyel (Cambridge)	Uncertainty-Based Memory Updating[Video][CC]
10:30am	Morning break
11:00am Janine Kwapis (Penn State)	Molecular mechanisms of memory updating in young and old mice[Video][CC]
11:45am All participants	Perspectives and Discussion: Memory updating[Video][CC]
	LUNCH
2:00pm	CONFERENCE END SHUTTLE TO BWSCI *Also available to SB Airport and SB Airbus, Goleta location (See Registration Desk BEFORE THURSDAY to sign up.)