



Kick-Off Meeting

PP2205 - Evolutionary Optimization of Neuronal Processing

October 12th - 14th 2020

Monday 12th

09:00	Welcome / Introduction
09:30	Benda, Grewe, Lindner Weakly nonlinear interactions in an electrosensory cocktail party problem
10:00	Jösch, Kondrashov Evolution of Sensorimotor Transformation Across Diptera
10:30	Break
11:00	Arrenberg, Hafed Saccadic suppression: from zebrafish to primates
11:30	Nieder, Mormann Deciphering the neuronal codes for convergently evolved working memory functions in humans, monkeys, and crows
12:00	Nowick, Wernet The evolutionary mechanisms optimizing neural circuit structure and function for skylight navigation across insect species
12:30	End
16:30	Marion Silies Evening Colloquium: Visual processing mechanisms in dynamically changing contexts

Tuesday 13th

09:00	Memmesheimer Modeling dynamics, function and evolution of earliest nervous systems
09:30	Priesemann, Wibral Evolutionary Convergence of Hierarchical Information Processing
10:00	Ernst, Kreiter Evolving to be flexible - optimizing task-dependent information processing in the visual system
10:30	Break
11:00	Harzsch, Nawrot, Rybak Evolutionary specialization of neuronal core circuits in arthropod olfactory systems: structure and function of convergence/divergence in crustaceans versus insects
11:30	Egger, Sachse Spatially anisotropic lateral inhibition: Convergent circuit designs in the insect AL and vertebrate OB
12:00	Clemens, Hennig The evolution of phenotype, computation, and network mechanism of song recognition in crickets
12:00	End
17:00	George Striedter Evening Colloquium: Evolutionary Innovations: from Stamp Collecting to Theory (interactive forum)

Wednesday 14th

09:00	Wicher, Kittel Task-dependent orchestration of insect OSN performance
09:30	Rotter, Kampa Plug and play integration of a new sensory channel in evolution – experiment and theory
10:00	Grunwald, Portugues Identification of conserved circuit logic in temperature navigation behavior in fish and fly
10:30	Break
11:00	Wolf, Huber Through the eyes of a mouse lemur – understanding the evolutionary emergence of visual cortical columns through cellular imaging, optimization theory, and visual behavior in a miniature primate
11:30	Güntürkün, Pusch, Rose A three-dimensional functional investigation of the avian visual system - Do amniotes share a canonical forebrain circuit?
12:00	Final Discussion
13:00	End