IST AUSTRIA
Institute of Science and Technology

Life Sciences Seminar

The eclectic cerebellum - from neurons to circuits and behavior

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Host: Sandra Siegert

The cerebellum controls both motor coordination and higher cognitive function, and cerebellar dysfunction can result in various disorders, ranging from ataxia to autism-like symptoms. To understand how cerebellum regulates behavior, a detailed understanding of local computations within the cerebellum, and long-range connections between the cerebellum and its target regions are warranted. My present research focuses on the former. I recently identified a ubiquitous interneuron in the cerebellar cortex that due to its unique position within the circuit is poised to expand computational flexibility in the cerebellar cortex. In a second study, I investigated the mechanisms that underlie the integration of multisensory information in the input layer of the cerebellar cortex and behavior. I found that genetically disrupting context-specific neuromodulation results in behavioral abnormalities, including anxiety and social deficits, while not affecting motor performance. My future research will elucidate how neuromodulation controls cerebellar processing during physiological challenges, and to identify the target brain regions that enable the cerebellum to control behavior in health and disease.

Tuesday, March 5, 2019 09:00am - 10:00am

IST Austria Campus Mondi Seminar Room 2, Central Building

This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage: https://ist.ac.at/en/campus/how-to-get-here/ The IST Shuttle bus is marked IST Shuttle (#142) and has the Institute Logo printed on the side.