

IGSN - SYMPOSIUM

Monday, October 25th 2021 • 15.00 (3 pm)

Auditory perception: the meaning of sounds, their relevance in decision making and crossmodal integration in healthy and disease individuals

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Decisions and Circuits in Auditory Perception

Our understanding of brain function is built on fundamental studies that relate single-neuron spiking activity to sensation, perception, and behavior. These studies have illuminated important contextual phenomena, such as surround suppression in the visual and auditory systems, and computational principles such as efficient coding¹. However, despite this rich history, it has become clear that our understanding of the neuronal bases of perception and behavior depends on identifying and clarifying the information processing within neuronal circuits that operate on different spatial scales. At one spatial scale, the inter-laminar connectivity neurons defines the circuitry of a cortical column. At larger spatial scales, feedforward and feedback inter-areal cortical circuitry generates neurons with progressively more complex responses properties. In this talk, I will highlight the flow of information underlying auditory decisions across different cortical areas of the rhesus cortex. I will also highlight new techniques and results that identify cortical circuits that exist within cortical columns and how this circuitry changes across areas.

Host:

GABRIELE RUSSO

Department of Neurophysiology, Faculty of Medicine, Ruhr Universität Bochum

Virtual guests are welcome!

