

Central Control of the Legs in the Locust with a Historical Perspective

Daniel Knebel, Max Planck Institute for Chemical Ecology in Jena

In this seminar, we will discuss the central mechanisms underlying motor behavior from two perspectives: (1) the interconnections of leg-motor centers in the locust's nervous system will serve as a biological example to (2) historical changes in the research of motor control in neurobiology and neuroscience. We will examine whether and how the output of the locust's isolated nervous system corresponds with its walking gaits. In parallel, we will consider how changes in scientific frameworks affect how we understand and study the nervous system, specifically its functional independence of sensory inputs. Together, these two lines of investigation will illuminate the roles of central mechanisms in motor control and the research of the nervous system.