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Molecular Mechanisms of Neuronal Connectivity

Tuesday, 15 September 2026

Paul-Ehrlich-Hörsaal, Virchowweg 4, CCM

14:00

Reverse-engineering *Drosophila* action selection and movement control

A shared goal of neuroscience and robotics is to understand how systems can be built to move effectively and autonomously through the world. However, state-of-the-art algorithms for selecting and executing limb-dependent behaviors in robots are still quite primitive compared with the neural controllers used by animals. To inform the design of artificial systems, we are investigating how the fly, *Drosophila melanogaster*, selects and controls its behaviors and how this process can be modulated by learning. I will discuss how we are pursuing this research program through a combination of experimentation and computational modeling.

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