



# CELLULAR & SYSTEMS NEUROSCIENCE SEMINAR SERIES

Co-sponsored by MCDB, N&B, NRI, and DYNs



**Next Speaker:**  
**Wednesday, November 30th**  
**3PM | BioE 1001**

## **Mechanisms of Adaptive Behavior, from Receptors to Circuits**

Olfactory systems are continuously barraged with odors, varying widely in their structure, physicochemical properties, and concentration. Contending with such a complex chemical landscape poses a distinct challenge to the fundamental flexibility of the nervous system. Our lab has been using olfaction as a window into the mechanisms of flexible and adaptive behavior, leveraging the concise olfactory circuits of *Drosophila* to reveal how animals can detect, perceive, and navigate the vast chemical world. By applying a multidisciplinary perspective to study olfaction, from the structure of olfactory receptors to the behavioral algorithms of odor navigation, we aim to gain a mechanistic understanding of how behaviors can be flexibly modified over different timescales at the level of molecular, cellular, and circuit motifs.



**Professor Vanessa Ruta**  
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**and Behavior**  
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