

# Quantitative Behavior: Understanding what animals do and how brains control them

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I will present recent work from my group and our collaborators on the use of unsupervised machine learning to define and quantify stereotyped behaviors performed by animals. Through the use of real-time optogenetic readout and control of neuronal activity, we have made progress on understanding the systems that convert external stimuli into behavioral changes and those that allow animals to dynamically select from a suite of hundreds of unique actions.

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