

## The functional role of oscillatory dynamics in neocortical circuits: a computational perspective

*Friday 10 November 2023 11:00 (45 minutes)*

Biological neuronal networks exhibit hallmark features such as oscillatory dynamics, heterogeneity, modularity, and conduction delays. To investigate which of these features support computations or are epiphenomena, we study recurrent networks of damped harmonic oscillators and endow them with such biological features. Analyses of network dynamics uncovered a novel, powerful computational principle and provided plausible a posteriori explanations for features of natural networks whose computational role has remained elusive for a long time.

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