Seminario

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Metastable dynamics in cortical circuits: a novel perspective on neural coding.

Abstract: Metastable brain dynamics are characterized by abrupt, jump-like modulations so that the neural activity in single trials appears to unfold as a sequence of discrete, quasi-stationary 'states'. Metastable activity occurs both in response to an external stimulus and during ongoing, self-generated activity. These spontaneous metastable states are increasingly found to subserve internal representations that are not locked to external triggers, including states of deliberations, attention and expectation. Focusing on metastability allows us to shift our perspective on neural coding from traditional concepts based on trial-averaging to models based on dynamic ensemble representations. Recent theoretical work has started to characterize the mechanistic origin and potential roles of metastable representations. In this talk, I will review recent findings on metastable activity, how it may arise in biologically realistic models, and its potential role for representing internal states as well as relevant task variables.

More details at:
https://www.sciencedirect.com/science/article/pii/S0959438818302198