



## Neurotheory Forum

# Residual population dynamics as a window into neural computation

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**Host: Thijs van der Plas**

Neural activity in frontal and motor cortices can be considered to be the manifestation of a dynamical system implemented by large neural populations in recurrently connected networks. The computations emerging from such population-level dynamics reflect the interaction between external inputs into a network and its internal, recurrent dynamics. Isolating these two contributions in experimentally recorded neural activity, however, is challenging, limiting the resulting insights into neural computations. I will present an approach to addressing this challenge based on response residuals, i.e. variability in the population trajectory across repetitions of the same task condition. A complete characterization of residual dynamics is well-suited to systematically compare computations across brain areas and tasks, and leads to quantitative predictions about the consequences of small, arbitrary causal perturbations.

**Friday, December 4, 2020 03:00pm - 04:00pm**

IST Austria Campus Online



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