



Dr. Viola Priesemann
 Max Planck Research Group Leader
 MPI for Dynamics and Self-Organization
 Göttingen

Spreading dynamics: from neural information flow to COVID-19

physikalisches

Mo. 29.11.21
 16:00 Uhr
go.ur.de/Koll

How does activity spread in living neural networks? And how can we infer the spread of SARS-CoV-2 in a social network - even if only a fraction of all infections is reported?

We recapitulate the basic principles of spreading dynamics, and the role of critical phenomena. We then investigate their role in shaping collective computation in neural networks. Using the same basis, we investigate COVID-19 spread and mitigation strategies. In particular, we demonstrate a tipping point in the test-trace-isolate strategies, which incurs (transient) supra-exponential growth. Avoiding that tipping-point can greatly facilitate the control of COVID-19.

