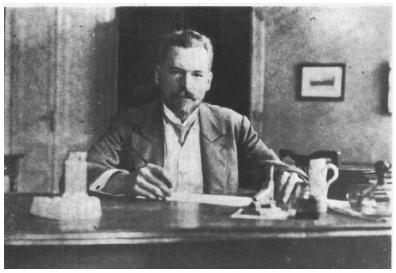

Contribution ID: **21** Type: **Poster**

Clustering of dynamic node states in an adaptive network model

We investigate an adaptive network model describing human smoking behavior incorporating the social processes homophily and induction introduced by Schleussner et al. (Sci Rep 2016). Upon social transition, the smoking prevalence in the model decreases, leaving remaining smokers clustered and marginalized in the network. Intriguingly, the model qualitatively resembles empirical findings. Employing a new measure for the clustering of dynamic node states in networks we study the influence of the locality of node interactions, of the complex contagion process of the node update, and of the homophily during network evolution on the clustering and marginalization of smokers in the network. We find that homophily is the dominant process bringing about clustering.

Summary

Primary author: KASSEL, Johannes A. (MPI for the Physics of Complex Systems)

Co-authors: Dr DONGES, Jonathan F. (Potsdam Institute for Climate Impact Research); Prof. PARLITZ, Ulrich (Max Planck Institute for Dynamics and Self-Organization, Georg August University Göttingen)

Presenter: KASSEL, Johannes A. (MPI for the Physics of Complex Systems)

Session Classification: Session 8