

Theoriekolloquium

Am **4. April 2024** um **14.15 Uhr** im Raum **W2 1-143** hält

Herr Dr. Johannes Zierenberg (Göttingen)

einen Vortrag mit dem Titel

How contact patterns affect the non-equilibrium physics of epidemic outbreaks

The spread of a contagious disease clearly depends on when infected individuals come into contact with susceptible ones. Still, it remains unknown how spatiotemporal contact patterns of interaction affect the non-equilibrium physics of epidemic outbreaks. To shed some light onto this problem, I will present two of our recent studies with complementary perspectives. First, I will present our recent analysis of a large data set with real-world physical proximity to show how the temporal structure of human interactions affects the mean-field statistics of epidemic outbreaks. Second, I will present simulations of a toy model of spatiotemporal mobility - Brownian motion with cyclic resetting - to show that cycloactive interaction can interpolate between the collective dynamics of spatial and mean-field models with non-trivial critical phenomena. I will conclude with my personal perspective on how to include spatiotemporal contact patterns into studies of epidemic outbreaks.

Interessierte sind herzlich eingeladen.

gez. Prof. Dr. Alexander Hartmann