



Einladung zum Oberseminar Stochastik

Am Mittwoch, 29.10.2025 um 17:45 Uhr, im Seminarraum 1 (Raum 005)
der Abteilung Mathematik, Weyertal 86–90, 50931 Köln, spricht:

Dr. Marco Seiler
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zum Thema

The Offended Voter Model

Abstract

In this talk we discuss a variant of the voter model on a co-evolving network in which interactions of two individuals with differing opinions only lead to an agreement on one of these opinions with a fixed probability q . Otherwise, with probability $1 - q$, both individuals become offended in the sense that they never interact again, i.e. the corresponding edge is removed from the underlying network. Eventually, these dynamics reach an absorbing state at which there is only one opinion present in each connected component of the network. If globally both opinions are present at absorption we speak of “segregation”, otherwise of “consensus”. We show that segregation and a weaker form of consensus both occur with positive probability for every $q \in (0, 1)$ and that the segregation probability tends to 1 as $q \rightarrow 0$. Furthermore, we establish that, if $q \rightarrow 1$ fast enough, with high probability the population reaches consensus while the underlying network is still densely connected. If time allows we briefly discuss results from simulations to assess the obtained results and to discuss further research directions.

This talk is based on joint work with Raphael Eichhorn and Felix Hermann.

Interessenten sind herzlich eingeladen.

Die Dozenten der Stochastik