

Perlen-Kolloquium

Der Fachbereich Mathematik lädt zu folgendem Vortrag ein:

**Prof. Eitan Tadmor
(University of Maryland & ETH-ITS)**

*Self-organized dynamics: from emergence of
consensus to social hydrodynamics*

Donnerstag, 2. März 2017, 16.15 Uhr
im Seminarraum 2 im 5. OG (Spiegelgasse 5).
Anschliessend offerieren wir einen Apéro.
Gäste sind herzlich willkommen!

Zusammenfassung: Self-organization is observed in systems driven by the “social engagement” of agents with their local neighbors. Prototypical models are found in opinion dynamics, flocking, self-organization of biological organisms, and rendezvous in mobile networks.

We discuss the emergent behavior of such systems. Two natural questions arise in this context. The underlying issue of the first question is how different rules of engagement influence the formation of clusters, and in particular, the emergence of ‘consensus’. Different paradigms of emergence yield different patterns, depending on the propagation of connectivity of the underlying graphs of communication. The second question involves different descriptions of self-organized dynamics when the number of agents tends to infinity. It lends itself to “social hydrodynamics”, driven by the corresponding tendency to move towards the local means.

We discuss the global regularity of social hydrodynamics for sub-critical initial configurations.