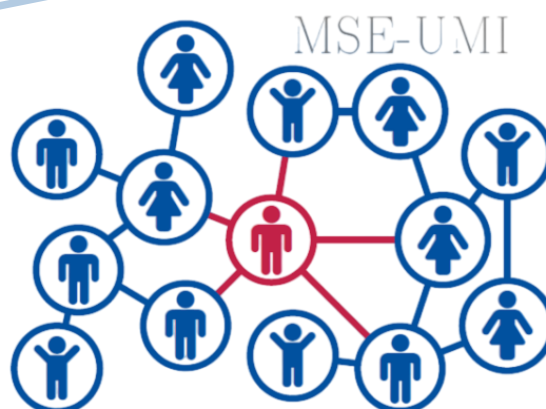




Unione
Matematica
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UMI-MSE Online Seminars

Advances in Socio-Epidemic Mathematical Modelling



February 8, 2024



17:00 CET



Hosted on Zoom

Eitan Tadmor, University of Maryland

Emergent Behavior in Collective Dynamics

A fascinating aspect of collective dynamics is self-organization of small-scale interactions into large-scale patterns. It is a characteristic feature of “social particles” which actively probe the environment and emerge into clusters. In different contexts these clusters take the form of flocks, swarms, consensus, synchronized states etc.

In this talk I will survey recent mathematical developments in alignment dynamics driven by different protocols of pairwise communication kernels. A main question of interest is how different kernels affect the large-time, large-crowd emergent dynamics. In particular, we discuss short- vs. long-range interactions, models anticipation, multi-species dynamics, and the role of pressure away thermal equilibrium.



<https://mseumi.wordpress.com/online-seminars/>

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