



Seminario
on-line

Tuesday July 14, 2020 at 17:00

Hosted on: [Zoom](#)

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The Phase Transition in Random Graphs and Coagulation Processes: a Large Deviation Approach

Prof. Bibbona introduces the seminar.

Abstract

Inhomogeneous random graphs are a natural generalization of the well known Erdős Rényi random graph, where vertices are characterized by a type and edges are independent but distributed according to the type of the vertices that they are connecting. In the sparse regime, these graphs undergo a phase transition in terms of the emergence of a giant component exactly as the classical Erdős Rényi model.

In this talk Dr Andreis will present an alternative approach, via large deviations, to prove this phase transition. This allows a comparison with the gelation phase transition that characterizes some coagulation process and with phase transitions of condensation type emerging in several systems of interacting components.

This is an ongoing joint work with Wolfgang König (WIAS and TU Berlin), Robert Patterson (WIAS) and Heide Langhammer (WIAS).

Biography

Luisa Andreis is a post-doc fellow at WAIS - Weierstrass Institute. Previously, she was research fellow at the University of Padova. She received her PhD in Mathematics from the University of Padova, Italy, in 2017. Her research focuses on probability theory and interacting particle systems. Particularly, she is interested in coagulation processes, condensation, gelation and phase transitions, interacting random walks and scaling limits, reinforced processes, emergence of self-sustained periodic behaviour in cooperative systems, mean-field interacting particle systems and propagation of chaos, large deviations.