

Tuesday 20 February 2024 - Morning Talks

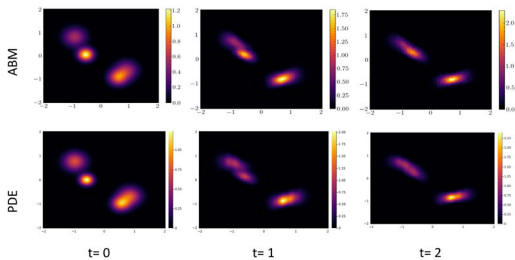
Magnus-Haus Berlin

10:00 Ana Djurdjevac *(FU Berlin)*

From ABM to (S)PDE

Agent based models (ABMs) provide flexible and powerful models that are useful in many application areas such as sociology, molecular dynamics, etc. However, ABMs often have a very large number of agents and as such are often very complex and difficult to handle. In this talk, Djurdjevac will show that we can instead present the dynamics of the system by (stochastic) partial differential equation (S)PDE.

Ana Djurdjevac is a Junior Professor with tenure track and group leader of the group Stochastic and numerical analysis at FU Berlin. Her research interests are analysis and numerical analysis of (stochastic) partial differential equations. ▲



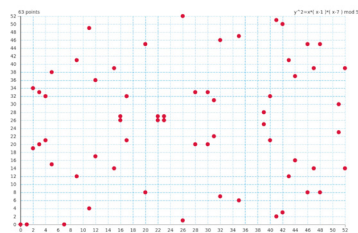
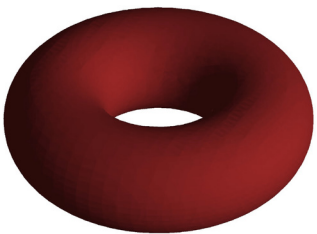
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10:30 Thomas Krämer *(HU Berlin)*

Irregular Varieties: From Geometry to Number Theory

Abelian varieties, the higher-dimensional generalization of elliptic curves, are among the most widely studied objects in algebraic geometry since the 19th century and play a fundamental role in number theory. In this talk, Krämer will explain how they arise from the study of differential forms on irregular varieties, and then discuss some recent results that connect the topology and arithmetic of such varieties over number fields.

Thomas Krämer is Junior Professor for Algebra and Number Theory at HU Berlin. His research lies in algebraic and arithmetic geometry, with a focus on abelian varieties, perverse sheaves and representation theory. ▲



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