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DK Seminar

October 8, 2014, 14:00 -15:30

University of Vienna, Faculty of Mathematics, OMP 1, HS 2

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Modelling Myxobacteria – From Micro to Macro

Abstract: Myxobacteria are soil-living single-cell organisms that can form complex macroscopic patterns such as aggregates and, most fascinating, interacting waves. I will present a Boltzmann-type model based on simple microscopic interaction rules. The focus of this talk will be the interpretation and analysis of a macroscopic system of nonlinear conservation laws which can be obtained from the Boltzmann model by an Euler limit. I will discuss open questions and possible model modifications.