



Conference

Recent advances in Gradient Flows, Kinetic Theory, and Reaction-Diffusion Equations (GradKinReadi21)

Host: Gianluca Favre, Lorenzo Portinale and Bao Quoc Tang

Organisers: Gianluca Favre (University of Vienna) Lorenzo Portinale (IST - Austria) Bao Quoc Tang (University of Graz)

Description of the workshop: The study of gradient flows (GF), kinetic models for reactive gases (KM), as well as reaction-diffusion systems (RDS) have experienced dramatic progress recently. These research topics are complementary, yet overlapping, and there have been more and more works showing their close connections. For instance, the study of the diffusive limit for kinetic systems of reactive gases gives a derivation of RDS with mass action kinetics; or the global well-posedness of a large class of RDS becomes feasible thanks to formal GF structures constructed for those systems. The same theory of generalised gradient-flow structures found applications in many discrete models satisfying detailed-balance conditions, including chemical reaction systems, such as the chemical master equation, the chemical Langevin dynamics, and the reaction-rate equation. Therefore, it is only natural to bring together experts in these respective fields to discuss recent advances as well as to strengthen the existing connections, and this is the main aim of the workshop. This workshop is also a good opportunity for young researchers to expand their potential and to build up possible future collaboration.

List of confirmed speakers: Luca Alasio, Marzia Bisi, Maria Bruna, Martin Burger, Laurent Desvillettes, Amit Einav, Antonio Esposito, Josephine Evans, Julian Fischer, Franca Hoffmann, Angeliki Menegaki, Alexander Mielke, Clément Mouhot, Mark Peletier, Emanuela Radici, Marie-Therese Wolfram

Tue, July 13, 2021 09:00am - Fri, July 16, 2021 01:00pm

Online (Zoom/Wonder.me)



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