Oberseminar
Mathematische
Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

Structure preserving numerical methods for hyperbolic equations

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Structure preservation issues for initial value problems viewed as backward-forward Mean Field Games with matrix-valued density fields

Abstract:

Backward-Forward systems are very common in control theory and in particular in the theory of Mean Field Games (MFG) a la Lasry-Lions. Quite recently, we figured out how the initial value problem for many important PDEs (Burgers, Euler, Hamilton-Jacobi, Navier-Stokes equations, systems of conservation laws with convex entropy, etc...) can be often reduced to a convex minimization problem that can be seen as generalized (variational) MFG involving matrix-valued density fields.

This clearly open the way to many problems of structure preservation at the numerical level. This is a joint work with Joackim Bernier (CNRS, University Nantes) and Fernando Casas (University Jaume I).

via Zoom video conference (request the Zoom link from klingen@mathematik.uni-wuerzburg.de)

Thursday, Nov. 26 at 9:30 am

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. Christian Klingenberg