Oberseminar
Mathematische
Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

Hyperbolic equations - structure preserving methods & other topics

Martin Frank

Karlsruhe Institute of Technology, Germany

Structure-preserving artificial neural networks for moment closures

Abstract:

We present how artificial neural networks can be used to substitute an otherwise costly moment closure. Specifically, we study entropy closures which have many desirable properties (among them guaranteed hyperbolicity, positivity and entropy decay). We will need to construct very specific artificial neural networks that are guaranteed to preserve these advantages. Furthermore, we address the question of data sampling. Several numerical results are shown.

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

Friday, May 13 at 3 pm CET

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. Christian Klingenberg