



Oberseminar Mathematische Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

Sam Krupa

ENS Paris, France

Computer-assisted proofs and well-posedness for hyperbolic systems of conservation laws

Abstract: For hyperbolic systems of conservation laws in 1-D, fundamental questions about uniqueness and blow up of weak solutions still remain even for the apparently *simple* systems of two conserved quantities such as isentropic Euler and the p-system. Similarly, in the multi-dimensional case, a longstanding open question has been the uniqueness of weak solutions with initial data corresponding to the compressible vortex sheet. We address all of these questions by using the lens of convex integration, a general method of constructing highly irregular and non-unique solutions to PDEs. Our proofs involve computer-assistance. This talk is based on joint work with László Székelyhidi, Jr.

room 40.03.003 (Emil Fischer Str. 40)

Thursday, Oct.. 29, 2026 at 12:30 pm

via Zoom,

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. *Christian Klingenberg*