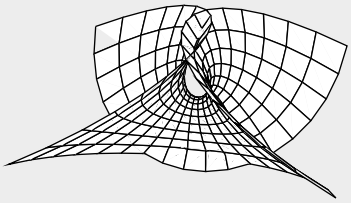

Oberseminar Mathematische Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

Emmanuel Franck

INRIA, Strabourg, France

Relaxation scheme: a tool to design time integration schemes

Abstract:

In this work, we will introduce different relaxation models for hyperbolic systems. With this relaxation we will show that it possible to simplify the design and the resolution of semi-implicit and implicit time integrators. To begin, we will introduce two linear relaxation systems: the Xin-Jin relaxations and the kinetic relaxation models. After that, focusing on the low-Mach limit in the Euler equations we will introduce a new relaxation similar to the Suliciu relaxation method, and show how this model allows to design simple semi-implicit schemes for Euler equations/Ripa equations adapted to the low Mach/low Froude regimes.

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

Thursday, June 4 at 9:30 am

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. Christian Klingenberg