



Oberseminar Mathematische Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

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Continuous Galerkin methods for the compressible Euler and Navier-Stokes equations

Abstract:

Convection dominated problems like Navier-Stokes equations at high Reynolds numbers are difficult to solve with central-type or continuous Galerkin methods. In recent years, several ideas for stabilizing such methods have emerged which include summation-by-parts, split form schemes and gradient penalty. They help to achieve consistent evolution of other quantities like kinetic energy, internal and entropy, and are thought to lead to better stability. Gradient penalty is another idea to add extra dissipation which is found to reduce dispersion errors. Here we will try these ideas in the context of compressible flows and try to identify useful schemes.

room 40.03.003 (Emil Fischer Str. 40)

Wednesday, May. 28, 2025 at 12:30 pm

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. Christian Klingenberg