



Oberseminar Mathematische Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

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An Active Flux Method for Compressible Navier-Stokes Equations

Abstract: The active flux (AF) method is a compact high-order finite volume method, where cell averages and point values at cell interfaces are evolved simultaneously. In this talk, I will present a high-order AF method for compressible Navier-Stokes equations. The evolution of cell averages follows the standard finite volume method, ensuring conservation, where the fluxes are directly obtained from the point values at the cell interfaces, and Riemann solvers are not required. The point values are updated using suitable finite difference operators. To maintain the original compact stencil of the AF methods, the proposed method is built on compact finite difference operators for both first and second derivatives. Several numerical experiments validate the high-order accuracy and efficacy of the method.

room 40.03.003 (Emil Fischer Str. 40)

Thursday, Nov.. 5, 2026 at 12:30 pm

via Zoom,

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. Christian Klingenberg