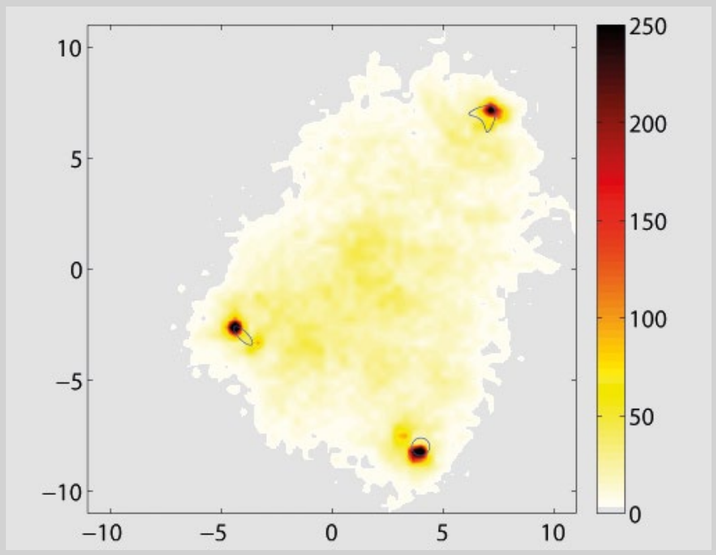

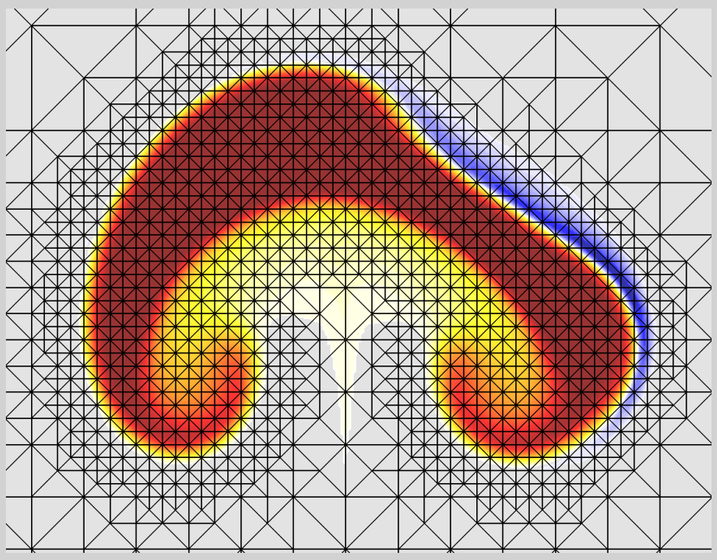

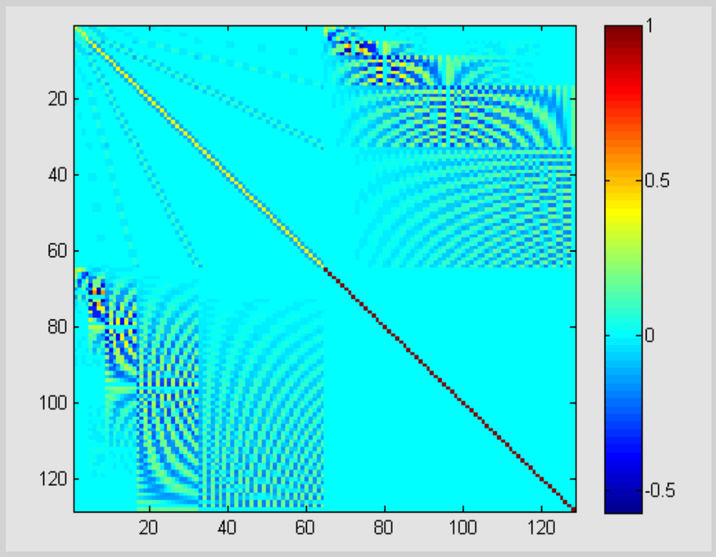

Oberseminar Numerik

Dr. Georgii Oblapenko (RWTH Aachen)

28.05.2025
14:15 Uhr
Raum 05-426
Staudingerweg 9, 55128 Mainz

„Entropy-stable high-order discretizations of thermochemically non-equilibrium flows“

Abstract:

A framework for numerical evaluation of entropy-conservative volume fluxes in multi-species gas flows with internal energies and chemical reactions is developed, for use with the high-order Discontinuous Galerkin Spectral Element Method (DGSEM). The novelty of the approach lies in the ability to use arbitrary expressions for the internal degrees of freedom of the constituent gas species. The developed approach is implemented in an open-source discontinuous Galerkin code for solving hyperbolic equations. Numerical simulations are carried out for several model 2-D flows and the results are compared to those obtained with the finite volume-based solver DLR TAU.

Hierzu sind alle herzlich eingeladen.

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