Oberseminar
Mathematische
Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

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A consistent kinetic Fokker-Planck model for gas mixtures

Abstract:

We propose a general multi-species Fokker-Planck model. We prove consistency of our model: conservation properties, positivity of all temperatures, H-Theorem and the shape of equilibrium as Maxwell distributions with the same mean velocity and temperature. Moreover, we derive the usual macroscopic equations from the kinetic two-species BGK model and compute explicitly the exchange terms of momentum and energy.

room 40.03.003 (Emil Fischer Str. 40)

Donnerstag, Feb. 13, 2025 at 12:30 pm,

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. Christian Klingenberg