

Vortragseinladung

Prof. Sharipov, Felix

Federal University of Parana, Brazil

spricht über

Fundamentals of Vacuum Gas Dynamics

Aims: The course is addressed to students, scientists and engineers who are not experts in Rarefied Gas Dynamics but who deals with this field in their routine work.

Topics: Concept of dilute gas. Molecular free path, gas rarefaction and flow regimes. Velocity distribution function. Gas surface interaction. Accommodation coefficients. Free-molecular flows. Intermolecular interaction and kinetic equation. Transport coefficients. Flows in the transition regime. Discrete velocity method. Direct simulation Monte Carlo method. Main numerical solutions in the transitional regime with examples: Poiseuille flow, Couette flow, heat transfer. Transient flows. Modelling of gas dynamics processes in vacuum chambers.

Information about the lecturer: Prof. Felix Sharipov graduated from the Moscow University of Physics and Technology, Faculty of Aerophysics and Space Research in 1982. He obtained his Ph.D. in 1987 at the Ural State Technical University. In 1988 he joined the Physics Faculty of the Ural State University where he set up his activity in rarefied gas dynamics. In 1992 he moved to the Federal University of Parana in Brazil where he built up a group on numerical modelling of gas flows in microscale. His research interests are numerical methods of rarefied gas dynamics applied to microfluidics, vacuum technology and aerothermodynamics. F. Sharipov published over a hundred journal articles, several reviews and chapters in handbooks. He is an author of two books and a member of editorial board of "Vacuum" (Elsevier).

Zeit:	Montag, 12.11.2018 um 14 Uhr
Veranstaltungsort:	Bau 402, Raum 224
Vortragssprache:	Englisch
Einladender:	KATRIN Kollaboration