Modelling and Applications in Kinetic Theory of Mixtures

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The kinetic theory of gases is a branch of statistical mechanics, which deals with non-equilibrium dilute gases. The evolution of the gas system is described, at the mesoscopic level, in terms of certain statistical quantities, named velocity distribution functions. It gives a detailed description of the gas and allows to obtain its macroscopic analogue. The methods of the kinetic theory can be applied to many and varied modelling problems, as for example, detonation processes and complex biological systems. In this talk, we will present and discuss some interesting applications to some of these problems.

This submission is for a invited session