

Prof. Gerhard Rein, Universität Bayreuth

Equilibrium solutions in stellar dynamics

A large stellar system such as a galaxy or a globular cluster can be modeled as a self-gravitating collisionless gas. In the Newtonian context this is described by the Vlasov-Poisson system, in the general relativistic context by the Einstein-Vlasov system. I will discuss a joint result with H. Andreasson and M. Kunze on the existence of rotating, axially symmetric steady states of the Einstein-Vlasov system, and on the way I will review a general approach to the existence of equilibria of such kinetic models.