

Self-consistent method to predict trapped states in Vlasov systems

Friday, June 13, 2025 9:30 AM (45 minutes)

A Vlasov system describes dynamics of a many-body long-range interacting Hamiltonian system including self-gravitating systems and plasmas. Such a system does not go to thermal equilibrium and is trapped at a so-called quasi-stationary state. A central issue is then to predict the trapped state, which may experience a bifurcation by varying a parameter. The self-consistent method is a powerful tool to reveal universality of bifurcations. This talk presents the idea of the self-consistent method and some applications with strange universality.

Presenter: YAMAGUCHI, Yoshiyuki