

Global existence and asymptotic behavior of (quantum) hydrodynamic model of semiconductors

Hailiang Li

[†]SISSA, Via Beirut 2-4, Trieste 34014, Italy

Abstract

In this talk, we list our recent results on global existence and asymptotic behavior of (quantum) hydrodynamic model of semiconductors. First, we establish the existence of stationary solutions and prove its stability. Then, we consider the semiclassical (quantum) limit from quantum hydrodynamic system (Schrödinger-Poisson) to hydrodynamic system (Euler-Poisson).