

Seminar 2021

Math

Hydrodynamic limits of the Schrodinger equation with gauge fields

김정호 박사

한양대학교

2021년 9월 16일(목) 14시

ZOOM강의

Abstract: In this talk, we present the hydrodynamic limits of the Schrodinger equation, affected by different gauge fields. Precisely, we first present the hydrodynamic limit of the Schrodinger equation with the Chern-Simons gauge fields (Chern-Simons-Schrodinger equation), toward the Euler-Chern-Simons equation on the two-dimensional state space. Then, we consider the hydrodynamic limit of the Schrodinger equation with the Maxwell gauge fields (Maxwell-Schrodinger equation), toward the Euler-Maxwell equation on the three-dimensional state space. Both estimates use the estimate on the modulated energy functionals.



연세대학교 수학기산학부

주최: 4단계 BK21 수리과학 및 계산 교육연구단