

Singular alignment dynamics

Jan Peszek

University of Warsaw

2023년 8월 14일(월) 15시 – 16시 30분

과학관 225호

Abstract: I will present some latest results and ideas related to the micro- to meso- and macroscopic limit for singular alignment dynamics. This includes the heterogeneous gradient flows related to weakly singular alignment (joint with David Poyato, University of Granada) with matrix valued communication, and a monokineticity estimate for strongly singular alignment (joint with Michał Fabisiak, University of Warsaw). In particular, I will show that any weakly continuous solution to strongly singular Cucker-Smale kinetic equation is monokinetic. This information can be used to obtain (via direct micro- to macroscopic mean-field limit) existence of measure-valued solutions to the fractional Euler-alignment system in the whole space for general initial data admitting vacuum.



연세대학교 수학기산학부

주최: 4단계 BK21 수리과학 및 계산 교육연구단