

现代分析研讨会



上海交通大学数学科学学院

上海市现代分析前沿科学基地

2022年1月15-17日

现代分析研讨会

本次研讨会将于 2022 年 1 月 15-17 日召开，**15 日下午报到，16 日下午学术会议，16 日上午及 17 日上午自由讨论。**

此研讨会得到了上海交通大学数学科学学院和上海市现代分析前沿科学基地资助。上海市现代分析前沿科学基地成立于 2021 年 11 月，由上海市教委资助，依托上海交通大学数学科学学院，李从明教授担任基地主任。基地将围绕现代分析的三个基础研究方向--偏微分方程、几何分析和动力系统开展前沿研究，本系列研讨会由几何分析和偏微分方程两课题组联合主办。

组织委员会（按字母顺序排列）

李从明 楼元 陶有山 谢峰

会议联系人 taoys@sjtu.edu.cn

会议地点

线下会场：沪华国际大酒店 (上海市闵行区剑川路 368 号)

线上会场：腾讯会议 (ID [188-486-847](#))

上海交通大学数学科学学院

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2022 年 1 月

现代分析研讨会日程表

腾讯会议：[188-486-847](https://meeting.tencent.com/join/319188486847) (学术报告部分)

2022年1月16日			
时间	特征值问题研讨(线下)		
9:00-11:00			
休息 11:00-14:00			
时间	报告人	题目	主持人
14:00-14:40	周风	Isolated singularities for some nonlinear elliptic equations	潘生亮
14:40-15:20	华波波	Some evolution equations on graphs	叶东
休息 15:20-15:40			
15:40-16:20	李玉祥	Finite-time blow-up in a 2d Keller-Segel System with rotation	陶有山
16:20-17:00	吴昊	The Conserved Navier-Stokes-Allen-Cahn System	楼元
2022年1月17日			
时间	趋化模型研讨(线下)		
9:00-11:00			

报告题目和摘要

(按报告人姓名字母顺序排列)

Some evolution equations on graphs

华波波

复旦大学

In this talk, we introduce some uniqueness results on some evolution equations on infinite graphs, including the heat equation and the wave equation.

Finite-time blow-up in a 2d Keller-Segel System with rotation

李玉祥

东南大学

In this talk we consider Neumann problem for 2D Keller-Segel system with rotation where the rotation angle is θ . We prove that: In a general bounded domain, if the initial mass is large than $8\pi/\cos(\theta)$, then there exists nonnegative initial datum such that the corresponding nonradial solution blows up in finite time and the blow-up point lies in the domain; if the boundary of the domain contains a line segment and the initial mass is large than $4\pi/\cos(\theta)$, then there exists nonnegative initial datum such that the nonradial solution blows up in finite time and the blow-up point lies in the line segment. Let the domain be a disc, if the initial mass is smaller than $8\pi/\cos(\theta)$, then the radial solution exists globally in time; if the initial mass is smaller than $4\pi/\cos(\theta)$, then the radial solution is globally bounded.

The Conserved Navier-Stokes-Allen-Cahn System

吴昊

复旦大学

In this talk, we discuss a Navier-Stokes-Allen-Cahn system with the physically relevant Flory-Huggins potential for a nonhomogeneous incompressible two-phase viscous flow. We present some recent results concerning the existence, uniqueness and regularity of weak/strong solutions to the initial boundary value problem. This is a joint work with A. Giorgini (Imperial College London) and M. Grasselli (Politecnico di Milano).

Isolated singularities for some nonlinear elliptic equations

周凤

华东师范大学

In this talk, we will talk about the isolated singular solutions for Lane-Emden equation involving Hardy-Leray potential. We will also talk about solutions with fast decaying or slow decaying at infinity to Lane-Emden equation with nonhomogeneous potential and when the exponent belongs to certain range. We present some recent results for fractional Lane-Emden with potential on the classification of the isolated singular solutions. The talk is based on joint works with H.Y.Chen and X.Huang.