

Thursday, Nov 19	
MORNING SESSION	Room: Gross 270
9:00 - 9:05	<i>Welcoming Remarks</i>
9:05 - 9:45	Mauro Maggioni (Duke University) Geometric methods for learning reduced models for high-dimensional stochastic systems
9:50 - 10:30	Dejan Slepcev (Carnegie Mellon University) Nonlocal interaction equations: phenomena and structures
10:35 - 11:05	COFFEE BREAK
11:05 - 11:55	Sebastien Motsch (Arizona State University) Self-alignment driven by jump processes: macroscopic limit and numerical investigation
12:00 - 2:00	LUNCH (on your own)
AFTERNOON SESSION	Room: Gross 330
2:00 - 2:40	Alexander Kurganov (Tulane University) Adaptive moving-mesh (AMM) methods for chemotaxis systems
2:45 - 3:25	Francis Filbet (Université Paul Sabatier, Toulouse III) Numerical simulations of kinetic models for chemotaxis
3:30 - 4:00	COFFEE BREAK
4:00 - 4:40	Maria Lukacova (Universität Mainz) Numerical methods for a chemotaxis based cancer invasion model
4:45 - 5:40	Short Talks: Introduction to Posters
5:40 - 7:30	Poster Session

Posters:

Nastassia Pouradier Duteil (Rutgers University-Camden): Optimal Control of a Collective Migration Model

Louis Fan (University of Wisconsin at Madison): Stochastic spatial models for complex systems

Hui Huang (Duke University): Error estimate of a random particle blob method for the Keller-Segel equation

Ryan Murray (Carnegie Mellon University): Decay estimates and the cutoff phenomenon for the Becker-Doring equations

Zhuolin Qu (Tulane University): A fast and stable explicit operator splitting method for phase-field models

Jinhuan Wang (Liaoning University): Uniqueness of Keller-Segel: Refined hyper-contractivity, sharp condition for the global existence and blow-up

Tong Wu (Tulane University): Steady State and Sign Preserving Semi-Implicit Runge-Kutta Methods for ODEs with Stiff Damping Term

Glenn Young (University of Pittsburgh): Solitary Modes in Models of Bacterial Chemotaxis

Jia Zhao (University of South Carolina): Pattern Formations of Active Liquid Crystals

Friday, Nov 20	
MORNING SESSION	Room: Gross 270
9:30 – 10:10	Eitan Tadmor (University of Maryland) A new paradigm for collective dynamics: the emergence of leaders
10:15 – 10:55	Bob Pego (Carnegie Mellon University) Euler sprays and optimal transportation
11:00 - 11:30	COFFEE BREAK
11:30 - 12:10	Qi Wang (University of South Carolina and Beijing Computational Science Research Center) Models for active matter and their applications to cell motility
12:15 - 2:00	LUNCH (on your own)
AFTERNOON SESSION	Room: Gross 270
2:00 - 2:40	Jacob Bedrossian (University of Maryland) Scaling and criticality in variants of the Patlak-Keller-Segel system
2:45 – 3:25	Nader Masmoudi (New York University) Stability of infinite time aggregation for the critical Patlak-Keller-Segel model in 2 dimension
3:30 - 4:00	COFFEE BREAK
4:00 - 4:40	Alexander Lorz (Université Pierre et Marie Curie - Paris 6) Population dynamics and therapeutic resistance: mathematical models
6:15	Conference Dinner at Piedmont Restaurant

Saturday, Nov 21	
MORNING SESSION	Room: Gross 270
9:30 – 10:10	Doron Levy (University of Maryland) Modeling selective local interactions with memory
10:15 – 10:55	Razvan Fetecau (Simon Fraser University) The complexities of a simple first-order aggregation model
11:00 – 11:30	COFFEE BREAK
11:30 – 12:10	Nancy Rodriguez (University of North Carolina) Periodic cycles of social outbursts
12:15 - 2:00	LUNCH (on your own)
AFTERNOON SESSION	Room: Gross 270
2:00 - 2:40	Jingwei Hu (Purdue University) Asymptotic-preserving stochastic Galerkin schemes for the Boltzmann equation with uncertainty
2:45 – 3:25	Xu Yang (University of California, Santa Barbara) Pathway-based mean-field models for <i>E. coli</i> chemotaxis
3:30 - 4:00	COFFEE BREAK
4:00 - 4:40	Martin Short (Georgia Institute of Technology) The game of crime: How societies "choose" their crime level

Sunday, Nov 22	
MORNING SESSION	Room: Gross 270
9:30 - 10:10	Li Wang (University of California, Los Angeles) Efficient numerical schemes for multiscale crowd dynamics with emotional contagion
10:15 - 10:55	Yuan Zhang (University of California, Los Angeles) Convergence of stochastic interacting particle systems in probability under a Sobolev norm
11:00 - 11:30	COFFEE BREAK
11:30 - 12:10	Yi Sun (University of South Carolina) Kinetic Monte Carlo simulations of multicellular aggregate self-assembly in biofabrication
12:15	CLOSING