

Tuesday, January 15	
8:45 - 9:15	COFFEE
MORNING SESSION	Chair: Eitan Tadmor (University of Maryland)
9:15 – 9:20	Loek Helminck (North Carolina State University) Chair, Department of Mathematics Welcoming Remarks
9:20 - 9:25	Alina Chertock (North Carolina State University) Opening Remarks
9:30 - 10:10	Hans Othmar (University of Minnesota) “Multiscale analysis in biology - successes and open problems”
10:15 - 10:55	Eshel Ban-Jacob (Tel-Aviv University) “Multiscale biocybernetics during collective cellular navigation from bacterial to cancer”
11:00 - 11:30	COFFEE BREAK
11:30 - 12:10	David Cai (Institute of Natural Sciences Shanghai Jiao Tong University) “Generation, adaptation, and optimization of biological transport networks”
12:15 - 2:00	LUNCH BREAK
AFTERNOON SESSION	Chair: Benoit Perthame (Université Pierre et Marie Curie)
2:00 - 2:40	Nader Masmoudi (Courant Institute) “Existence, uniqueness and Lipschitz dependence for Patlak-Keller-Segel with measure-valued initial data”
2:45 - 3:15	COFFEE BREAK
3:15 - 3:55	Hailiang Liu (Iowa state University) “Entropy satisfying methods for Fokker-Planck-type equations”

Wednesday, January 16	
9:00 - 9:30	COFFEE
MORNING SESSION	Chair: Pierre Degond (CNRS and University Paul Sabatier)
9:30 - 10:10	<p>Canceled: Alfred Bruckstein (Technion) "Some recent work on multi-agent self-location and gradient ascent"</p> <p>A Replacement Talk: Adi Shklarsh (Tel-Aviv University) "Complex Collective Navigation in Bacteria-Inspired Models"</p>
10:15 - 10:55	Pierre-Emmanuel Jabin (University of Maryland) "Particles' method for porous medium equation"
11:00 - 11:30	COFFEE BREAK
11:30 - 12:10	Thomas Banks (North Carolina State University) "Mathematical and statistical modeling of human Lymphocyte proliferation using CFSE data"
12:15 - 2:00	LUNCH BREAK
AFTERNOON SESSION	FREE AFTERNOON
EVENING ACTIVITIES	
7:00	DINNER

Thursday, January 17	
9:00 - 9:30	COFFEE
MORNING SESSION	Chair: Alina Chertock (North Carolina State University)
9:30 - 10:10	Benoit Perthame (Université Pierre et Marie Curie) "Kinetic models of chemotaxis and traveling bands"
10:15 - 10:55	Alexander Kurganov (Tulane University) "Numerical methods for chemotaxis and related models"
11:00 - 11:30	COFFEE BREAK
11:30 - 12:10	Min Tang (Shanghai Jiao Tong University) "Derivation of macroscopic models from the kinetic chemotaxis model incorporating E. Coli chemo-sensory system"
12:15 - 2:00	LUNCH BREAK
AFTERNOON SESSION	Chair: Sébastien Motsch (University of Maryland)
2:00 - 2:40	Qi Wang (University of South Carolina) "Analysis and simulation of active liquid crystals using both kinetic and continuum models"
2:45 – 3:15	COFFEE BREAK
3:15 - 3:55	Francis Filbet (Université Claude Bernard de Lyon, Université de Lyon) "Numerical simulation of collective dynamics in a complex geometry"

Friday, January 18	
9:00 - 9:30	COFFEE
MORNING SESSION	Chair: Pierre-Emmanuel Jabin (University of Maryland)
9:30 - 10:10	Pierre Degond (CNRS and University Paul Sabatier) "Pedestrian macroscopic models: game-theoretical versus mechanistic viewpoints"
10:15 - 10:55	Sébastien Motsch (University of Maryland) "Traffic models for pedestrian and their comparison with experimental data"
11:00 - 11:30	COFFEE BREAK
11:30 - 12:10	Yuan Lou (Ohio State University) "Evolutionarily stable dispersal strategies in heterogeneous environments"
12:15 - 2:00	LUNCH BREAK
AFTERNOON SESSION	Chair: Alexander Kurganov (Tulane University)
2:00 - 2:40	Jian-Guo Liu (Duke University) "Phase transitions for self-organized dynamics and sweeping networks"
2:45 - 3:15	COFFEE BREAK
3:15 - 3:55	Marco Di Francesco (University of Bath) "Nonlocal transport vs. nonlinear diffusion: from particle description to large time asymptotics"
EVENING ACTIVITIES	
7:30	Piano CONCERT (free attendance)