Friday, April 17	Thoren and Traditions Rooms – University Club
MORNING SESSION	***Chair:*** **Dieter Armbruster** (Arizona State University)
8:30 – 8:40	**Dieter Armbruster** (Arizona State University) Welcoming Remarks
8:40 - 9:25	**Maurizio Porfiri** (New York University) Modeling the zebrafish animal model
9:25 - 10:10	**Yannis Kevrekidis** (Princeton University**)** Equation-free and Variable-free computations for agent based/complex system models
10:10 - 10:40	**Coffee Break**
10:40 - 11:25	**Spring Berman** (Arizona State University) Continuum abstractions for scalable control of robotic swarms with minimal capabilities and information
11:25 – 12:10	**Victor Yakovenko** (University of Maryland) Statistical mechanics of money, income, debt, and energy consumption
12:10 - 1:30	***LUNCH BREAK (box lunch, provided)***
AFTERNOON SESSION	***Chair:*** **Benedetto Piccoli** (Rutgers)
1:30 - 2:15	**Shi Jin** (University of Wisconsin - Madison) Uncertainty quantification for multiscale hyperbolic and kinetic equations with uncertain coefficients
2:15 – 3:00	**Eitan Tadmor** (University of Maryland) Collective dynamics with tendency: the emergence of leaders
3:00 - 3:30	***COFFEE BREAK***
3:30 - 4:15	**Reinhard Illner** (University of Victoria) Marketing on Populations modelled as random graphs
4:15 – 5:00	**Alethea Barbaro** (Case Western Reserve University) Modeling fish migration with an interacting particle model

Saturday, April 18	Basha Room – Old Main Building
MORNING SESSION	***Chair:*** **Sebastien Motsch** (Arizona State University)
9:00 – 9:45	**Audrey Dussutour** (University of Toulouse 3) Moving in the crowd : Ants hold the key to traffic chaos
9:45 - 10:30	**Richard Mann** (ETH Zurich) The big statistical problems in collective behavior
10:30 - 11:00	**Coffee Break**
11:00 - 11:45	**Simon Garnier** (NJIT and Rutgers University) Decision-making without a brain: the case of the slime mold Physarum polycephalum
11:45 - 12:30	**Pedro Lowenstein** (University of Michigan) Towards understanding glioma growth patterns: is glioma migration stochastic or deterministic
12:30 - 2:00	***LUNCH BREAK (on your own)***
AFTERNOON SESSION	***Chair:*** **Reinhard Illner** (University of Victoria)
2:00 - 2:45	**Gil Ariel** (Bar Ilan University) Multiscale dynamics of marching locust swarms
2:45 - 3:30	**William Romey** (SUNY Potsdam) Whirligig beetles vs. swarm models: perturb and measure emergent properties
3:30 – 4:00	***COFFEE BREAK***
4:00 – 4:45	**Sebastien Motsch** (Arizona State University) Data-model comparison for pedestrian dynamics
4:45 - 5:15	***Poster preview session***
6:00 – 7:00	***Poster session - Farnsworth Terrace- southside of Old Main***
EVENING SESSION	***Workshop Dinner*** Uclub 7:00 pm

Sunday, April 19	**Basha Room, Old Main Building**
MORNING SESSION	***Chair:*** **Christian Ringhofer** (Arizona State University)
9:00 – 9:45	**Nicole Abaid** (Virginia Tech) Bat swarms and the role of active sensing: models and experimental framework
9:45 - 10:30	**Nicholas Oulette** (Yale University) Driving and Response in Insect Swarms
10:30 - 11:00	**Coffee Break**
11:00 - 11:45	**Ted Pavlic** (Arizona State University) Kinetic modeling of collective behavior: When a good match goes bad
11:45 - 12:30	**Andrey Sokolov** (Argonne National Lab) Underlying physics of collective motion in bacterial suspensions
	Workshop Closing

POSTER SESSION (Saturday)

List of Posters:

- **Tiziana Bartolini** (New York University)
  Fish 'n' Robots: not a take-out food
- **Karthik Elamvazhuthi** (Arizona State University)
  Control of Stochastic Behaviors in Robotic Swarms using PDE Models
- **Rui Ni** (Yale University)
  Probing swarm cohesion by pulling swarms apart
- **Nastassia Pouradier Duteil** (Rutgers University (Camden))
  Optimal control of a collective migration model
- **Juan Diego Rodriguez** (University of Texas at Austin)
  Limits of stochastic binary interactions on a dense graph
- **Subhradeep Roy** (Virginia Tech)
  Consensus and synchronization over biologically-inspired networks: from collaboration to antagonism
- **Zachary Shaffer** (Arizona State University)
  How do foraging ants learn the quality of food sources?
- **Andee Thatcher** (Arizona State University)
  Scattering of flocks for an attraction-repulsion model
- **Sean Wilson** (Arizona State University)
  Design of ant-inspired stochastic control strategies for boundary coverage and collective transport by robotic swarms
- **Gleb Zhelezov** (University of Arizona)
  Coalescing Diffusion and Blow-Up Dynamics in the Keller-Segel Model