PROGRAM SCHEDULE Friday, May 31

8:00-8:40 a.m.	Registration + Coffee/Pastries	Kupfrian 1 st Floor Lobby			
	Set Up Posters	Kupfrian 2 nd Floor Rotunda			
8:45-9:00 a.m.	Introductory Remarks	Theater			
	Jonathan Luke, Chair, Department of Mathematical Sciences				
	Welcoming Remarks				
	Fadi Deek, Interim Provost				
9:00-10:00 a.m.	Plenary Lecture I	Theater			
	Pam Cook, University of Delaware				
	Mesoscale Modeling and Simulation of Transient (liquid gel) Networks				

10:00-10:30 a.m. Coffee Break

Minisymposium I				
10:30 - 11:00	Mathematical Biology I Kupfrian 118 Chair: Horacio G. Rotstein Carina Curto University of Nebraska- Lincoln Encoding Binary Neural Codes in Networks of Threshold-	Statistics I Kupfrian 105 Chair: Wenge Guo Cun-Hui Zhang Rutgers University Statistical Inference with High- Dimensional Data	Fluids I Kupfrian 117 Chair: Shahriar Afkhami Jeff Morris CCNY Microstructural Analysis and Rheology of Concentrated	Waves IKupfrian 106Chair: YassineBoubendirPeter SmerekaUniversity ofMichiganThe Gaussian WavePacket Transform:Efficient
11:00 - 11:30	linear Neurons	Yufeng Liu	Colloidal Dispersions Arvind Baskaran	Computation of the Semi-classical Limit of the Schroedinger Equation Hans Stimming
	Amarasingham City College of NY Statistical Repeatability and Timing in Electrophysiology	UNC-Chapel Hill Joint Estimation of Multiple Dependent Gaussian Graphical Models	UC-Irvine Kinetic Density Functional Theory: A Mesoscale Model to Study the Effect of Flow on the Freezing of a Pair Potential Fluid	University of Vienna Modeling and Simulation of Bose- Einstein Condensates (BEC) by Nonlinear Schroedinger equations: Quantification of Dephasing
11:30 - 12:00	Adrien Peyrache New York University Inferring Cell Assembly Organization from Neuronal Correlations	Xiaodong Lin Rutgers Business School Alternating Linearization for Structured Regularization	Michael Graham University of Wisconsin-Madison Collide and Conquer: Flow- induced Segregation Phenomena in Blood and Other Multicomponent Suspensions	Malena Español University of Akron Multilevel Methods for Image Deblurring

12:00 - 12:30	Jiannis Taxidis	Yang Feng	Kausik Sarkar
	Caltech	Columbia University	George Washington
	Extracellular Field	Consistent Cross-	University
	Signatures of CA1	Validation for	Effects of
	Spiking Cell Assemblies	Tuning Parameter	Viscoelasticity on
		Selection in High-	Drop Dynamics and
		Dimensional	Emulsion Rheology
		Variable Selection	

12:30-2:30 p.m. Lunch Poster Session

Kupfrian 1st Floor Lobby Kupfrian 2nd Floor Rotunda

2:30-3:30 p.m. **Plenary Lecture II** Theater Daniel Heitjan, University of Pennsylvania *What They Say and What They Mean: Modeling Misreported Counts*

3:30-4:00 p.m. Coffee Break

Minisymposium II				
4:00 - 4:30	Mathematical Biology II Kupfrian 118 Chair: Amitabha Bose Jose L. Pena Albert Einstein School of Medicine 'The biased owl'	Statistics II Kupfrian 105 Chair: Sunil Dhar Dhammika Amaratunga Janssen Research & Development Enriched Ensemble	Fluids II Kupfrian 117 Chair: Michael Booty Shreyas Mandre Brown University The Effect of Size and Shape on the Capillary Attraction	Waves II Kupfrian 106 Chair: Peter Petropoulos Nathan Albin Kansas State University Advances in Fourier Continuation
		Methods for Classification of High-dimensional Data	between Nearby Floating Objects	
4:30 - 5:00	Martin Wechselberger University of Sydney Neuronal Excitability and Canards	Michael E. Sobel Columbia University Compliance Mixture Modelling with a Zero-Effect Complier Class and Missing Data	Longfei Li University of Delaware Modeling Tear Film Dynamics with Time Dependent Flux Boundary Conditions on a 2D Eye-Shaped Domain Lisa Mayo Queensland University of Technology Numerical Solutions for Thin Film Flow Down the Outside and Inside of a Vertical Cylinder	Mark Lyon University of New Hampshire Fourier Continuation Algorithms, Fast Transforms, and Techniques for PDE Solution
5:00 - 5:30	Uri Eden Boston University Estimating Neural Spiking Dynamics using Point Process Filters	Ken Cheung Columbia University Objective Calibration of the Bayesian Continual Reassessment Method	Ian Griffiths University of Oxford The Control of Solute Transport in a Permeable Pipe: the Optimal Growth of Tissue in a Hollow Fibre Bioreactor	Daniel Onofrei University of Houston Active Control of Acoustic and Electromagnetic Fields

5:30 - 6:00	Sashi Marella	Zhiwei Zhang	Reuben O'Dea	Taoufik Meklachi
	New Jersey Institute of	Food and Drug	University of	University of
	Technology	Administration	Nottingham	Houston
	Asynchronous Inhibition	Blinding Assessment	A Multiscale Analysis	Anomalous Localized
	and Small Neuronal	and the Placebo	of Solid Tissue	Resonance: A
	Network Dynamics	Effect: A Causal	Growth in vitro	Summary of the
	-	Inference Perspective		Behavior of the
				Power Dissipation
				Eric Platt
				University of
				Houston
				Modeling Nonlinear
				Properties and
				Fracture Mechanics
				of Elasto-viscoplastic
				Materials by Use of
				an Integrity Property

6:15 p.m. Poster Session and Reception

Kupfrian 2nd Floor Rotunda

PROGRAM SCHEDULE Saturday, June 1

8:00-8:50 a.m.	Coffee and Pastries	Kupfrian 1 st Floor Lobby
9:00-10:00 a.m.	Plenary Lecture III	Theater
	Esteban Tabak, Courant Institute of Mathem	natical Sciences
	Biological Data through Mathematical Eyes	S

10:00-10:30 a.m. Coffee Break

	Minisymposium III					
	Mathematical Biology III Kupfrian 118 Chair: Victor Matveey	Statistics III Kupfrian 105 Chair: Ji Meng Loh	Fluids III Kupfrian 117 Chair: Michael Siegel	Waves III Kupfrian 106 Chair: Shidong Jiang		
10:30 - 11:00	Zachary P. Kilpatrick University of Houston Noise and Multistability in Spatially Organized Neural Fields	Hakmook Kang Vanderbilt University Spatio-spectral Mixed-Effects Model for fMRI Data Analysis	Lin Zhou NY City College of Technology Shear Responses of the VCM model for Wormlike MicellarMixtures	Peijun Li Purdue University Inverse Surface Scattering in Near- Field Imaging		
11:00 - 11:30	Duane Nykamp University of Minnesota Capturing Effective Neuronal Dynamics in Random Networks with Complex Topologies	Giovanni Motta Columbia University Spatial Identification of Epilepsy Regions	Jacek Wrobel Tulane University Surfactant Driven Tipstreaming in a Microfluidic Flow Focusing Device Kellen Petersen Courant Institute of Mathematical Sciences Shape Optimization of Superhydrophobic Surfaces	Zhen Peng Ohio State University Recent Advances in Surface Integral Equation Methods for Time-Harmonic Maxwell Equations		
11:30 - 12:00	Eric Sobie Mount Sinai School of Medicine Leveraging Mathematical Models to Understand Population Variability in Cardiac Physiology	Zhengyuan Zhu Iowa State University Non-stationary Variance Estimation and Kriging Prediction	Qiming Wang University of British Columbia Breakup of a Poorly Conducting Liquid Thread in a Radial Electric Field Carlos Colosqui Levich Institute Computational Modeling of Colloidal Assembly in Dip Coating	Aihua Wood Air Force Institute of Technology Topics on Electromagnetic Scattering from Cavities		

12:00 - 12:30	Casey Diekman	Jun Zhu	Andrew Belmonte	Mohan Kadalbajoo
	The Ohio State	University of	Penn State	IIT Kanpur
	University	Wisconsin-Madison	Non-diffusive Spatial	Non-Uniform B-
	Derived Patterns in	Autologistic	Patterns in	Spline Collocation
	Binocular Rivalry	Regression Models	Evolutionary Games	Method for Solving
	Networks	for Spatial Binary		Generalized Burger-
		Data		Fisher and Burger-
				Huxley Equations

12:30-2:00 p.m. Lunch Poster Session Kupfrian 1st Floor Lobby Kupfrian 2nd Floor Rotunda

2:00-3:00 p.m. Plenary Lecture IV Theater Yvon Maday, Jacques-Luis Lions Laboratory Some Results on Numerical Analysis (a priori and a posteriori) for Electronic Structure Calculations and Applications

3:00-3:30 p.m. Coffee Break

	Minisymposium IV				
	Mathematical Biology	Statistics IV	Fluids IV	Waves IV	
	IV	Kupfrian 105	Kupfrian 117	Kupfrian 106	
	Kupfrian 118	Chair: Sundar	Chair: Linda	Chair: Michael Booty	
	Chair: Sashi Marella	Subramanian	Cummings		
3:30 - 4:00	Nicholas Brunel	Subharup Guha	Scott McCue	Alejandro Aceves	
	University of Chicago	University of	Queensland	Southern Methodist	
	Collective Oscillations	Missouri	University of	University	
	in Networks of Spiking	Survival Predictor	Technology	Nonlinear Localized	
	Neurons: Mechanisms	Detection by	Bubbles Contracting,	Modes in Binary	
	and Input Dependence	Dirichlet Processes	Expanding and	Waveguide Arrays	
			Translating in Hele-		
			Shaw Cells		
4:00 - 4:30	Sridhar Raghavachari	Ruosha Li	Darren Crowdy	Brenton	
	Duke University	University of	Imperial College	LeMesurier	
	TBA	Pittsburgh	London	College of	
		Assessing Quantile	Mixed Boundary	Charleston	
		Prediction with	Value Problems in	Energetic Pulses in	
		Censored Quantile	Stokes Flows: Theory	Exciton-Phonon	
		Regression Models	and Applications	Chains, and	
				Conservative	
				Numerical Methods	
				for Quasi-linear	
				Hamiltonian Systems	
4:30 - 5:00	Paul Miller	Antai Wang	Yuriy Antipov	Tsampikos Kottos	
	Brandeis University	Columbia University	Louisiana State	Wesleyan University	
	Optimal Decision	The Analysis of	University	Taming the Flow of	
	Making under	Bivariate Truncated	Scattering of an	Light via Parity-Time	
	Biological Constraints:	Data Using the	Obliquely Incident	Symmetry	
	Linear Perfect	Clayton Copula	Electromagnetic		
	Integrators versus	Model	Wave by an		
	Nonlinear Attractor-		Impedance Right-		
	based Neural Circuits		angled Wedge		
5:00 - 5:30	Jiawei Zhang	Huixia Wang	N. Robb McDonald	Panagotis	
	University of California	North Carolina State	University College	Panayotaros	
	Limb Coordination in	Local Buckley-James	London	UNAM	
	Crayfish Swimming:	Estimator for the	Poisson Growth and	Solitary Waves in	
	the Neural Mechanisms	Heteroscedastic	the Geometry of	Nematic Liquid	

	and Mechanical Implications Paola Malerba University of Utah Sub- and Supra- threshold Dynamics Determine Firing Rate Sensitivity to Additive Noise	Accelerated Failure Time Model	Valleys	Crystals
5:30 - 6:00	Simon Garnier New Jersey Institute of Technology <i>TBA</i>	Gavin Lynch New Jersey Institute of Technology On Procedures Controlling the False Discovery Rate for Testing Hierarchically Ordered Hypotheses	Peter Buchak Imperial College London Modeling of Viscous Flow in Fibers for Fabrication of MOF's Aleksandr Smirnov Louisiana State University Rapid Propagation of a Crack Parallel to the Boundary of a Half- plane	Luis Rivero UNAM Pullback Attractors and Nonlinear Wave Equations

6:30 p.m. Banquet (Registration Required) Remarks by President Joel Bloom

Campus Center 1st Floor Atrium

PROGRAM SCHEDULE

Sunday, June 2

9:15-10:00 a.m.

Coffee and Pastries

Kupfrian 1st Floor Lobby

	Ν	linisymposium	V	
	Mathematical Biology	Fluids V	Waves V	
	V	Kupfrian 117	Kupfrian 106	
	Kupfrian 118	Chair: Yuan Young	Chair: Rov	
	Chair: Simon Garnier		Goodman	
10:00 - 10:30	Sebastien Motsch	Sarah Olson	Sean Nixon	
	University of Maryland	Worcester	University of	
	Trail Formation Based	Polytechnic Institute	Vermont	
	on Directed Pheromone	Hydrodynamic	Nonlinear Dynamics	
	Deposition	Interactions of Sperm	of Wave Packets in	
	-		\$\mathcal{PT}\$-	
			symmetric Optical	
			Lattices	
10:30 - 11:00	Colin Torney	Daisuke Takagi	Christopher Chong	
	Princeton University	University of	University of	
	Information Use and	Hawaii-Manoa	Massachusetts	
	Collective Behaviour in	How Synthetic	Dark Breathers in	
	Animal Groups	Microswimmers	Granular Crystals	
	1	Move, Turn, Flip,		
		and Spread		
		1		
11:00 - 11:30	David Hu	Sunghwan Jung	David Trubatch	
	Georgia Tech	Virginia Tech	Montclair State	
	Ants Cooperate to Build	Dynamics of	University	
	Rafts and Towers	Paramecium	Recurrence in	
	-	Swimming in a	Discretizations of the	
		Viscous Fluid	KdV Equation	
11:30 - 12:00	Michael Rubenstein	Jerzy	Edward Farnum	
	Harvard University	Blawzdziewicz	Kean University	
	Kilobot: A 1024 Robot	Texas Tech	Short Pulse	
	Platform for	University	Perturbation Theory	
	Implementing Collective	Locomotion of C.		
	Behaviors	elegans:		
		Evolutionary		
		Adaptation and		
		Neuromuscular		
		Control		

12:00 – 1:00 Lunch Removal of posters Kupfrian 1st Floor Lobby Kupfrian 2nd Floor Rotunda

End of Conference