PROGRAM SCHEDULE
Thursday, June 9

8:00-8:40 a.m.	Registration + Coffee/Pastries	Kupfrian 1st Floor Lobby
	Set Up Posters	Kupfrian 103
	Poster session all day	

8:45-9:00 a.m.   **Introductory Remarks**   Theater
 Daljit S. Ahluwalia, Chairman
 Department of Mathematical Sciences
 Welcoming Remarks
 Ian Gatley, Provost and Senior Vice President of Academic Affairs

9:00-10:00 a.m.   **Plenary Lecture I**   Theater
 Joyce McLaughlin, Rensselaer Polytechnic Institute
 Biomechanical Imaging in Tissue - Using Time Dependent Data
 Introduced by Jonathan Luke

10:00-10:30 a.m.   Coffee Break   Kupfrian 1st Floor Lobby

	Minisymposium I Kupfrian 117 *Chair: Shidong Jiang*	Minisymposium II Kupfrian 118 *Chair: Yassine Boubendir*
10:30 – 11:00	**Andreas Kloeckner** New York University *Generalized Debye Sources: Computational Aspects on Arbitrary Surfaces*	**Catalin Turc** Case Western Reserve University *Efficient Solution of Three-Dimensional Problems of Acoustic and Electromagnetic Scattering by Closed and Open Surfaces with Edges and Corners*
11:00 – 11:30	**James Bremer** University of California-Davis *An Approach to the Numerical Solution of Integral Equations on Singular Domains*	**Helene Barucq** INRIA Research Center, France *Enriched Absorbing Boundary Conditions for Acoustic Waves*
11:30 – 12:00	**Jianliang Qian** Michigan State University *Fast Multiscale Gaussian Wavepacket Transforms and Multiscale Gaussian Beams for the Wave Equation*	**Paul Martin** Colorado School of Mines *Internal Gravity Waves and Hyperbolic Boundary-value Problems*

12:00 – 12:30	Matthew Causley New Jersey Institute of Technology *Wave Propagation in Dielectric Media that Exhibit Fractional Relaxation* **Jiawei Chiu** Massachusetts Institute of Technology *Matrix Probing and its Conditioning*	Siddarth Savadatti North Carolina State University *Absorbing Boundary Conditions for Anisotropic Acoustic and Elastic Media* **Elodie Estecahandy** INRIA, France *Analysis of the Frechet Differentiability with Respect to Lipschitz Domains for an Elasto-Acoustic Scattering Problem*

12:30-2:00 p.m.   Lunch and Poster Session   Kupfrian 1ˢᵗ Floor Lobby
                                                                 Kupfrian 103

2:00-3:00 p.m.   **Plenary Lecture II**   Theater
                   Oscar Bruno, California Institute of Technology
                    Fast Spectral Frequency- and Time-domain PDE Solvers for General Domains
                   Introduced by Yassine Boubendir

3:00-3:30 p.m.   **National Science Foundation Presentation**   Theater
                    Henry Warchall, *A Look Inside the NSF Division of Mathematical Sciences*

3:30-4:00 p.m.   Coffee Break   Kupfrian 1ˢᵗ Floor Lobby

	Minisymposium III Kupfrian 117 *Chair: Shidong Jiang*	Minisymposium IV Kupfrian 118 *Chair: Horacio Rotstein*
4:00 – 4:30	Laurent Demanet Massachusetts Institute of Technology *Matrix Probing: Fitting Preconditioners from Applications to Random Vectors*	Eli Shlizerman University of Washington *Neural Activity Measures and Their Dynamics*
4:30 – 5:00	Jingfang Huang University of NC-Chapel Hill *On the Order and Stiffness of Gauss Collocation Methods for Time Dependent PDEs*	Linghai Zhang Lehigh University *Traveling Wave Solutions of Integral Differential Equations Arising from Synaptically Coupled Neuronal Networks*
5:00 – 5:30	Michael O'Neil NYU, Courant Institute of Mathematical Sciences *A Robust Axisymmetric Electromagnetic Scattering Solver using Generalized Debye Sources*	Chiu-Yen Kao The Ohio State University *Numerical Study of the KP Equation for Non-periodic Waves*

5:30 – 6:00	Mridula Kanoria	Ying Wang
	University of Calcutta	University of Minnesota
	Two Temperature Generalized Thermo-piezoelastic Problem with Three-phaselag Effect under Different Types of Thermal Loading	*The Modified Buckley-Leverett Equation*
		Melissa Stoner
		Lehigh University
	Mike Nicholas	*Existence and Stability of Standing Wave Solutions Arising from Synaptically Coupled Neuronal Networks*
	Tulane University	
	A Spectral Method for Periodic Scattering	

6:00 p.m.   Reception for Alumni   3rd floor Student Center
                      Remarks by Donald Sebastian, Senior Vice President for Research and Development

PROGRAM SCHEDULE
Friday, June 10

8:00-8:50 a.m.   Coffee and pastries   Kupfrian 1st Floor Lobby

9:00-10:00 a.m.   **Plenary Lecture III**   Theater
                 George Papanicolaou, Stanford University
                 Correlation Based Imaging
                 Introduced by Michael Siegel

10:00-10:30 a.m.   Coffee Break   Kupfrian 1st Floor Lobby

	Minisymposium V Kupfrian 117 *Chair: Amitabha Bose*	Minisymposium VI Kupfrian 118 *Chair: Robert Miura*
10:30 – 11:00	**Koby Rubinstein** Technion, Israel *Introduction to Mathematical Optometry*	**Huaxiong Huang** York University, Canada *A Neuronal Model for the Instigation and Propagation of Cortical Spreading Depression*
11:00 – 11:30	**Bjorn Sandstede** Brown University *Nonlinear Stability of Defects*	**Stefanos Folias** University of Pittsburgh *Spatially-localized Synchronous Oscillations in Neuronal Networks*
11:30 – 12:00	**Govind Menon** Brown University *Complete Integrability of Shock Clustering and Burgers Turbulence*	**John Pearson** Los Alamos National Laboratory *A Data-driven Model of a Modal Gated Ion Channel: The Inositol 1,4,5-Trisphosphate Receptor in Insect Sf9 Cells*
12:00 – 12:30	**Trevor Potter** University of California-Berkeley *Effective Dynamics for N-solitons of the Gross-Pitaevskii Equation* **Alan Lindsay** University of Arizona *Quenching Solutions of a Fourth Order Nonlinear Parabolic PDE Modeling a MEMS Capacitor*	**Filippo Posta** University of California, Los Angeles *Mathematical Modeling of Epithelial Wound Healing* **Michael Higley** New Jersey Institute of Technology *Tank-treading, Bursting and Cusping: Capsule Response at Large Deformation*

12:30-2:00 p.m.   Lunch and Poster Session   Kupfrian 1st Floor Lobby
                                                              Kupfrian 103

2:00-3:00 p.m.   **Plenary Lecture IV**   Theater
                 Naomi Ehrich Leonard, Princeton University
                 Information Passing and Collective Animal Motion
                 Introduced by Eliza Michalopoulou

3:00-3:30 p.m.   Coffee Break   Kupfrian 1st Floor Lobby

	Minisymposium VII Kupfrian 117 *Chair: Yassine Boubendir*	Minisymposium VIII Kupfrian 118 *Chair: Richard Moore*
3:30 – 4:00	**Aloknath Chakrabarti** Indian Institute of Science *Solution of Three-part Wiener–Hopf Problems Occurring in Scattering Theory*	**William Troy** University of Pittsburgh *The Lowest Possible Temperature of an Einstein Solid is Strictly Positive*
4:00 – 4:30	**Chrysoula Tsogka** University of Crete *Adaptive Time-Frequency Detection and Filtering for Imaging in Heavy Clutter*	**Murthy Guddati** North Carolina State University *Modeling Wave Propagation in Unbounded Domains: Links Between Various Absorbing Boundary Conditions and Perfectly Matched Layers*

4:30-5:30 p.m.   **Panel Discussion**   Theater
Future Trends in Applied and Computational Mathematics
William Kath, Naomi Leonard, Joyce McLaughlin, and George Papanicolaou
Moderator: Robert M. Miura

5:45-8:30 p.m.   Reception and Banquet   Campus Center Atrium
Remarks by President Robert Altenkirch

PROGRAM SCHEDULE
Saturday, June 11

8:00-8:55 a.m.   Coffee and pastries   Kupfrian 1st Floor Lobby

9:00-10:00 a.m.   **Plenary Lecture V**   Kupfrian 118
Jacob White, Massachusetts Institute of Technology
Surface Absorbers in Fast Integral Equation Solvers
Introduced by Shidong Jiang

10:00-10:30 a.m.   Coffee Break   Kupfrian 1st Floor Lobby

	Minisymposium IX Kupfrian 117 *Chair: Linda Cummings*	**Minisymposium X** Kupfrian 118 *Chair: John Bechtold*
10:30 – 11:00	**David Ambrose** Drexel University *Time-Periodic Solutions of Nonlinear Systems of PDE*	**Jack Xin** University of California-Irvine *Asymptotic Properties of Flame Speeds in Turbulent Combustion Models*
11:00 - 11:30	**Denis Zorin** New York University *Large Scale Simulation of Vesicle Flows*	**Leon Cohen** City University of New York *Wave Propagation in Phase-Space*
11:30 – 12:00	**Mary-Catherine Kropinski** Simon Fraser University, Canada *Fast Integral Equation Methods for the Laplace-Beltrami Equation on the Sphere*	**Yu-Yu Liu** University of California, Irvine *Turbulent Flame Speed for G-equations* **Lyudmyla Barannyk** University of Idaho *Regularized Deconvolution Closure Method for Spatially Averaged Dynamics of Particle Chains*
12:00 - 12:30	**Bryan Quaife** Simon Fraser University *Integral Equation Methods for the Modified Biharmonic Equation*	**Qiming Wang** New Jersey Institute of Technology *Numerical Simulations of Drop Dynamics with Soluble Surfactant* **Sathishkumar Gurupatham** New Jersey Institute of Technology *Breaking Up of Particle Clumps on Liquid Surfaces*

12:30 – 2:00   Lunch and Poster Session   Kupfrian 1st Floor Lobby
Removal of posters   Kupfrian 103

	Minisymposium XI Kupfrian 117 *Chair: Shahriar Afkhami*	Minisymposium XII Kupfrian 118 *Chair: Richard Moore*
2:00 - 2:30	**Shari Moskow** Drexel University *Inverse Born Series for the Calderon Problem*	**Thomas Erneaux** Universite Libre de Bruxelles, Belgium *Fronts and Pulses Controlled by Time-delayed Feedbacks*
2:30 – 3:00	**Francisco-Javier Sayas** University of Delaware *Energy Estimates in Semidiscrete Time-domain Boundary Integral Equations*	**William Kath** Northwestern University *Methods to Determine Large Deviations and Rare Events in Optical Pulses*
3:00 – 3:30	**Stephen Shipman** Louisiana State University *An Exactly Solvable Model for Nonlinear Resonant Scattering*	**Agis Athanassoulis** University of Cambridge *Semiclassical Limits for Non-smooth Potentials: Quantum Selection Principles for Certain Ill-posed Classical Problems*
3:30 - 4:00	**Dongdong He** York University *On the Motion of a Conducting Drop on an Electrowetting Device* **Xinli Wang** University of Virginia *Transport of Brownian Particles Confined to a Channel by a Periodic Potential*	**J. Douglas Wright** Drexel University *Well-posedness Issues for Degenerate Dispersive Equations*

End of Conference