

Monday June 4, 2018 Thematic Sessions 10:15 AM - 12:15 PM			
Combinatorial Optimization - Rehearsal Hall 1			
10:15 AM	Naomi Nishimura	University of Waterloo	<i>Combinatorial Reconfiguration: Handling Incremental Change</i>
10:45 AM	Sushant Sachdeva	University of Toronto	<i>Fast Approximate Gaussian Elimination for Laplacians</i>
11:15 AM	Chaitanya Swamy	University of Waterloo	<i>Improved Algorithms for MST and Metric-TSP Interdiction</i>
11:45 AM			
Computational Mathematics and Applications - Drama Room 4			
10:15 AM	Yang Cao	Virginia Tech	<i>Accuracy Analysis of Hybrid Stochastic Simulation Algorithms</i>
10:45 AM	Jeremy Schofield	University of Toronto	<i>Microscopic Models of Synthetic Nanomotors</i>
11:15 AM	Robert Strehl	Germany	<i>Controlling Diffusion in Reactive Multiparticle Collision Dynamics</i>
11:45 AM	Diane Fokoue	University of Ottawa	<i>Numerical Methods for the Microscopic Cardiac Electrophysiology Model</i>
Financial Mathematics - Rehearsal Hall 2			
10:15 AM	Alexander Melnikov	University of Alberta	<i>Option Price Bounds Determined by Comparison of Stochastic Processes and Market Completions</i>
10:45 AM	Marcos Escobar	Western University	<i>Portfolio Optimization under Solvency II Constraints.</i>
11:15 AM	Tony Ware	The University of Calgary	<i>Modelling Energy Commodity Prices with Polynomial Processes</i>
11:45 AM	Francois Watier	Université du Québec à Montréal	<i>First Passage Time Estimation of Diffusion Processes with Application in Portfolio Management</i>
Canadian Symposium on Fluid Dynamics - Drama Room 5			
10:15 AM	Boualem Khouider	University of Victoria	<i>Northward Propagation, Initiation, and Termination of Monsoon Intraseasonal Oscillations in a Zonally Symmetric Atmospheric Model</i>
10:45 AM	Francis Poulin	University of Waterloo	<i>Modelling Wind-Driven Oceanic Gyres</i>
11:15 AM	Michael Waite	University of Waterloo	<i>Random Forcing of Geostrophic Modes in Rotating-Stratified Turbulence</i>
11:45 AM			
Mathematics of Disease and Ecology - Drama Room 6			
10:15 AM	Thomas Hillen	University of Alberta	<i>The Metastatic Reproduction Number</i>
10:45 AM	Moriah Pellowe	University of Waterloo	<i>An Agent-based Framework of Tumour Heterogeneity</i>
11:15 AM	Carlos Contreras	University of Alberta	<i>Modelling the Effect of Low-Dose Radiation on the G2/M Transition</i>
11:45 AM	Adam Stinchcombe	University of Toronto	<i>Understanding Myelodysplastic Syndromes from Blood Cell Counts</i>
Scientific Computing - Contributed Talks - Drama Room 7			
10:15 AM	Jie Sun	Clarkson University	<i>Resilience of Network Synchronization Against Structural and Dynamical Perturbations</i>
10:45 AM	Koyaguerebo-lme Saint-Cyr	University of Ottawa	<i>Arbitrary Order A-Stable Methods for Ordinary Differential Equations via Deferred Correction</i>
11:15 AM	Paul Muir	Saint Mary's University	<i>Recent Advances in Gaussian Collocation Software for Boundary Value ODEs and 1D PDEs</i>
11:45 AM	Tony Humphries	McGill University	<i>Efficient Computation of Breaking Points in State-Dependent Delay Differential Equations</i>

Monday June 4, 2018 Thematic Sessions 4:00 PM - 6:00 PM			
Scientific Computing - Contributed Talks - Rehearsal Hall 1			
4:00 PM	Ronald Haynes	Memorial University	<i>Parallel Iterations for Nonlinear Boundary Value Problems</i>
4:30 PM	Richard Mikael Slevinsky	University of Manitoba	<i>A Spectral Method for Nonlocal Diffusion Operators on the Sphere</i>
5:00 PM	Chu Alex Shiu Lun	University of British Columbia	<i>Solving Heat Equation via a Combined Method of CPM and RBF</i>
5:30 PM			
Computational Mathematics and Applications - Drama Room 4			
4:00 PM	James Faeder	University of Pittsburgh	<i>Rule-Based Modeling of Biochemical Systems</i>
4:30 PM	Brian Ingalls	University of Waterloo	<i>Synthetic Biology Approaches to Suppression of Antibiotic Resistance: Toward Model-Based Design</i>
5:00 PM	Silvana Ilie	Ryerson University	<i>An Effective Hybrid Strategy for Stochastic Reaction-Diffusion Biochemical Systems with Delay</i>
5:30 PM	Raymond Spiteri	University of Saskatchewan	<i>High-Order Operator-Splitting Methods for the Bidomain and Monodomain Models</i>
Financial Mathematics - Rehearsal Hall 2			
4:00 PM	Traian Pirvu	McMaster University	<i>Longevity Bond Pricing in Equilibrium</i>
4:30 PM	Dan Rosen	University of Toronto	<i>Least-Squares Stress Testing: Integrating Economic Scenarios with Market and Credit Risk Simulations</i>
5:00 PM	Niushan Gao	Ryerson University	<i>A General Representation Theory for Risk Measures</i>
5:30 PM	Malek Ben Abdellatif	HEC Montréal	<i>Dynamic Programming and Parallel Computing for Valuing Two-Dimensional Derivatives</i>
CSFD Mini Symposium on Turbulence - Drama Room 5			
4:00 PM	Jahrul Alam	Memorial University	<i>Canopy Stress Method for Large Eddy Simulation of Wind Farms in Complex Terrain</i>
4:30 PM	Peter Taylor	York University	<i>On the Potential Impact of Lake Erie Wind Farms on Water Temperatures: Modelling Using COHERENS.</i>
5:00 PM	Alex Hay	Dalhousie University	<i>Turbulence in a High-Flow Tidal Channel: A Comparison of Results From a Standard Divergent-Beam Doppler Profiler and a Developmental Wide-Baseline Convergent-Beam Acoustic Doppler Instrument</i>
5:30 PM			
Mathematics of Disease and Ecology - Drama Room 6			
4:00 PM	Sivalog Sivaloganathan	University of Waterloo	<i>High Intensity Focused Ultrasound - The Future of Cancer Therapy?</i>
4:30 PM	Ali Mahdipour-Shirayeh	Princess Margaret Cancer Centre	<i>A Light on the Evolution of Colorectal and Intestinal Cancer</i>
5:00 PM	Raluca Eftimie	University of Dundee	<i>Immunotherapies and Virotherapies for Cancer: a Mathematical Approach to Understand a Delicate Balance Between Anti-Viral and Anti-Tumour Immune Responses</i>
5:30 PM	Tyler Cassidy	McGill University	<i>A Mathematical Model of Viral Oncology as an Immunoncology Instigator</i>
Mathematical Biology - Contributed Talks - Drama Room 7			
4:00 PM	Cody Koykka	Western University	<i>Modelling the Diverse Functions of Begging Behaviours</i>
4:30 PM	Jingjing Xu	Western University	<i>A Kin-selection Model on the Persistence of Cooperative Breeding: Does Group Augmentation Promotes Cooperation?</i>
5:00 PM	Nathan Marculis	University of Alberta	<i>Neutral Genetic Patterns for Stage-Structured Integrodifference Equations</i>
5:30 PM	Joshua LeClair	Western University	<i>Towards a Modelling Framework for Evolutionary Trap Dynamics</i>

Tuesday June 5, 2018 Thematic Sessions 10:00 AM - 12:00 PM			
Combinatorial Optimization - Rehearsal Hall 1			
10:00 AM	Jochen Koenemann	University of Waterloo	<i>Improved Approximation for Tree Augmentation via Chvatal Gomory Cuts</i>
10:30 AM	Ricardo Fukasawa	University of Waterloo	<i>The Chance-Constrained Vehicle Routing Problem</i>
11:00 AM	Bertrand Guenin	University of Waterloo	<i>Towards a Possible Resolution of the Flowing Conjecture</i>
11:30 AM			
Mini Symposium on Scientific Computing - Drama Room 4			
10:00 AM	Alexander Bihlo	Memorial University	<i>A Well-Balanced Meshless Tsunami Propagation and Inundation Model</i>
10:30 AM	Brittany Hamfeldt	New Jersey Institute of Technology	<i>Meshfree finite difference methods for fully nonlinear elliptic equations</i>
11:00 AM	Jessica Cervi	University of Saskatchewan	<i>Towards New High-Order Operator-Splitting Time-Integration Methods</i>
11:30 AM	Sebastian Dominguez	Simon Fraser University	<i>An overdetermined eigenvalue problem in linear elasticity</i>
Financial Mathematics - Rehearsal Hall 2			
10:00 AM	Matheus Grasselli	McMaster University	<i>Banking Networks and the Circuit Theory of Money</i>
10:30 AM	David Saunders	University of Waterloo	<i>Mean-Risk Portfolio Selection with Expectiles and the Omega Performance Measure</i>
11:00 AM	Tom Salisbury	York University	<i>Uncertain Correlation and Multivariate Credit Derivatives</i>
11:30 AM	Mark Reesor	Laurier	<i>Capital Structure Effects on the Prices of Equity Call Options: First Passage Time Approach</i>
Canadian Symposium on Fluid Dynamics - Drama Room 5			
10:00 AM	John Bowman	University of Alberta	<i>On the Global Attractor of 2D Incompressible Turbulence with Random Forcing and Friction</i>
10:30 AM	Greg Lewis	UOIT	<i>Flow Transitions in Sheared Annular Electroconvection</i>
11:00 AM	Lennaert van Veen	UOIT	<i>Towards the Computation of Time-Periodic Inertial Range Dynamics</i>
11:30 AM			
Mathematics of Disease and Ecology - Drama Room 6			
10:00 AM	Laura Cowen	University of Victoria	<i>Population Dynamics Without Individual Identification: Hidden Markov Modeling of Batch-Marking Data</i>
10:30 AM	Joanna Mills-Flemming	Dalhousie University	<i>Recent Developments in Aquatic Animal Movement Modelling</i>
11:00 AM	Eric Foxall	University of Alberta	<i>Phase Portrait of the Stochastic Logistic Process</i>
11:30 AM	Marie-Josée Fortin	University of Toronto	<i>Spatial Ecology From the Local to Regional Scales</i>
Mathematical Biology - Contributed Talks - Drama Room 7			
10:00 AM	Eric Cytrynbaum	University of British Columbia	<i>Cortical Microtubules Deflect in Response to Cell-Surface Curvature</i>
10:30 AM	Scott Greenhalgh	Siena College	<i>Fighting the Public Health Burden of AIDS with the Human Pegivirus</i>
11:00 AM	Gregory Kuling	University of Toronto	<i>Automatic Segmentation of MS Lesions using Dictionary Learning in Feature Space</i>
11:30 AM			

Wednesday June 6, 2018 Thematic Sessions 10:00 AM - 12:00 PM			
Combinatorial Optimization - Rehearsal Hall 1			
10:00 AM	Adrian Vetta	McGill University	<i>On the Dynamics of Ascending Combinatorial Auctions</i>
10:30 AM	Leszek Gasieniec	University of Liverpool	<i>Perpetual Maintenance of Machines with Different Attendance Urgency Factors</i>
11:00 AM	Kevin Cheung	Carleton University	<i>On the Minimum Directed Cutwidth Problem</i>
11:30 AM	Laurent Poirrier	University of Waterloo	<i>Implementation and Performance of the Simplex Method</i>
Computational Mathematics and Applications - Drama Room 4			
10:00 AM	Alireza Sayyidmousavi	Ryerson University	<i>Multi-Particle Collision Dynamics for Modeling Reaction-Diffusion Systems</i>
10:30 AM	Frederic Paquin-Lefebvre	University of British Columbia	<i>A Class of 2D Coupled Bulk-Surface Reaction-Diffusion Models and their Bifurcation Analysis</i>
11:00 AM	Samaneh Gholami	Ryerson University	<i>Model Reduction of Stochastic Models of Biochemical Systems</i>
11:30 AM	Scott MacLachlan	Memorial University of Newfoundland	<i>Preconditioned Iterative Techniques for Geophysical Electromagnetic Problems</i>
Financial Mathematics - Rehearsal Hall 2			
10:00 AM	Thomas F. Coleman	University of Waterloo	<i>Delta Hedging via Machine Learning (w/o parametric models)</i>
10:30 AM	Alexey Rubtsov	Ryerson University	<i>Systemic Risk Measures and Portfolio Choice</i>
11:00 AM	Rim Cherif	HEC Montréal	<i>Dynamic Programming for Valuing American Options Under Variance-Gamma Process</i>
11:30 AM	Ali Fathi	RBC	<i>Machine Learning for illiquid Asset Pricing</i>
Canadian Symposium on Fluid Dynamics - Drama Room 5			
10:00 AM	Gwynn Elfring	University of British Columbia	<i>Active Particles in Complex Fluids</i>
10:30 AM	Vakhtang Putkaradze	University of Alberta	<i>Variational Methods for Fluid-Structure Interactions: Applications to Tubes Conveying Fluid and Moving Porous Media</i>
11:00 AM	Rouslan Krechetnikov	University of Alberta	<i>On Break-Up of a Growing Liquid Cylinder</i>
11:30 AM	Mary-Catherine Kropinski	Simon Fraser University	<i>Fast Integral Equation Methods for CFD</i>
Mathematics of Disease and Ecology - Drama Room 6			
10:00 AM	Gail S. K. Wolkowicz	McMaster University	<i>Analysis of a Simplified Model of Anaerobic Digestion</i>
10:30 AM	David Earn	McMaster University	<i>Temporal and Spatial Patterns of Plague Epidemics in London from 1348 to 1666</i>
11:00 AM	Olga Vasilyeva	Memorial University	<i>Nonlinear Population Dynamics in River Networks</i>
11:30 AM	Peter Molnar	University of Toronto	<i>Balancing the Positive and Negative Impacts of Climate Change: How Life-Cycle Complexity Determines Parasite Fitness in a Warming Climate.</i>
Scientific Computing - Contributed Talks - Drama Room 7			
10:00 AM	Kevin Green	University of Saskatchewan	<i>Extended BACOLI: Solving One-Dimensional Multi-Scale Parabolic PDE Systems with Error Control</i>
10:30 AM	Keegan Kirk	University of Waterloo	<i>Error Analysis of a Space-Time Hybridizable Discontinuous Galerkin Method for the Advection-Diffusion Equation</i>
11:00 AM	Aili Shao	University of British Columbia	<i>Elliptic PDEs on Composite Domains via the Schwarz Alternating Method and the Closest Point Method</i>
11:30 AM			

Wednesday June 6, 2018 Thematic Sessions 3:30 PM - 5:30 PM**Scientific Computing - Contributed Talks - Rehearsal Hall 1**

3:30 PM	Giselle Sosa Jones	University of Waterloo	<i>Hybridizable Discontinuous Galerkin Method for Linear Free Surface Problems</i>
4:00 PM	Ludvig af Klinteberg	Simon Fraser University	<i>A Fast Integral Equation Method for the Navier-Stokes Equations in 2D</i>
4:30 PM	Sana Keita	University of Ottawa	<i>An Eulerian Droplet Model: Mathematical Analysis and Improvement</i>
5:00 PM			

Mini Symposium on Scientific Computing - Drama Room 4

3:30 PM	Katrin Rohlf	Ryerson University	<i>Weakly Compressible Flow Through a Cylinder with Density-Dependent Viscosity and Navier-Slip at the Wall</i>
4:00 PM	Paul Tupper	Simon Fraser University	<i>Fitting a Stochastic Model to Eye Movement Time Series</i>
4:30 PM	Tony Wong	University of British Columbia	<i>A numerical method for solving ODEs on surfaces</i>
5:00 PM	Bamdad Hosseini	California Institute of Technology	<i>Function Space MCMC for Posteriors with Non-Gaussian Priors</i>

Financial Mathematics - Rehearsal Hall 2

3:30 PM	Sebastian Jaimungal	University of Toronto	<i>Algorithmic Trading and Mean-Field Games with Latent Factors</i>
4:00 PM	Adam Metzler	Wilfrid Laurier University	<i>Modelling PD-LGD Correlation in Loan Portfolios: Some Interesting Observations</i>
4:30 PM	Walid Mnif	TD	<i>Some Analytical Advances in Risk Management</i>
5:00 PM	Alexander Alvarez	University of Prince Edward Island	<i>A Geometric Approach to Financial Risk Management</i>

CSFD Mini Symposium on Turbulence - Drama Room 5

3:30 PM	Kasper Juel Petersen	University of British Columbia	<i>Evaluation of RANS-Based Transition Models for Predicting Separation Bubbles on a NACA0018 Airfoil</i>
4:00 PM	Richard Karsten	Acadia University	<i>Large-Scale Turbulence Modelling and Measurement in Tidal Channels</i>
4:30 PM	Raymond Spiteri	University of Saskatchewan	<i>Mathematical Modelling and Simulation of the Lux Vertical Axis Wind Turbine</i>
5:00 PM	Andrew Gerber	University of New Brunswick	<i>HPC Oriented CFD Modeling of Tidal Flows in the Bay of Fundy Region</i>

Mathematics of Disease and Ecology - Drama Room 6

3:30 PM	Amber Smith	University of Tennessee	<i>Modeling T cell Mediated Control During Influenza Infection and Bacterial Coinfection</i>
4:00 PM	Angie Raad	York University	<i>Mathematical Modelling of Potential Mechanism for the Restoration of the T-Cell Homeostasis Along with a Sustained Decay in Viral Reservoir upon Infusion of CCR5 Gene Edited T-Cells in HIV Infected Subjects</i>
4:30 PM	David Dick	University of Western Ontario	<i>A Multiscale Model of the Evolution of HIV-1 at the Within- and Between-Host Levels</i>
5:00 PM	Jessica M Conway	Pennsylvania State University	<i>SIV Infection Dynamics in Vaginal Tissues</i>

Mathematical Biology - Contributed Talks - Drama Room 7

3:30 PM	Amjad Khan	Western University	<i>Mathematical Model of the Prophage Size Distribution in Bacterial Genomes</i>
4:00 PM	Christopher Heggerud	University of Alberta	<i>Stoichiometric Modeling and Multi-Scale Dynamics of Cyanobacteria</i>
4:30 PM	Selmane Schehrazad	University of Sciences and Technology Houari Boumediene	<i>Forecasting and Prediction of Scorpion Sting Cases on the Basis of Surveillance System</i>
5:00 PM	Tyler Pattenden	Western University	<i>The Effects of the Environment on Bacteriophage Virulence</i>

Thursday June 7, 2018 Thematic Sessions 9:00 AM - 11:00 AM

Scientific Computing - Contributed Talks - Drama Room 4			
9:00 AM	Justin Wan	University of Waterloo	<i>Numerical Method for Solving Optimal Mass Transport arising from Image Registration</i>
9:30 AM	Reza Zolfaghari	McMaster University	<i>A Hermite-Obreschkoff Method for Stiff High-Index DAEs</i>
10:00 AM	Eunice Chan	University of Western Ontario	<i>Algebraic Linearizations of Matrix Polynomials</i>
10:30 AM	Martin Do Pham	University of Waterloo	<i>Visualizing Fractal Patterns in DNA Sequences using Chaos Game Representation</i>
Financial Mathematics - Drama Room 7			
9:00 AM	Christina Christara	University of Toronto	<i>Option Pricing with Stochastic Correlations Via a PDE Approach</i>
9:30 AM	Sebastian Ferrando	Ryerson University	<i>Trajectorial Martingale Transforms. Convergence and Integration</i>
10:00 AM	David Farahany	University of Toronto	<i>Mixing LSMC and PDE Methods to Price Bermudan Options</i>
10:20 AM	Michael Chiu	University of Toronto	<i>Backward Simulation of Poisson Processes</i>
10:40 AM	Shengzhong Chen	Ryerson University	<i>Fatou properties and inf-convolutions of risk measures</i>
Fluid Dynamics - Contributed Talks - Drama Room 5			
9:00 AM	Rüdiger Brecht	Memorial University of Newfoundland	<i>Variational Integrator for the Rotating Shallow-Water Equations on the Sphere</i>
9:30 AM	Elsa Cardoso-Bihlo	Memorial University of Newfoundland	<i>Calibration of an Extended Multicloud Model</i>
10:00 AM	Eglal Ellaban	Ryerson University	<i>Instability of a Binary Liquid Film Flowing Down a Slippery Inclined Heated Plate</i>
10:30 AM			
Mathematics of Disease and Ecology - Drama Room 6			
9:00 AM	Lauren M. Childs	Virginia Tech	<i>Modeling the Impact of Antigenic Variation on Persistence and Infectivity of Malaria</i>
9:30 AM	Megan A. Greischar	University of Toronto	<i>Parasites Playing the Odds: How Mosquito Ecology Can Alter Malaria Infection Dynamics Within the Host</i>
10:00 AM	Ashrafur Rahman	York University	<i>Impact of Early Treatment Programs on HIV Epidemics: an Immunity-Based Mathematical Model</i>
10:30 AM	Chad R. Wells	Center for Infectious Disease Modeling and Analysis, Yale	<i>Quantifying Cell-To-Cell Infection in Lymphoid Tissue During Acute HIV Infection</i>