# Preliminary Program

- Lists titles and presenting authors
- Full details will be available once the program is finalized.

## Plenaries

### Welcome and Plenary: Sunday 11am-12.30pm. Rick Durrett
Three Aspects of Life on a Random Graph

### Monday 10-11am. Persi Diaconis
On Adding Up a List of Numbers (and other One-Dependent Determinental Processes)

### Tuesday 1.30-2.30pm. Jim Dai
Fluid and Diffusion Limits for Many-Server Queues

## Tutorials:

### Sunday 4-5:30pm. Claudia Klueppelberg
Modelling Dependence of Lévy Processes by Pareto Lévy Copulas

### Tuesday 10.30am-12pm. Peter Taylor
The Physics of Matrix-Analytic Algorithms

# Sessions S1: Sunday 2-3.30pm

**Stochastic Control**
On Stochastic Control Up to a Hitting Time: Optimality and Rolling-Horizon Implementation
*Presenting Author: Debasish Chatterjee*

MDP Algorithms for Portfolio Optimization Problems in Pure Jump Markets
*Presenting Author: Ulrich Rieder*

Expected and Sample-Path Constrained Average MDPs
*Presenting Author: Oscar Vega-Amaya*

Applications of Ergodic Control to Environmental Economics
*Presenting Author: Maro A. Mèndez-Salazar*

**Recent Developments in Optimal Stopping Problems**
The Best Choice Problem for Random Number of Objects with a Refusal Probability
*Presenting Author: Masayuki Horiguchi*

Multiple Sums-the-Odds Theorem
*Presenting Author: Hideo Kakinuma*

The Optimal Stopping of "Loop" Markov Chains
*Presenting Author: Perry Gillespie*

Numerical Approach to Multiple Exercise Boundaries of Multiple Exercise Options
*Presenting Author: Ryo Hirade*

**Risk**
Forward and Futures Prices with Bubbles
*Presenting Author: Robert Jarrow*

Stochastic Endogenous Growth and Growth Stocks
*Presenting Author: Steven S.G Kou*

Risk Measures on Orlicz Hearts
*Presenting Author: Patrick Cheridito*

Rebalancing Horizon and Risk Horizon
*Presenting Author: Paul Glasserman*

**Asymptotic Methods for Queueing Models**
A Class of Risk Processes with Delayed Claims: Ruin Probability Estimates under Heavy-Tailed Conditions
*Presenting Author: Ayalvadi Ganesh*

Measure Valued Processes in the Asymptotic Approximation of Many Servers Queues
*Presenting Author: Haya Kaspi*

Asymptotic Approximations for Many-Server Queues with Abandonment
*Presenting Author: Kavita Ramanan*

Diffusion Regime with Non-Degenerate Slowdown
*Presenting Author: Rami Atar*

**Transient Analysis**
Dynamic Scheduling of Impatient Jobs in a Clearing System with Multiple Servers
*Presenting Author: Evin Uzun*

The Concert Queueing Problem: A game of arrivals
*Presenting Author: Rahul Jain*

Transient asymptotics of Lévy-driven queues
*Presenting Author: Abdelghafour Es-Saghouani*

**Simulation**
A Bayesian Model for Simulations with Correlated Inputs
*Presenting Author: Canan Gunes*

Modelling Dependence with Copulas and Applications to Competing Risks
*Presenting Author: Kanji Yoneyama*

An Acceptance/Rejection Based Approach For Sampling From The Tail Of Bivariate Distributions
*Presenting Author: Soumyadip Ghosh*

**Approximate and Heuristic Methods for Stochastic Dynamic Programming Problems**
Nonlinear Approximate Dynamic Programming for Revenue Management
*Presenting Author: Dan Adelman*

The Knowledge Gradient Algorithm for a General Class of Online Learning Problems
*Presenting Author: Ilya Ryzhov*

Convergence Properties of Sequential Sampling Policies for Bayesian Information Collection
*Presenting Author: Peter Frazier*

The Design and Performance Analysis of Index Policies for the Admission Control and Routing of Impatient Customers for Service
*Presenting Author: Kevin Glazebrook*

**Staffing in Service Systems**
Hiring and Retention of Heterogeneous Workers
*Presenting Author: Alessandro Arlotto*

Capacity Planning Under Arrival Rate Uncertainty: Safety Staffing Principles Revisited
*Presenting Author: Ramandeep Randhawa*

A Little Flexibility is All You Need: Asymptotic Optimality of Tailored Chaining and Pairing in Queuing Systems
*Presenting Author: Achal Bassamboo*

# Sessions S2: Sunday 4-5:30pm

**Markov Chains, Graphs and Hamiltonicity**
A Convex Programming Approach to Hamiltonian Cycle Problem
*Presenting Author: V. S. Borkar*

Markov Chains and Optimality of the Hamiltonian Cycle
*Presenting Author: Nelly Litvak*

A Refined Polyhedral Domain for the Hamiltonian Cycle Problem
*Presenting Author: Ali Eshragh*

"Fractals" From the Moments of Spectra of Regular Graphs
*Presenting Author: Stephen Lucas*

**Applied Probability**
Bounding Ruin Probabilities of Controlled Discrete-Time Risk Processes
*Presenting Author: Maikol Diasparra*

Semi-Markov Control Systems with Unknown Holding Times Distribution
*Presenting Author: J. Adolfo Minjárez-Sosa*

Rational Swarms: A Bio-Inspired Scheme for Global Optimization
*Presenting Author: Alfredo García*

Self-Decomposability of the Present Value Distribution
*Presenting Author: Carlos G. Pacheco-González*

**Queues with Flexible Servers**
Dynamic Control of a Make-to-Order Manufacturing System with a Flexible Server and Setups
*Presenting Author: Nilay Tanik Argon*

Performance Bounds and Policy Structure for Parallel Flexible Servers
*Presenting Author: Michael Veatch*

Distributed Resource Allocation for Fork and Join Processing Networks
*Presenting Author: Cathy H. Xia*

Dynamic Server Assignment in the Presence of Setup Costs
*Presenting Author: Eser Kirkizlar*

**Scheduling and Allocation**
Analysis of a Bloom Filter Algorithm via the Supermarket Model
*Presenting Author: Haneen Mohamed*

Inducing Optimal Scheduling with Selfish Users
*Presenting Author: Paul Enders*

First Come First Served Infinite Bipartite Matching of Servers and Customers
*Presenting Author: Gideon Weiss*

**Efficient Simulation**
Efficient Simulation of Light Tailed Sums
*Presenting Author: Kevin Leder*

Exact and Efficient Simulation of Correlated Defaults
*Presenting Author: Kay Giesecke*

Efficient Simulation for Tail Probabilities of Gaussian Random Fields
*Presenting Author: Jingchen Liu*

Importance Sampling for Markov Process Expectations
*Presenting Author: Hernan Awad*

**Markov Decision Processes**
A Simplex-Type Algorithm for Infinite-Dimensional Linear Programs with Applications to Non-Homogeneous Infinite Horizon Markov Decision Processes
*Presenting Author: Archis Ghate*

Exact Finite Approximations of Countable State MDPs
*Presenting Author: Arie Leizarowitz*

Two Characterizations of Optimality in Dynamic Programming
*Presenting Author: William D. Sudderth*

Compactness of the Space of Non-Randomized Policies in Countable-State Sequential Decision Processes
*Presenting Author: Eugene A. Feinberg*

**Methods in Call Center Analysis**
Optimizing Daily Agent Scheduling in a Multiskill Call Center
*Presenting Author: Wyean Chan*

Staffing Call-Centers with Uncertain Demand Forecasts: A Chance-Constraints Approach
*Presenting Author: Itay Gurvich*

Monotonicity Results for Call Center Models
*Presenting Author: Ger Koole*

On the Duality Between Servers and Customers in Large-Scale Call Centers
*Presenting Author: Mor Armony*

# Sessions M1: 8-9:30am

**Mean Field Approximations**
A Local Mean Field Analysis of Security Investments in Networks
*Presenting Author: Marc Lelarge*

A Particle System in Interaction with a Rapidly Varying Environment: Mean Field Limits and Applications
*Presenting Author: David McDonald*

Asymptotic Stability Region of Slotted-Aloha
*Presenting Author: Alexandre Proutiere*

Fluid Limit of Diffusion of Innovation on Infinite Graphs
*Presenting Author: Vahideh H. Manshadi*

**Gerber-Shiu Functions**
On a Generalization of the Gerber-Shiu Function
*Presenting Author: David Landriault*

Gerber-Shiu Analysis with a Generalized Penalty Function
*Presenting Author: Gord Willmot*

A Gerber-Shiu Function for a Risk Process with MAP-2 Claims in the Presence of Interest
*Presenting Author: David Stanford*

Some Remarks on Risk Models with Surplus-Dependent Drift Rate
*Presenting Author: Eric Cheung*

**Financial Engineering**
Optimal Investment and Exit Decisions in the Face of a Declining Profit Stream
*Presenting Author: Dharma Kwon*

Pricing Occupation Time Derivatives with Jump Risk
*Presenting Author: Ning Cai*

Drawdowns and rallies in a finite time-horizon and applications
*Presenting Author: Olympia Hadjiliadis*

Pricing Immediate Capital Trades Using Asian Options
*Presenting Author: Jen-Lun Yuan*

**Scheduling and Bandwidth Sharing**
Diffusion Limits for Shortest Remaining Processing Time Queues
*Presenting Author: Christian Gromoll*

Bandwidth Sharing Networks with 0-Homogeneous Allocations
*Presenting Author: Matthieu Jonckheere*

Proportional Fairness and Its Relationship with Multi-Class Queueing Networks
*Presenting Author: Neil Walton*

Self-Adaptive Admission Control Policies for Resource-Sharing Systems
*Presenting Author: Varun Gupta*

**System Reliability and Queueing Models 1**
Genetic Algorithm for Optimal Thresholds of a Controllable Two-Server Queue
*Presenting Author: Hsin-I Huang*

Optimal Number of Minimal Repairs before Ordering Spare for Preventive Replacement
*Presenting Author: Yu-Hung Chien*

An Object Detection Using Adaptive Threshold for ThinPrep-Cervical Smear
*Presenting Author: Chun-Chieh Chen*

Optimization of k-out-of-n: F System with Server Asynchronous Working Vacations
*Presenting Author: Jyh-Bin Ke*

**Stochastic Simulation**
Lyapunov Inequalities, Subsolutions to an Isaacs Equation and Rare-Event Simulation of Markovian Networks
*Presenting Author: Jose Blanchet*

Stochastic Root Finding and Efficient Estimation of Convex Risk Measures
*Presenting Author: Rolf Waeber*

Computationally Efficiently Incorporating Tail Views in Mathematical Models
*Presenting Author: Sandeep Juneja*

Gamma Expansion of the Heston Stochastic Volatility Model
*Presenting Author: Paul Glasserman*

**Markov Decision Processes**
On Optimizing Taboo Criteria in Markov Decision Processes
*Presenting Author: Srinivasa Puranam*

A Two-Step Method to Characterize the Structure of the Optimal Stopping Policy
*Presenting Author: Sechan Oh*

A Dynamic Approach for Strategic Capacity Portfolio Planning under Uncertainties
*Presenting Author: Cheng-Hung Wu*

Properties of the relative value function in call and contact centre models
*Presenting Author: Flora Spieksma*

**Inventory and Revenue Management**

Selling with Binding Reservations in the Presence of Strategic Consumers
*Presenting Author: Nikolay Osadchiy*

Joint Capacity Allocation and Overbooking in Network Revenue Management
*Presenting Author: Huseyin Topaloglu*

Objective Operational Learning
*Presenting Author: Lian Yu*

On the Use of "Buy Up" as a Model of Customer Choice in Revenue Management
*Presenting Author: William L. Cooper*

## Sessions M2: 11:15am-12:45pm

**New Trends in Stochastic Systems**
Stationary Solutions for Stochastic Delay Differential Equations with Reflection
*Presenting Author: Ruth J. Williams*

Reversibility, Product-Form Solutions and Throughput Optimality in Discrete-Time Models of Wireless Networks
*Presenting Author: R. Srikant*

Departures From Queues in Series and the Largest-Eigenvalue Process for Wishart Random Matrices
*Presenting Author: Ton Dieker*

Correlation Decay and Efficient Inference in Markov Random Fields
*Presenting Author: Gamarnik, David*

**Influence of Tail Behavior on Stochastic Models**
The M/G/1 Queue with Regularly Varying Service Time Distribution: Intermediate Sojourn Time Asymptotics
*Presenting Author: Onno J. Boxma*

Transient Characteristics of Gaussian Queues
*Presenting Author: Michel Mandjes*

On the Structure of Max--Stable Processes
*Presenting Author: Stilian A. Stoev*

Large Deviation Principle for a Class of Long Range Dependent Infinitely Divisible Process
*Presenting Author: Souvik Ghosh*

**Financial Engineering**
On the Dual Problem Associated to the Robust Utility Maximization in a Market Model Driven by a Lévy Process
*Presenting Author: Leonel Ramón Pérez Hernández*

On the Density of Averaged Geometric Brownian Motion and Meijer-G Functions
*Presenting Author: Gerardo Hernandez-del-Valle*

HARA Equilibrium in Incomplete Continuous Markets
*Presenting Author: Kasper Larsen*

Regularities for Controlled Jump Diffusion Models
*Presenting Author: Xin Guo*

**Random Multi-Access Schemes in Wireless Networks**
Exploitation vs. Exploration Trade-Off in Distributed Random Opportunistic Spectrum Access
*Presenting Author: Alexandre Proutiere*

Throughput Balancing in Wireless Networks with Random Multi-Access
*Presenting Author: Peter van de Ven*

Stability of Random Multiple-Access Protocols
*Presenting Author: Seva Shneer*

Multi-Hop Flows in Wireless Random Multi-Access Networks
*Presenting Author: Sem Borst*

**System Reliability and Queueing Models 2**
A Discrete-Time Geo/G/1 Queue with a Single Vacation
*Presenting Author: Tsung-Yin Wang*

Optimal Age-Replacement Time Based on Cumulative Repair Cost Limit and Random Lead Time
*Presenting Author: Jih-An Chen*

Queueing and Reliability Measures for a Vacation Queue with an Unreliable Server and Repair
*Presenting Author: Jau-Chuan Ke*

Optimal Management of the Machine Repair Problem with Working Vacation: Newton's Method
*Presenting Author: Kuo-Hsiung Wang*

**Optimization**
Monte Carlo Inference on Sample-Path Roots
*Presenting Author: Raghu Pasupathy*

A new perspective on computing budget allocation for sample average approximation
*Presenting Author: Roberto Szechtman*

Using Markov Chains to Analyze the Effectiveness of Local Search Algorithms
*Presenting Author: Sheldon Jacobson*

**Approximation and Control of Stochastic Systems**
Modeling the Outsourcing of Discovery:  A Diffusion-Based Principal-Agent Problem
*Presenting Author: Sunil Kumar*

Distribution-Valued Heavy-Traffic Limits for the G/GI/Infinity Queue
*Presenting Author: Josh Reed*

The c m / q  Rule
*Presenting Author: Nahum Shimkin*

Dynamic Scheduling of an N-System with Impatient Customers
*Presenting Author: Amy R. Ward*

**Consumer-Oriented Stochastic Models**
On the Minimax Complexity of Pricing in a Changing Environment
*Presenting Author: Omar Besbes*

"We Will Be Right with You:" Managing Customers with Vague Promises and Cheap Talk
*Presenting Author: Gad Alon*

Capacity Investment Decisions under Periodic Forecast Updating
*Presenting Author: Ming Yuen*

A Call Center Model with Abandonments
*Presenting Author: Mark E. Lewis*

# Sessions T1: 8:30-10am

**Graphical Models and Inference Algorithms 1**
Matrix Completion from Fewer Entries
*Presenting Author: Andrea Montanari*

Randomized Rounding via Maximum Entropy Distributions
*Presenting Author: Amin Saberi*

Scheduling in Switched Networks
*Presenting Author: Devavrat Shah*

Scaling Phenomena in Switched Networks
*Presenting Author: Damon Wischik*

**Heavy Tails in Theory and Practice**
Effect of Truncation on Heavy-Tailed Model
*Presenting Author: Arijit Chakrabarty*

Tandem Queues with Blocking and Subexponential Service Times
*Presenting Author: Hayriye Ayhan*

Competitive Scheduling in a Large Deviations Setting
*Presenting Author: Bert Zwart*

Pagerank and Power Laws on Trees
*Presenting Author: Mariana Olvera-Cravioto*

**Financial Engineering**
Equilibrium Pricing in Incomplete Markets
*Presenting Author: Patrick Cheridito*

Optimal Trade Execution in Illiquid Markets
*Presenting Author: Mike Ludkovski*

A Stochastic Model for Order Book Dynamics
*Presenting Author: Sasha Stoikov*

Strategic Execution in the Presence of an Uninformed Arbitrageur
*Presenting Author: Ciamac C. Moallemi*

**Queues with Time-Varying Parameters**
Control of the Multiserver Queue with Time-Varying Arrival Rate
*Presenting Author: Barbara H. Margolius*

Analysis of Time Dependent Loss Queues with General Service Time Distribution
*Presenting Author: Navid Izady*

Analysis of Time-Dependent Queueing Networks
*Presenting Author: Dave Worthington*

Staffing Requirements Based on Infinite Server Models
*Presenting Author: Fernanda Campello*

**System Reliability and Queueing Models 3**
Analysis of an Unreliable Server M[x]/G/1 System with Randomized Vacation and a Delayed Repair
*Presenting Author: Kai-Bin Huang*

Texture Image Segmentation Using Adaptive Thresholding
*Presenting Author: Chun-Chieh Chen*

Batch Arrival M/G/1 Retrial Queue under Bernoulli Vacation Schedule
*Presenting Author: Fu-Min Chang*

MAP Modulated Fluid Flow Model with Server Control
*Presenting Author: Ho Woo Lee*

**Monte Carlo 1 - Rare-Events and Tail Probabilities**
Simulation Estimation of the Mean of a Non-Linear Function of a Conditional Expectation
*Presenting Author: Sandeep Juneja*

A Skew T-Copula Model for Portfolio Credit Risk with Efficient Simulation
*Presenting Author: Joshua C. C. Chan*

One-and-a-Half-Level Simulation
*Presenting Author: Jeremy Staum*

Efficient Simulation of Tail Probabilities of Logelliptical Random Variables
*Presenting Author: Leonardo Rojas Nandayapa*

**Decentralized Control of Communication Networks**
Concentration of Measure and Mixing for Markov Chains
*Presenting Author: Malwina Luczak*

Probabilistic Cellular Automaton and Product Measure
*Presenting Author: Jean Mairesse*

Local Control Rules for Globally Optimal Information Diffusion Using Network Coding
*Presenting Author: Laurent Massoulié*

A Multi-Class Model for a Large Number of TCP-Like Connections in a Network
*Presenting Author: Carl Graham*

**Stochastic Models in Revenue Management**
Congestion-Based Leadtime Quotation and Pricing for Revenue Maximization with Heterogeneous Customers
*Presenting Author: Baris Ata*

Network Revenue Management via Repeated LP Resolves
*Presenting Author: Sunil Kumar*

Pricing and Dimensioning Competing Large-Scale Service Providers
*Presenting Author: Itai Gurvich*

Dynamic Pricing with Financial Milestones: Feedback-Form Policies
*Presenting Author: Omar Besbes*

## Sessions T2: 10:30am-12pm

**Graphical Models and Inference Algorithms 2**
A Probabilistic Comparison of Bilateral and Multilateral Content Exchange
*Presenting Author: Christina Aperjis*

Counting Independent Sets Using BP for Sparse Graphs
*Presenting Author: Jinwoo Shin*

Convergence of the Belief Propagation Algorithm for Network Flow Problems
*Presenting Author: Yehua Wei*

Randomized Greedy Algorithm for Finding Large Independent Sets
*Presenting Author: David Goldberg*

**Stochastic Analysis**
Wiener-Hopf factorization and distribution of extrema for a family of Lévy processes
*Presenting Author: Alexey Kuznetsov*

An extension technique for solving non monotonic stochastic recursions
*Presenting Author: Pascal Moyal*

On the mean of a stochastic integral with non-Gaussian alpha-stable noise
*Presenting Author: Zbigniew Michna*

**Financial Engineering**
High-Water Marks and Risk Aversion
*Presenting Author: Paolo Guasoni*

Distribution-Free Arbitrage Bounds for Spread Options and Market-Implied Monotonicity Gap
*Presenting Author: Tai-Ho Wang*

A Bayesian Approach to Incorporate Model Ambiguity in a Dynamic Risk Measure
*Presenting Author: Nicole Bäuerle*

Exact Simulation of Point Processes with Stochastic Intensities
*Presenting Author: Kay Giesecke*

**Scheduling Disciplines**
On the Gittins Index in the M/G/1 Queue
*Presenting Author: Urtzi Ayesta*

Understanding and Improving the Inefficiency of Load Balancing Designs
*Presenting Author: Adam Wierman*

Asymptotically Optimal Parallel Resource Assignment with Interference
*Presenting Author: Sindo Núñez-Queija*

State-Dependent Response Times via Fluid Limits in Shortest Remaining Processing Time Queues
*Presenting Author: Douglas G. Down*

**Monte Carlo 2 - Particle Systems and Lattice Simulation**
Efficient Monte Carlo Simulation via the Generalized Splitting Method
*Presenting Author: Zdravko I. Botev*

Limiting Distributions for Randomly-Shifted Lattice Rules
*Presenting Author: Pierre L'Ecuyer*

Adaptation of the Proposal in SMC Methods: KLD-Based Criterions and Adaptive Algorithms
*Presenting Author: Julien Cornebise*

Some Observations on the Interacting Particle System Approach to Rare Event Estimation
*Presenting Author: Paul Dupuis*

**Markov Decision Chains, Complexity and Perturbations**
On Polynomial Cases of the Unichain Classification Problem for Markov Decision Processes
*Presenting Author: E.A. Feinberg*

Markov Decision Chains, Graphs and Hamiltonian Cycles
*Presenting Author: Jerzy Filar*

Limiting Optimality in Perturbed Linear Programming with Application to Markov Decision Processes
*Presenting Author: Vladimir Gaitsgory*

Quasi-Stationary Distributions as Centrality Measures for the Giant Strongly Connected Component of a Reducible Graph
*Presenting Author: K. Avrachenkov*

**Bandit Problems**
The Irrevocable Multi-Armed Bandit Problem
*Presenting Author: Vivek Farias*

Linearly Parameterized Bandits
*Presenting Author: Paat Rusmevichientong*

Sharp Dichotomies for Regret Minimization in Metric Spaces
*Presenting Author: Robert D. Kleinberg*

A Two-Armed Bandit Problem with Side Observations
*Presenting Author: Assaf Zeevi*

## Sessions T3: 3-4:30pm

**Stochastic Models with Lévy Input**
Lévy Processes with Adaptable Exponent
*Presenting Author: Onno Boxma*

A Lévy Input Model with Additional State-Dependent Services
*Presenting Author: Maria Vlasiou*

Eigenvalues of the Generator of a Spectrally-Negative Markov Additive Process
*Presenting Author: Jevgenij Ivanovs*

Markov Additive Growth Collapse Processes
*Presenting Author: Offer Kella*

**Applications with Matrix-Analytic Structure**
Branching Processes with Catastrophes
*Presenting Author: Guy Latouche*

A Recursion Formula for Compound Phase-Type Distributions
*Presenting Author: Jiandong Ren*

Trigonometric Integral Representations of the Transient Solution for the M/M/1 Queue with Time-Varying Parameters
*Presenting Author: Barbara Margolius*

A Model for Fire Spread Incorporating Brownian Perturbations
*Presenting Author: David Stanford*

**Actuarial Risk Theory**
Extending Pricing Rules to General Risk Functions, with Applications to Optimal Reinsurance
*Presenting Author: Jose Garrido*

On the Dual Risk Model with Budget Decisions
*Presenting Author: Kristina Sendova*

When Is a Horizontal Dividend Barrier Strategy Optimal if the Deficit at Ruin is Taken into Account?
*Presenting Author: Jean-Francois Renaud*

Ruin Analysis of a Threshold Strategy in a Discrete-Time Sparre Andersen Model
*Presenting Author: Steve Drekic*

**Matrix-Analytic Methods in Queueing**
Analysis of a Discrete-Time Retrial Queue with State-Dependent Arrivals
*Presenting Author: Jesus R. Artalejo*

Stability Conditions for Priority Queues with Customer Transfers
*Presenting Author: Qi-Ming He*

On a Queue with Interruption Controlled by a Super Clock and with a Bound on Maximum Number of Interruptions
*Presenting Author: A. Krishnamoorth*

Spectral Analysis of Circulant, Symmetric and Tridiagonal M/G/1- and GI/M/1-Type Markov Chains
*Presenting Author: Benny van Houdt*

**Robust Control of Large-Scale Server Pools**
Decentralized Load Balancing of Heterogeneous Grids
*Presenting Author: Douglas G. Down*

Blind Policies for Large Server Pools
*Presenting Author: Adam Shwartz*

Control of Systems with Flexible Server Pools: Order-Optimality
*Presenting Author: Tolga Tezcan*

Control of Systems with Flexible Server Pools: Shadow Routing Approach
*Presenting Author: Alexander Stolyar*

**Monte Carlo 3 - Adaptive Methods**
The Cross-Entropy Method: Statistical Applications and Statistical Extensions
*Presenting Author: Nicolas Chopin*

Monte Carlo Techniques for Selection of Non-Nested Models of Complex Data Structures
*Presenting Author: Adam Guetz*

A Hybrid Simulation-Optimization Algorithm for the Hamiltonian Cycle Problem
*Presenting Author: Ali Eshragh*

The Cross Entropy Method with Patching for Rare-Event Simulation of Markov Chains
*Presenting Author: Bahar Kaynar*

**Models in Queueing Analysis and Control**
Admission Control and Scheduling for Preventive Services
*Presenting Author: Lerzan Örmeci*

Markov Chains with Binomial Transitions: Modeling and Analysis of Queueing Systems with Synchronized Events
*Presenting Author: Stella Kapodistria*

Optimal Pricing of an M/M/1 Queue with Dynamic Service Control
*Presenting Author: Ioannis Dimitrakopoulos*

Customer Equilibrium Models in Queues with Batch Arrivals
*Presenting Author: Apostolos Burnetas*

**Inventory and Production Logistics**
Computing static and dynamic operating policies for a machine tool with stochastic tool life
*Presenting Author: Bernard F. Lamond*

A closed queueing network with greedy bulk servers of a distribution center
*Presenting Author: Liqiang Liu*

Benefits of Pooling in Service Parts Inventory Systems
*Presenting Author: Benhür Satir*

Some Properties of a Stochastic Programming Based Lower Bound for Assemble-To-Order Inventory Systems
*Presenting Author: Martin I. Reiman*

## Sessions T4: 5-6:30pm

**Time-Dependent Models and Convergence to Stationarity**
On the Transient M/M/N Queue in the Halfin-Whitt Regime
*Presenting Author: David A. Goldberg*

Spectral Gap of the Erlang-A Model in the Halfin-Whitt Regime
*Presenting Author: Johan S. H. van Leeuwaarden*

The Event Horizon for a Processor Sharing Queue
*Presenting Author: William A. Massey*

On Random Walks and Interchange Processes for Small Graphs
*Presenting Author: Ton (A. B.) Dieker*

**Polling Models**
Lévy-Driven Polling Models Part I: Distribution of the Joint Workload
*Presenting Author: Kamil M. Kosi\'nski*

Lévy-Driven Polling Models Part II: Stability Results
*Presenting Author: Jevgenijs Ivanovs*

A Polling Model with Multiple Priority Levels
*Presenting Author: Marko Boon*

Closed-Form Approximations for General Polling Systems
*Presenting Author: Erik Winands*

**Stochastic Modeling and Simulation in Financial Engineering**
Learning to Be Efficient
*Presenting Author: Pirooz Vakili*

Efficient Risk Estimation via Nested Simulation
*Presenting Author: Ciamac Moallemi*

Risk Analysis of Collateralized Debt Obligations
*Presenting Author: Kay Giesecke*

Optimal Investment with American Derivatives in a Regime-Switching Market
*Presenting Author: Tim Leung*

**Server Farms**
On the Gittins Index in the M/G/1 Queue
*Presenting Author: Ohad Perry*

Understanding and Improving the Inefficiency of Load Balancing Designs
*Presenting Author: N. Gautam*

Asymptotically Optimal Parallel Resource Assignment with Interference
*Presenting Author: Mor Harchol-Balter*

**Queueing Asymptotics**
Asymptotic behavior for PH/PH/3 queue with shortest queue discipline and jockeying
*Presenting Author: Yutaka Sakuma*

Sharp Asymptotics for Single-Server Queues
*Presenting Author: Henry Lam*

Heavy-Traffic Extreme-Value Limits for Erlang Delay Models
*Presenting Author: Guodong Pang*

An Analytic Approach for Tail Asymptotics of Stationary Distributions in Multidimensional Reflected Processes
*Presenting Author: Masakiyo Miyazawa*

**Monte Carlo 4 - Other Topics**
Adaptive and Non-Linear MCMC Algorithms
*Presenting Author: Eric Moulines*

Quantile Sensitivities
*Presenting Author: Bernd Heidergott*

Monte Carlo Sampling for Optimization Problems with Stochastic Dominance Constraints
*Presenting Author: Tito Homem-de-Mello*

General Bounds and Finite-Time Improvement for Stochastic Approximation Algorithms
*Presenting Author: Assaf Zeevi*

**Queueing Models for Transportation and Mobility Services**
Analysis of Parking-Induced Cruising Behavior using a Queueing Model with Reneging
*Presenting Author: Katsunobu Sasanuma*

Real-Time Pricing under Uncertainty for Loss Systems
*Presenting Author: Cathy H. Xia*

The Analytical Relationship of Variance of Waiting Time to Headway Distributions for Randomly Arriving Passengers
*Presenting Author: Yuan Yuan*

A Spatial Queueing Model of a Large-Scale Bike Sharing Program
*Presenting Author: Robert C Hampshire*

**Managing Inventories in Complex Stochastic Systems**
Performance Analysis of Assemble-to-Order Systems with Exogenous Lead Times
*Presenting Author: Alp Muharremoglu*

The Impact of Yield-Dependent Costs on Pricing and Production Planning under Supply Uncertainty
*Presenting Author: Burak Kazaz*

No-Holdback Allocation Rules for Continuous-Time Assemble-to-Order Systems
*Presenting Author: Yingdong Lu*

Sourcing From Multiple Unreliable Suppliers for Price-Dependent Demands
*Presenting Author: Qi Feng*

## Sessions W1: 8:30-10am

**Asymptotics, Reversibility and Efficient Simulation in Queues**
Sharp Asymptotics for Single-Server Queues
*Presenting Author: Henry Lam*

Comparing the Maximum of a Random Walk with the Maximum When Using Time-Reversed Increments
*Presenting Author: Karl Sigman*

Asymptotics, Reversibility and Efficient Simulation for Markovian Networks
*Presenting Author: Jose Blanchet*

Large Deviations for a Random Sign Lindley Recursion
*Presenting Author: Maria Vlasiou*

**Epidemics, Branching and Social Queues**
Extinction probability of a branching process in a Markovian random environment
*Presenting Author: Sophie Hautphenne*

Little's formula and evolution of cooperation in social animals
*Presenting Author: Hiroshi Toyoizumi*

On some continuous characteristics of a stochastic SIS model
*Presenting Author: M.J. Lopez-Herrero*

Spread of epidemics and rumours with mobile agents
*Presenting Author: Moez Draief*

**Distributions and Approximations**
An extension of the (a; b; 0) class of discrete distributions
*Presenting Author: Jiandong Ren*

Compound Poisson Approximation to Sums of Compound Negative Binomial Variables
*Presenting Author: Neelesh S. Upadhye*

Stein's Method for the Exponential Distribution
*Presenting Author: Erol Pekoz*

**Scheduling in Queueing Systems**
An MDP Model for Scheduling and Predictive Maintenance
*Presenting Author: John J. Hasenbein*

Dynamic Scheduling of Outpatient Appointments under Patient No-Shows and Cancellations
*Presenting Author: Vidyadhar Kulkarni*

Managing Queues with Heterogeneous Servers
*Presenting Author: Rhonda Righter*

Priority Scheduling in a Queueing System with Hidden Customer Type Identities
*Presenting Author: Nilay Tanik Argon*

**Queueing Systems**
Spatial polling system with myopic greedy service
*Presenting Author: Lasse Leskela*

On Tandem Blocking Queues with a Common Retrial Queue
*Presenting Author: Konstantin Avrachenkov*

A Multi-server, Finite Buffer Queueing Network Performance Model
*Presenting Author: Jim Smith*

Resource dimensioning through buffer sampling
*Presenting Author: Michel Mandjes*

**Optimizing Stochastic Systems**
Stochastic Programming for Fluid Networks with Parameter Uncertainty
*Presenting Author: Burak Buke*

Miracle of Regularization - a Robust Optimization View
*Presenting Author: Huan Xu*

New Development in Searching for Markovian Particles
*Presenting Author: Nedialko Dimitrov*

Simulation-Based Approximate Dynamic Programming for the Control of Re-Entrant Line Manufacturing Models: an Actor-Critic Architecture
*Presenting Author: Emmanuel Fernandez*

**MDP Applications: Optimal Policy Structure in Queueing and Inventory Problems**
Admission Control in Multiclass Queueing Networks with Blocking
*Presenting Author: William P. Millhiser*

Structural Results of Optimal Scheduling Policies for the Limited Processor Sharing Queue
*Presenting Author: Sandjai Bhulai*

Inventory Replenishment: Would You Use Less Replenishment If the Cost Per Machine Increased?
*Presenting Author: David Hodge*

Dynamic Pricing and Scheduling in a Multi-Class Queue
*Presenting Author: Eren B. Çil*

**Modeling**
Capacity allocation and rostering for an intensive care unit
*Presenting Author: Ilze Ziedins*

Heuristic modeling to Random Sequence Alignment with Gaps
*Presenting Author: Yonil Park*

A Flexible Business Process Modeling and Simulation Environment
*Presenting Author: Changrui Ren*

## Sessions W2: 10.30am-12pm

**Stochastic Networks**
Steady-State Multi-Server Queueing System in the Halfin-Whitt Regime
*Presenting Author: David Gamarnik*

Large Deviations of Jump Markov Processes Revisited
*Presenting Author: Kavita Ramanan*

Refined Square Root Staffing for Call Center with Impatient Customers
*Presenting Author: Bo Zhang*

Revisiting Stochastic Loss Networks: Structures and Algorithms
*Presenting Author: Mark S. Squillante*

**Stochastic Analysis in Network Services**
Filter Based Real Time Performance Modeling for Computer Systems
*Presenting Author: Dinesh Kumar*

Asymptotic Behavior of a Two Station Queue and Its Applications in Production Systems
*Presenting Author: Yingdong Lu*

Model Driven Optimization for Pageview Response Time in Web Systems
*Presenting Author: Li Zhang*

Dynamic Budget Allocation Mechanisms for Reservation Based Advertising
*Presenting Author: Ana Radovanovic*

**Financial Engineering**
An Approach for Reinsurance Optimization with Loss Dependent Insurance Premiums
*Presenting Author: Maik Wagner*

Pricing Collateralized Debt Obligations under a New Model
*Presenting Author: Xianhua Peng*

Threshold copulas and financial contagion
*Presenting Author: Fabrizio Durante*

Portfolio Selection Using Imprecise Probabilities
*Presenting Author: Diogo de Carvalho Bezerra*

**Stochastic Networks**
Dynamic Outsourcing for Call Centers
*Presenting Author: Y. Levent Kocaga*

Heavy Traffic Averaging Principles for Polling Stations with K Job Classes
*Presenting Author: Otis B. Jennings*

Augmented Fluid Models and Stability of Queueing Systems
*Presenting Author: Tolga Tezcan*

Lower Bounds for Switched Networks
*Presenting Author: Devavrat Shah*

**Queueing**
On the Stability of Queues with Delay-Dependent Workload
*Presenting Author: Carri W. Chan*

Analysis of non-Markovian state-dependent queueing systems
*Presenting Author: Young Myoung Ko*

Analysis of Oscillating M/G/1/n Systems
*Presenting Author: Fatima Ferreira*

**Efficient Simulation**
Exact Simulation of Stochastic Differential Equations
*Presenting Author: Nan Chen*

Adaptive Control Variates for Regenerative Steady-State Simulations
*Presenting Author: Sujin Kim*

On Adaptive Stratification
*Presenting Author: Gersende Fort*

How to Count Fast
*Presenting Author: Reuven Y. Rubinstein*

**Markov Chains and Markov Decision Processes**
Comparing Markov chains: Combining aggregation and precedence relations applied to sets of states
*Presenting Author: Ana Busic*

Restricted transitions in QBDs, M/G/1- and GI/M/1-type Markov chains
*Presenting Author: Juan Perez*

Risk-constrained Markov Decision Processes
*Presenting Author: Rahul Jain*

Markov Decision Processes with Risk-Sensitive Average Optimality Criteria
*Presenting Author: Emmanuel Fernandez*

**Stochastic Models for Health Care**

Optimal Patient and Personnel Scheduling Policies for Care-At-Home Service Facilities
*Presenting Author: Sandjai Bhulai*

Time-Dependent Analysis for Refused Admissions in Clinical Wards
*Presenting Author: René Bekker*

Statistical Data Analysis of Ambulance Call Volumes
*Presenting Author: Rob van der Mei*

An MDP Approach for the Optimal Issuing Policy of a Blood Product
*Presenting Author: René Haijema*