# August 18 - 21, 2010 Fields-MITACS Workshop on

# Approximations, Asymptotics and Resource Management for Stochastic Networks

# School of Mathematics and Statistics, Herzberg Building, HP 4351 Carleton University

Organizers: Minyi Huang and Yiqiang Q. Zhao

### Wednesday August 18

1:00-1:30pm (Coffee/Registration)

1:30-3:00pm (Tutorial 1) Michel Mandjes, University of Amsterdam and CWI

Levy-driven Queues

3:00-3:15pm Coffee/Tea

3:15-4:45pm (Tutorial 2) Masakiyo Miyazawa, Tokyo University of Science

Light Tail Asymptotics for Stochastic Networks

#### **Thursday August 19**

8:30-9:00am (Coffee/Registration)

9:00-10:30am (Tutorial 1) Michel Mandjes, Levy-driven Queues

10:30-10:45am Coffee/Tea

10:45am-12:15pm (Tutorial 2) Masakiyo Miyazawa, Light Tail Asymptotics for Stochastic Networks

12:15-1:00pm (Lunch, provided)

#### 1:00-2:00 **Doug Down**, McMaster University

State-Dependent Response Times via Fluid Limits in Shortest Remaining Processing Time Queues

### 2:00-2:30 Peter Rabinovitch, RIM

Critical Paths in Random Networks

2:30-3:00 Coffee/Tea

3:00-4:00 Yuanyuan Liu, Central South University

Subgeometric Ergodicity and Integral-type Functionals for Continuous-time Markov Chains

4:00-4:30 **Zhidong Zhang**, University of Saskatchewan

Call Centres with Balking and Abandonment: from Queueing to Queueing Network Models

### Friday August 20

8:30-9:00am (Coffee/Registration)

9:00-10:30am (Tutorial 1) Michel Mandjes, Levy-driven Queues

10:30-10:45am Coffee/Tea

10:45am-12:15pm (Tutorial 2) Masakiyo Miyazawa, Light Tail Asymptotics for Stochastic Networks

12:15-1:00pm (Lunch, provided)

#### 1:00-2:00 Yuliy Baryshnikov, Alcatel-Lucent Bell Labs

Search on the Edge of Chaos

2:00-2:30 **Guichang Zhang**, University of Saskatchewan

Infinite-server Queues with Time-varying Rates

2:30-3:00 Coffee/Tea

3:00-4:00 Hui Li, Mount Saint Vincent University

Light-Tailed Behaviour for Random Walks in the Quarter Plane

4:00-4:30 **Gheorghe Miscoi**, Free International University of Moldova

Multidimensional Analogs of the Kendall Equation and Its Application for Evaluating the Traffic Characteristics

## **Saturday August 21**

8:30-9:00am (Coffee/Registration)

9:00-10:30am (Tutorial 1) Michel Mandjes, Levy-driven Queues

10:30-10:45am Coffee/Tea

10:45am-12:15pm (Tutorial 2) Masakiyo Miyazawa, Light Tail Asymptotics for Stochastic Networks

12:15-1:00pm (Lunch, provided)

1:00-2:00 Peter Glynn, Stanford University

Explicit Computation and Asymptotics for Finite Buffer Models

2:00-2:30 Qishu Cai, University of Waterloo

Shipment Consolidation by Private Carriage: A Matrix-Analytical Approach

2:30-3:00 Coffee/Tea

3:00-4:00 Ravi R. Mazumdar, University of Waterloo

Congestion in Large Balanced Fair Links

4:00-4:30 TBA