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Curriculum Vitae

Gennady Shaikhet, PhD
School of Mathematics and Statistics,
Carleton University

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Personal

Birth date	June 25, 1978
Place of birth	Donetsk, Ukraine
Citizenship	Israeli, Canadian (Permanent Residency)
Marital status	Married to Alina
Children	Michael, Margarita
Languages	Russian, Ukrainian, Hebrew, English

Education

Ph.D.	Statistics	Faculty of Industrial Engineering and Management Technion, Israel, 2007
MSc.	Statistics	Faculty of Industrial Engineering and Management Technion, Israel, 2003
B.A.	Mathematics	Donetsk State University, Ukraine, 1999

Employment

July 2010 - Present	Assistant Professor School of Mathematics and Statistics Carleton University
Sept 2007 - June 2010	Postdoctoral Associate Department of Mathematical Sciences Carnegie Mellon University, USA
Sept 2000 – April 2007	Teaching Assistant Faculty of Industrial Engineering and Management Technion, Israel

Research Interests

Probability Theory, Stochastic Processes and Applications: Approximations and Control of Large Scale Service Networks, Financial Engineering, Operations Management

Research Awards

- NSERC grant for 2011-2016
- NSERC Early Career Supplement for 2011-2016

Graduate Supervision

PhD students (in progress):

Chi Zhang (with Prof. Yiqiang Zhao) - "*Approximations and control of stochastic networks*".

MSc Students:

Rasha Sakr - "*Fluid approximations and optimality in charging of electric vehicles*".

Yiqun Song - "*Numerical analysis and simulations in the complex healthcare systems* ".

Xiaotong Wu (with Prof. Yiqiang Zhao) - " *Optimal trading in the dynamic market* ".

Undergraduate Supervision

Nick Toller - "*Optimal stopping, with applications to financial markets".*

Papers in Preparation

- **A diffusion approximation of G/G/N networks in non-degenerate slowdown regime**
- **Ergodic Control Problems for Many-Server Networks**

Papers Submitted

- **Asymptotically Optimal Scheduling of Random Malleable Demands in Smart Grid** (with M. Karbasioun, E. Kranakis and I. Lambadaris)*, to IEEE Transactions.*

Papers in Refereed Journals

- **Sensor Allocation Problems on the Real Line** (with E. Kranakis). *Journal of* (*Advances in) Applied Probability.* Forthcoming.
- **Necessary Condition for Null Controllability in Many-Server Heavy Traffic** (2015). *Annals of Applied Probability, Vol. 25, No. 1, 406 – 428.*

- **Optimal Execution in a General One-Sided Limit-Order Book** (2011) (with S. Shreve and S. Predoiu). *SIAM Journal on Financial Mathematics, 2011. Vol. 2, pp. 183-212.*
- **Simplified Control Problems for Multi-Class Many-Server Queueing Systems** (2009) (with R. Atar and A. Mandelbaum). *Mathematics of Operations Research, Vol. 34, No. 4, November, pp. 795-812.*
- **Critically loaded queueing models that are throughput sub-optimal** (2009) (with R. Atar). *Annals of Applied Probability, 2009, Vol. 19, No. 2, 521–555.*
- **Queueing Systems with Many Servers: Null Controllability in Heavy Traffic** (2007) (with R. Atar and A. Mandelbaum). *Annals of Applied Probability, 2007, Vol. 16, No. 4, 1764–1804.*

Papers in Refereed Conference Proceedings

- **Optimal Charging Strategies for Electrical Vehicles under Real Time Pricing** (2014) (with M. Karbasioun, E. Kranakis and I. Lambadaris). In proceedings of IEEE Smart Grid Comm., Nov 3-6, 2014, Venice, Italy.
- **Displacing Random Sensors to Avoid Interference** (2014) (with E. Kranakis). In Proceedings of COCOON 2014 - The 20th International Computing and Combinatorics Conference. August 4-6, Atlanta, Springer LNCS.
- **Asymptotic Convex Optimization for Packing Random Malleable Demands in Smart Grid** (2013) (with M. Karbasioun, E. Kranakis and I. Lambadaris). IEEE ICC 2013 - Selected Areas in Communications Symposium, Communication QoS, Reliability and Modeling Symposium
- **Power Strip Packing of Malleable Demands in Smart Grid** (2013) (with M. Karbasioun, E. Kranakis and I. Lambadaris). IEEE ICC 2013 - Selected Areas in Communications Symposium, *SAC - Smart Grid*
- **About Credit Risk Estimation** (1999). Proceedings of the Second International School on Actuarial and Financial Mathematics. 8-12 June 1999 in Kyiv, Ukraine. Theory of Stochastic Processes. Vol. 5(21), no.1-2, 1999, pp. 166-174 and Vol.6 (22), no.3-4, 2000, pp. 252-254.
- **Stability of stochastic linear difference equations with varying delay** (1998). In Advances in Systems, Signals, Control and Computers (V. Bajic Ed.), ISBN 0-620-23136-X, IAAMSAD and SA branch of the Academy of Nonlinear Sciences, Durban, South Africa, 1998, pp. 101-104.

Conference Talks

- **Sensor Allocation Problems on the Real Line** (2015) – invited speaker, SSC annual meeting, Halifax
- **Necessary Condition for Null Controllability in Many-Server Heavy Traffic** (2012) **–** Canadian Operations research Society (CORS) annual meeting.
- **Throughput Optimal Queueing Networks** (2010) – Institute for Operations Research and the Management Sciences (INFORMS) annual meeting
- **Optimal Execution in a General One-Sided Limit-Order Book** (2010) - Congress on Financial Mathematics

Other Administrative and Professional Service

- Co-organizer and coordinator of *Math Kangaroo Adventures*
- Member of the 2014 *Task Force* committee responsible for a 5-year strategic plan of the School
- Refereed numerous papers in high profile journals like *Annals of Applied Probability*, *SIAM Journal on Financial Mathematics*, *Queueing Networks*, *Operations Research*, *and Stochastic Models*
- Refereed probability textbooks for publishers like *Cambridge University Press* and *CRC Press*
- Jury in the Canadian Operations Research Society's "Best Student's Paper" committee, 2013
- Various PhD and MSC defenses; currently in 2 PhD committees (Econ and Ottawa U)