Kavita Ramanan

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Research Interests Probability theory and stochastic processes: stochastic analysis; large deviations; high-dimensional probability; interacting particle systems; Gibbs measures and phase transitions; applications to stochastic networks and statistical physics.

Education

Jun 1992	B.Tech. Chemical Engineering, IIT Bombay, India
May 1993	M.Sc. Applied Mathematics, Brown University, Providence, RI
May 1998	Ph.D. Applied Mathematics, Brown University, Providence, RI

Employment

07/2018–present	Roland George Dwight Richardson University Professor,
01/2019–present	Deputy Director, ICERM, Brown Univ, Providence, RI
01/2010–06/2018	Professor, Applied Mathematics, Brown Univ, Providence, RI
	Associate Chair (2017–);Director of Graduate Studies (2011-2014);
07/2009–12/2009	Professor, Math Sciences, Carnegie Mellon Univ, Pittsburgh, PA
09/2003–06/2009	Assoc. Professor, Math Sciences, Carnegie Mellon Univ, Pittsburgh, PA
11/1997–12/2002	Member of Technical Staff, Math Center, Bell Labs, NJ
02/1997–10/1997	Postdoctoral Fellow, Technion, Haifa, Israel (with O. Zeitouni)

Awards and Honors

- Newton Award (2020); Guggenheim Fellowship (2020); Simons Fellowship (2018)
- Elected Fellow of SIAM: Society of Industrial and Applied Mathematics (2020); Fellow of AAAS: American Association for the Advancement of Sciences (2019); Fellow of INFORMS: Institute for Operations Research and Management Sciences (2018); Fellow of AMS: American Mathematical Society (2018); Fellow of IMS: Institute of Mathematical Statistics (2013)
- Distinguished Alumnus Award, IIT Bombay (2020); IMS Medallion (2015);
- Erlang Prize for "Outstanding Contributions to Applied Probability" (2006)
- Select Plenary/Keynote lectures: *German Probability and Statistics Days,* Freiburg (2018); *AMS Invited Address*, New York (2017); *AMCCS Conference*, Waterloo (2017); *Hanna Neumann Lecture*, Australian Math Society Meeting, Canberra (2016); *INFORMS Annual Meeting,* PA (2015), *Stoch. Proc. & their Applications*, Boulder (2013); *Seminar on Stoch. Proc.*, Toronto (2007); *Skorokhod space*, Kiev (2007)
- Select Courses: *Cornell Probability Summer School* (2019); *CFM-Imperial Distinguished Lectures* (2017); *INFORMS International Meeting*, Hawaii (2016); *Midwest Probability Colloquium,* Evanston (2015),
- Stella Dafermos Award (1996)
- Simon Ostrach Fellowship (1995-1996)
- President's Award for Excellence in Teaching (Honorable Mention) (1995)

Publications, Invited Lectures, Editorships and Grants Summary

- $>$ 5000 Citations; H-index = 29; (Google Scholar)
- $\sim$ 70 Publications in refereed book chapters (2), conferences and journals
- 4 U.S. Patents granted
- Over 100 invited conference talks and university seminars/colloquia worldwide
- Have served on editorial boards of 12 Journals; Guest Editor, 1 volume
- Grants in the last 5 years – sole PI: 7 NSF grants - 5 research, 2 conf; 1 ARO grant, 1 DoD grant; co-PI: 4 research grants (1 ARO, 1 AFOSR, 2 NSF)

Mentoring Summary

- Mentor: 9 Post-doc fellows, 12 PhD, 2 Masters, 12 Undergraduate and 3 Visiting students

Select Visiting Positions

Visiting Professor	Oxford University (May, 2019)
Visiting Professor	Stanford University (Feb, 2019)
Invited Member	Mathematical Sciences Research Institute, CA (Aug, 2015)
Visiting Researcher	Microsoft Research, New England (Sep-Nov 2014)
Guest Researcher	Mathematisches Forschungsinstitut, Oberwolfach, Germany (Jun 2011)
Consultant	Microsoft Theory Group; Cambridge, US (Aug 2011), Redmond, Seattle (Nov-Dec 2006 and Mar-Apr 2003)
Visiting Fellow	Newton Institute for Math Sciences, Cambridge, UK (Mar-May 2010)
Visiting Professor	Courant Institute, NYU (Jan-Jun 2007)
Consultant	Microsoft Theory Group, Redmond, (Nov–Dec 2006)
Visiting Professor	University of Washington, Seattle (Sep-Nov 2006)
Consultant	INRIA, Rocquencourt, France (Dec 2013, Jun 2004 and Aug 2002)
Visting Scientist	Technion, Haifa, Israel (Jun 2003 and Jul 2001)
Visiting Scientist	University of Cergy-Pointoise, France (May 2003)
Visiting Professor	University of Auckland, New Zealand (Feb-Mar 2003)
Visiting Scientist	Ecole Normale Superieure, Paris (Jul 1999)

Editorships

Area Editor

- Mathematics of Operations Research [Stochastic Models] (Nov, 2016-Dec 2019)

Editorial Board

- American Mathematical Society Student Mathematical Library series (2020–present)
- Annals of Probability (2006-2012 and 2021-)
- Annals of Applied Probability (2009-2017)
- Applied Mathematics and Optimization (2019-)
- Communications of the American Mathematical Society (Dec 2020-Jan 2025)
- Mathematics of Operations Research (2007-present)
- Queueing Systems – QUESTA (2008-present)
- Guest Editor, special QUESTA volume on "Stochastic Networks" (2011)
- SIAP: SIAM Journal of Applied Math (2018-)
- SIMODS: SIAM Journal on the Mathematics of Data Science (Jan 2021-)
- Stochastic Analysis and Applications (2002-2010)
- Stochastic Models (2019-)
- Bhavana Mathematics Magazine – Corresponding Editor (2020-)

Grants

- "Uncovering hidden dynamics by exploiting the algebra of path signatures," Newton Award PI, DoD (8/15/2020–2/15/2020)
- "Analysis of high-dimensional stochastic systems," PI, NSF (8/2020–7/2023)
- "Asymptotic Behavior of Strongly Interacting Markov Chains", PI, ARO (6/1/2020–12/30/2022)
- "Institute for Computational and Experimental Research in Mathematics (ICERM)" co-PI, NSF (9/1/2020-8/31/2025)
- "High-dimensional phenomena and rare events," PI, NSF (9/1/2017–8/31/2020)
- "Rigorous Approximations of Stochastic Network Dynamics" PI, NSF (9/1/2015–8/31/2018)

- "Problems at the Interface of Stochastics and Analysis," PI, NSF (9/1/2014–8/31/2017)
- "Stability, Sensitivity & Optimization of Stochastic Systems," PI, NSF (9/1/2012–8/31/2015)
- "RTG: Integrating Dynamics & Stochastics (IDyaS)," co-PI, NSF (7/1/2012–5/31/2017)
- "Stability & Numerics for Weakly Interacting Particle Systems," co-PI, AFOSR (7/15/2012–7/14/2016)
- "Rare Events, Control & Metastability of Weakly Interacting Particle Syst.," co-PI, ARO (5/31/12-5/30/16)
- "Travel Grant for the Applied Probability Society Conference," PI, NSF (2/1/2011–1/31/2013)
- "Analysis of Large-Scale Stochastic Systems," PI, NSF (9/1/2009–8/31/2013)
- "Asymptotic Analysis & Control of Stochastic Networks," PI, NSF (9/1/2007-8/31/2011)
- "Mathematics of Stochastic Networks," PI, NSF (09/1/2004-08/31/2008)
- US-Israeli Binational Science Foundation (10/2007–10/2011)
- "The Asymptotic Analysis of Time Varying Queueing Systems," PI, NSF (09/2004-09/2006)
- NZIMA (New Zealand Institute of Math and its Applications), Research grant, Mar 2003

Professional Service

Service to the Scientific Community

- Associate Director, ICERM (July 2020-present); Deputy Director, ICERM (Jan–June 2020)
- Member of Scientific Advisory Boards
—ICERM (2017–2020)
—Oxford-Imperial Centre for Doctoral Training (CDT) (2019–2024)
- Member of Prize Committees
—2020 Marc Yor Prize Committee
—2019 ICIAM Maxwell Prize Subcommittee
—2018 Doeblin Prize Committee (Chair)
—APS Erlang Prize Committee (2014–2017)
—INFORMS Nicholson Prize Committee (2013; Co-chair, 2014)
- Member of Other Committees
—AMS Invited Address Committee for National Meetings (Feb 2021–Jan 2024)
—AMS Committee on Committees (Feb 2021-Jan 2023)
—Member-at-Large, AWM Executive Committee (2018-2022)
—IMS Council (2015-2018)
—AMS Nominating Committee (2015-2017)
—AWM Student Chapters Committee (2015-2018, Chair 2016-2017)
—Scientific Council of SMAI [French Society for Applied Math] (2014–)
—IMS Committee on Special Lectures (2014-2017)
—IMS Nominations Committee (2011-2013)
—Bernoulli Society Nominations Committee (2013-2016)
—Bernoulli Society ad-hoc committee for conferences
- Member of Panels
—Expert Evaluator, KTH, Stockholm (2014, 2016)
—ERC (European Research Commission) Consolidator Grant Panel (2013)
—Evaluation Panel of INRIA, France (2012)
—Multiple NSF and ARO Panels, USA (2006–present)
- Major Conferences Organized/co-organized
—Conference on New Developments in Probability (Virtual, May 2021)

—Program on Advances in Applied Probability II (ICTS Virtual, Jan 2021)
—Seminar on Stochastic Processes, Brown University (May 9–12, 2018)
—*WINRS (Women's Networking Research Symposium)*, New England pan-AWM Student chapter conference, Brown University (Mar, 2017)
—Conference on *New Developments in Probability*, Northwestern University (May, 2016)
—IMI Meeting on *Limit Theorems in Probability*, Bangalore, India (Jan 2013)
—Semester program on *Computational Challenges in Prob.*, ICERM, Providence (Fall 2012)
—INFORMS Applied Probability Conference, Stockholm, Sweden (Jul 2011)
—Young Researchers' Meet, Providence, RI (May 2011)
—*Stochastic Networks* meeting, Newton Institute, Cambridge, UK (Mar 2010)
—International conference on *Stochastics and Dynamics*, Brown Univ, Providence (Apr 2011)
—CNA (Center for Nonlinear Analysis) Summer schools, Pittsburgh, PA (Jun 2008 and Jun 2006)

◦ Steering and Scientific Committee Member for Conferences
—Conference on Stochastic Processes and their Applications (Jun 2021)
—SNAPP seminar series (Fall 2020–)
—2nd Conference on New Developments in Probability, Tulane (May 2020)
—XV Latin-American Congress in Probability and Statistics, Mexico (Dec 2019)
—"Program on Advances in Applied Probability", ICTS, Bangalore (Aug 2019)
—Organizing Committee Member, SIAM Annual Meeting, Portland, Oregon (Jun 2018)
—39th Conf. on Stochastic Processes and their Applications, Moscow (Jun 2017)
—Seminar on Stochastic Processes (2013-present)
—Stochastic Processes and their Applications (2010-2015; Chair, 2016-2018)
—Stochastic Networks (2008-present)
—AMS Eastern Section Program Committee (2012-2014)
—8th World Congress on Probability and Statistics (2010-2012)

◦ Conference Program Committee member
—over 45 conferences in applied math, probability, operations research and computer science

◦ Book Reviewer for AMS, Cambridge University Press, JASA, Springer-Verlag

◦ Society Memberships
—AAAS, AMS, APS, AWM, Bernoulli, IMS, INFORMS, SIAM

University Service

◦ Cluster Hire Committee, Brown University (2020-2021)
◦ Open Access Committee, Brown University (2019-2020)
◦ First Readings Seminar Leader, Brown University (2017, 2016)
◦ College Curriculum Committee, Brown University (2016)
◦ Provost Search Committee, Brown University (2014, 2015)

Departmental Service

◦ Associate Chair, Division of Applied Math, Brown University (2017–2019,2020-)
◦ Director of Graduate Studies, Brown University (2011-2014)
◦ Graduate Admissions Committee, Brown University (2020-)
◦ Diversity Committee, Division of Applied Math, Brown University (2019-2020)
◦ Colloquium Committee, Division of Applied Math, Brown University (2017–)
◦ Faculty Diversity Action Plan Group, Brown University (2017)

- Diversity and Inclusion Action Plan Committee, Brown University (2016,2019-2020)
- Prager Search Committee, Brown University (2015-Chair; 2016)
- Departmental Review Committee, Brown University (2013)
- Sheridan Center, Department Liaison, Brown University (2012, 2013)
- Graduate Admissions Committee, Brown University (2010-2014; 2020-)
- Scientific Computing position Search Committee, Brown University (2011)
- Departmental Review Committee, Carnegie Mellon University (2008)
- Undergraduate Curriculum Committee, Carnegie Mellon University (2003-2005)

Teaching

- Graduate Courses
  —Interacting Particle Systems (Fall, 2020)
  —Scaling Limits of Stochastic Networks (Spring, 2017)
  —Markov processes and Stochastic Analysis (Fall, 2016)
  —Stochastic Processes on Graphs (Spring, 2016)
  —Graduate Seminar on Coupling (Spring 2006)
  —Graduate Probability I and II (Fall 2010, 2017, 2020, Spring 2011, 2016, 2020)
  —Stochastic Differential Equations (Spring 2012)
  —Topics in Stochastic Processes: Graphical Models (Fall 2012)
  —Stochastics and Dynamics (Spring 2014)
  —Mathematics of Stochastic Networks (Spring 2017)
  —Stochastic Calculus I (Fall 2004-2009), Stochastic Calculus II (Spring 2008, 2009)

- Undergraduate Courses
  —Stochastic Operations Research (Spring 2018)
  —Senior Seminar, Mathematics of Random Networks (Fall 2011)
  —Calculus in 3D (Spring 2004, 2006)
  —(Honors) Probability (Fall 2004, 2005, 2007, 2009)

Advising and Mentoring

- Post-doctoral fellows mentored/co-mentored (9) and their subsequent employment
  —G. Shaikhet (2007-2009) Assistant Professor, Carleton Univ, Canada
  —W. Kang (2005-2009) Assistant Professor, Univ of Marlyand, Baltimore County
  —A. Ganguly (2012-2013) Assistant Professor, Louisiana State Univ., Baton Rouge
  —A. Smith (2012-2013), Assistant Professor, Univ of Ontario, Canada
  —V. Laschos (2013-2015), Post-doctoral Researcher at Technische Universität, Berlin, Germany
  —D. Lipshutz (2013-2017) Associate Research Scientist, Flatiron Institute, New York, New York
  —D. Lacker (2015-2017) Assistant Professor, Columbia University, New York, New York
  —R. Wu (2017-2018) Assistant Professor, Iowa State University, Ames, Iowa
  —D. Mukherjee (2018-2019) Assistant Professor, Georgia Tech. Atlanta, Georgia

- Masters students (2) and their next position
  —Runhan Xie (2020),
  —N. Shankar (2008), Vice President, Highbridge Capital management

- Graduate students (12) and their next jobs
  —M. Cudina (2003-2006) Clinical Assistant Professor, Dept. of Math, UT Austin
  —A. Kontorovich (2004-2007) Assistant Professor, Ben Gurion Univ, Israel
  —S. Kar (2006-2010) Assistant Research Professor, ECE Dept. CMU

—W. Wu (2011-2014) Post-doctoral Fellow, Courant Institute, NYU-Shanghai
—M. Aghajani (2010-2016) [recipient of Dunmu Ji Thesis award] Post-doctoral Fellow, UCSD
—S. Kim (2013-2017) [recipient of NDSEG Fellowship], Two Sigma Investments
—P. Agarwal (2016-2020)
—A. Ganguly (2017-present)
—Yin-Ting Liao (2018-present)
—Darryl Xie (2020-present)
—Giorgio Cocomello (2020-present)
—Kevin Hu (2020-present)

◦ Visiting Graduate Students (3)
—W. Sun, visiting student from INRIA, Paris (Fall 2017, Spring 2018)
—F. Rembart, visiting student from TU Munich (Spring 2013), PhD student, Oxford Univ, UK
—Erika Berenice Roldan Roa, Visiting student from CIMAT, Mexico, Fall 2016, Spring 2018

◦ Undergraduate Student Honors Theses and Research awards (12)
—Shreyas Rao, Brown Univ. (2020 Fall, UTRA 2021 Spring)
—Miriam Gordin, Brown Univ. (2019-2020)
[recipient of Ron Truell Premium Prize from the Division of Appl. Math]
—Misha Sohan, Brown Univ. (2018-2019)
[recipient of Jerome Stein Award from the Division of Applied Math]
—Rajita Chandak, Brown Univ. (2018-2019)
—Timothy Sudijono, Brown Univ. (2018-2019)
[recipient of Sigma-Xi award and Rohn Truell Prize from the Division of Applied Math]
—Hwai-Ray Tung, Brown Univ. (2017-2018) PhD. student, Duke Univ.
—M. Wortsman, Brown Univ. (2017-2018) Researcher, Allen Institute, Seattle
[recipient of Jerome Stein Award from the Division of Applied Math]
—D. Gitelman, Brown Univ. (2012-2013) PhD student, Princeton Univ
[recipient of Rohn Truell Prize from the Division of Applied Math]
—H. Tross, Brown Univ. (Spring '13) Consultant, Communication Media Advisors, Boston
—K. Kardassakis, Brown Univ. (2013-2014) Student, GSB, Stanford University
[recipient of Jerome Stein Award from the Division of Applied Math]
—Wonho Rhee, Brown Univ (UTRA Summer 2015)
—E. Hu, Brown Univ. (2015; UTRA Spring 2016)

◦ Student Independent Study Courses and Projects (9)
—Giorgio Cocomello, Kevin Hu, Darryl Xie and Tianmin Yu (Summer 2020)
—Yin-Ting Liao and Patrick Liscio (Summer 2018)
—Timothy Sudijono (Jan-May 2018)
—Ankan Ganguly (Spring 2017)
—Anand Bedekar, Bell Labs summer intern (Jun-Aug 1998)
—Edmund Yeh, Bell Labs summer intern (Jun-Aug 1998), Assistant Professor, Yale University
—Kamal Ibrahim, CMU freshman student (Summer 2008)
—Ines Azaiez, ETH-CMU exchange student, senior (Spring 2008)
—Alice Ren, Junior, Brown Univ (Fall 2011)
—Chongwu Du, Senior, Brown Univ (Fall 2012)
—Wonnie Sim, Junior, Brown Univ (Fall 2013)

◦ Freshman and Sophomore Advisor (2011–present) Over 30 students

PhD Thesis Committee Member for Students who are not my Phd students (17)

◦ Mihail Bazhba	CWI, Netherlands, May 2021
◦ Saloni Saxena	Physics, Brown University, 2018–
◦ Colin McScSwiggen	Applied Math, Brown University, Apr 2020
◦ Xufan Zhang	Math, Brown University, Apr 2019
◦ Chris Almost	Dept. of Math Sciences, CMU, Sep 2018
◦ Xiaofeng Yu	Dept. of Math Sciences, CMU, Sep 2018
◦ Hoy Loper	Applied Math, Brown University, May 2017
◦ Dane Johnson	Applied Math, Brown University, June 2014
◦ Joe Klobusicky	Applied Math, Brown University, May 2014
◦ Yufei Liu	Applied Math, Brown University, March 2013
◦ Yuan Zhong	PhD in Operations Research, Sloan School, MIT, Sep 2012
◦ Yi Cai	Applied Math, Brown University, May 2012
◦ Leila Setayeshgar	Applied Math, Brown University, May 2012
◦ Chia Ying Lee	Applied Math, Brown University, May 2011
◦ Zhongyang Li	Math, Brown University, May 2011
◦ David Goldberg	PhD in Operations Research, Sloan School, MIT, June 2011
◦ Florian Simatos	PhD in Applied Probability, INRIA, France

Habilitation Thesis Committee Member (2)

◦ Nicolas Gast	INRIA, Grenoble, Feb 2020
◦ Eustache Besançon	Telecom ParisTech, Dec 2020

Outreach Activities

Organizer	Mathematics Sin Fronteras – bilingual English-Spanish lecture series, Spring-Fall 2021
Founder	Social Equity and Applied Math (SEAM) seminar series (Fall 2020–present)
Contributor	14th ONLE Science Palooza, Fitzgerald Elementary School, Waltham, MA (Sep 2019) Presentation on "The Art of Math"
Speaker	13th Annual Outreach Live: New England, Potter Road Elementary School, Framingham, MA (Sep 2018) Presentation on "Games of Chance"
Organizer	WINRS (Women's Intellectual Networks Research Symposium) conference (Mar 2017)
Founder	The Math CoOp, a math outreach group (2014–present)
Founder	Faculty Sponsor of *AWM Chapter*, Applied Math, Brown Univ (2013–present)
Consultant	Narrator and Script consultant, Documentary film on *"Srinivas Ramanujan: The Mathematician and his Legacy"*
Speaker	GIIMS (Gender Inclusivity in the Mathematical Sciences) Harvard University (Nov 10, 2016)
Panelist	WIMS (Women in Maths and Science), Harvard University (April 2, 2016)
Presenter	MIT Women-in-Math (Dec 1, 2014)
Lecture	*The Art of Randomness*, STEM to STEAM Workshop, Rhode Island School of Design (RISD), Providence (2014)
Lecture	*Tales of Randomness*, Center for Women in Mathematics, Smith Coll. (2011)
Panelist	*Life as a Mathematician*, Math Dept. Undergrad. Group, Brown Univ (2010)
Talk	*Symmetry in Art and Nature*, MLK Elementary School, Providence, RI (2010)
Founder	"Women in Math" Group, CMU (2008)

Talk	*Reflections on Symmetry*, Girls' Science Club, Jewish Community Day School, Pittsburgh, PA (2005)
Mentor	COMPASS Program, CMU (2008–2010)
Mentor	Bell Laboratories Science Grant Program (2001)
Mentor	Lucent Global Science Scholars Program (2000-2002)
Member	Lucent Tech. Graduate Research Program for Women Committee (2000-2002)

List of Patents

- A. Bedekar, S. Borst, K. Ramanan, P. Whiting and E. Yeh. "Down-link transmission inter-cell scheduling in CDMA data networks" (U.S. Patent 6/603/753).
- A. Bedekar, S. Borst, K. Ramanan, P. Whiting and E. Yeh. "Down-link transmission scheduling in CDMA data networks" (U.S. Patent 6/763/009).
- K. Ramanan and A. Stolyar. "Method and apparatus for scheduling traffic to meet quality of service requirements in a communication network" (U.S. Patent 7/054/267).
- S. Borst, K. Kumaran, K. Ramanan, P. Whiting. "Methods and apparatus for planning wireless data networks using analytical modeling of user level performance" (U.S. Patent 8/099/098).

List of Publications

A. Preprints

1. C. Aistleitner, N. Gantert, Z. Kabluchko, J. Prochno and K. Ramanan, "Large deviation principles for lacunary sums," *Arxiv Preprint* (2020).
2. D. Lacker, K. Ramanan and R. Wu, "Marginal dynamics of interacting diffusions on unimodular Galton-Watson trees," *Arxiv Preprint* (2020).
3. D. Lacker, K. Ramanan and R. Wu, "Local weak convergence and propagation of ergodicity for sparse networks of interacting processes," *Arxiv Preprint* (2020).
4. B. Bhattacharya and K. Ramanan, "Parameter estimation for undirected graphical models with hard constraints," *Arxiv Preprint* (2020).
5. P. Agarwal and K. Ramanan, "Invariant states of hydrodynamic limits of randomized load balancing networks," *Arxiv Preprint* (2020).
6. S. Dhara, D. Mukherjee and K. Ramanan, "On r-to-p norms of random matrices with non-negative entries: Asymptotic normality and ℓ_∞-bounds on the maximizer," *Arxiv Preprint* (2020).
7. Y.-T. Liao and K. Ramanan, "Geometric sharp large deviations for random projections of ℓ_p^n balls and spheres," *Arxiv Preprint* (2020).
8. S. Kim, Y.-T. Liao and K. Ramanan, "An asymptotic thin shell condition and large deviations for multidimensional projections," *Arxiv Preprint* (2019).
9. D. Lacker, K. Ramanan and R. Wu, "Locally interacting diffusions as space-time Markov random fields", *Arxiv Preprint* (2019).
10. D. Lacker, K. Ramanan and R. Wu, "Local dynamics for large sparse networks of interacting diffusions," *Arxiv Preprint* (2019).
11. P. Dupuis, K. Ramanan and W. Wu, "Large deviation principle for finite-state mean field interacting particle systems," *Arxiv Preprint* (2015).

12. M. Aghajani, X. Li and K. Ramanan, "Mean-field dynamics of load-balancing networks with general service distributions," *Arxiv Preprint* (2015).

B. Book Chapters

2. N. Gantert, S.S. Kim and K. Ramanan, "Cramér's theorem is atypical", Springer's AWM Series: Advances in the Mathematical Sciences, AWM Research Symposium, Editors: Letzter, G., Lauter, K., Chambers, E., Flournoy, N., Grigsby, J.E., Martin, C., Ryan, K., Trivisa, K (2016).
1. L. Kruk, J. Lehoczky, K. Ramanan and S. Shreve. "Double Skorokhod map and reneging real-time queues," *Markov Processes and Related Topics: A Festschrift for Thomas G. Kurtz*, IMS Collections, Vol. 4 (2008) 169–193.

C. Expository Articles

1. K. Ramanan, "Random projections of high-dimensional measures," Spring Eastern Section Sampler, Notices of the American Mathematical Society, 2017.

D. Peer-reviewed Journal Publications

1. D. Lipshutz and K. Ramanan, "Sensitivity analysis for the stationary distribution of reflected Brownian motion in a convex polyhedral cone," (2019) *Arxiv Preprint* to appear in *Mathematics of Operations Research.*
2. F. Delarue, D. Lacker and K. Ramanan, "From the master equation to mean field game limit theory: Large deviations and concentration of measure," (2020) *Annals of Probability*, **48**, No. 1 (2020) 211-263.
3. P. Dupuis, V. Laschos and K. Ramanan, "Large deviations for configurations generated by Gibbs distributions with energy functionals consisting of singular interaction and weakly confining potentials", *Electronic Journal of Probability* **46** (2020), 41 pp.
4. M. Aghajani and K. Ramanan, "The limit of stationary distributions of many-server queues in the Halfin-Whitt regime," *Mathematics of Operations Research*, **45**, No. 3 (2020) 1016–1055.
5. D. Lipshutz and K. Ramanan, "Pathwise differentiability of reflected diffusions in convex polyhedral domains," (2019) *Annales de l'Institut Henri Poincaré, Probabilités et Statistiques* **55**, No. 3 (2019) 1439–1476.
6. P. Dupuis, V. Laschos and K. Ramanan, "Exit time risk-sensitive control for systems of cooperative agents," *Mathematics of Control, Signals, and Systems*, **31** No. 3 (2019), 279–332.
7. D. Lipshutz and K. Ramanan, "A Monte Carlo method for estimating sensitivities of reflected diffusions in convex polyhedral domains," *Stochastic Systems*, Vol. 9, No. 2 (2019) 101–140.
8. D. Lacker and K. Ramanan, "Rare Nash equilibria and the price of anarchy in large static games," *Mathematics of Operations Research*, **44**, No. 2 (2019) 400-422.
9. M. Aghajani and K. Ramanan, "Hydrodynamic limits of randomized load balancing networks," *Annals of Applied Probability*, **29**, No. 4 (2019) 2114-2174.
10. D. Gamarnik and K. Ramanan, "Uniqueness of Gibbs measures for continuous hard core models," *Annals of Probability*, **47**, No. 4 (2019) 1949–1981.

11. F. Delarue, D. Lacker and K. Ramanan, "From the master equation to mean field game limit theory: A central limit theorem," *Electronic Journal of Probability*, **24**, No. 51, (2019) 1–54.
12. M. Aghajani and K. Ramanan, "Ergodicity of an SPDE associated with a many-server queue," *Annals of Applied Probability*, **29**, No. 2 (2019) 994-1045.
13. A. Smith and K. Ramanan, "Bounds on Lifting Continuous-State Markov Chains to Speed Up Mixing," *Journal of Theoretical Probability*, **31**, No. 3 (2018) 1647–1678.
14. K. Ramanan and M. Shkolnikov, "Intertwinings of beta-Dyson Brownian motions of different dimensions," *Annales de l'Institut Henri Poincaré, Probabilités et Statistiques*, **54**, No. 2 (2018) 1152-1163.
15. D. Lipshutz and K. Ramanan, " On directional derivatives of Skorokhod maps in convex polyhedral domains," *Annals of Applied Probability*, **28**, No. 2 (2018) 688-750.
16. R. Atar, A. Biswas, H. Kaspi and K. Ramanan, "A Skorokhod-type Map on Measure-valued Paths and Priority Queues," *Annals of Applied Probability*, **28**, No. 1 (2018) 418–481.
17. S.S. Kim and K. Ramanan, "A conditional limit theorem for high-dimensional ℓ^p-sheres," *Journal of Applied Probability*, **55**, No. 4 (2018) 1060–1077.
18. N. Gantert, S.S. Kim and K. Ramanan, "Large deviations for random projections of ℓ^p balls," *Annals of Probability*, **45**, No. 6B (2017) 4419–4476.
19. K. Burdzy, Z.-Q. Chen, D. Marshall and K. Ramanan, "Obliquely reflected Brownian motions in non-smooth planar domains," *Annals of Probability*, **45**, No. 5 (2017), 2971-3037.
20. W. Kang and K. Ramanan, "On the submartingale problem for reflected diffusions in domains with piecewise smooth boundaries," *Annals of Probability*, **45**, No. 1 (2017) 404-468.
21. A. Budhiraja, P. Dupuis, M. Fischer and K. Ramanan. "Local stability of Kolmogorov forward equations for finite state nonlinear Markov processes," *Electronic Journal of Probability*, **20** (2015) Article 81.
22. A. Budhiraja, P. Dupuis, M. Fischer and K. Ramanan. "Limits of relative entropies associated with weakly interacting particle systems," *Electronic Journal of Probability*, **20** (2015) Article 80.
23. F. Rembart, N. Gantert and K. Ramanan, "Large deviations for weighted sums of exponential random variables," *Electronic Communications in Probability*, **19**, No. 41 (2014) 1–14.
24. W. Kang and K. Ramanan, "Characterizations of stationary distributions of reflected diffusions," *Annals of Applied Probability*, **23**, No. 4 (2014) 1329–1374.
25. H. Kaspi and K. Ramanan, "SPDE limits of many-server queues", *Annals of Applied Probability*, **23**, No. 1 (2013) 145–229.
26. S. Kar, J. Moura and K. Ramanan, "Distributed parameter estimation in sensor networks: nonlinear observation models and imperfect communication," *IEEE Transactions on Information Theory*, **58**, No. 6 (2012) 3575–3605.
27. W. Kang and K. Ramanan, "Asymptotic approximations for the stationary distributions of many-server queues," *Annals of Applied Probability*, **22**, No. 2 (2012) 477–521.

28. D. Galvin, F. Martinelli, K. Ramanan, P. Tetali, "The multistate hard core model on a regular tree", *SIAM Jour. Discrete Math*, **25**, No. 2 (2011) 894–915.
29. M. Cudina and K. Ramanan, "Asymptotically optimal control for time-inhomogeneous networks," *SIAM Jour. Contr. Opt.*, **49**, No. 2 (2011) 611–645.
30. L. Kruk, J. Lehoczky, K. Ramanan and S. Shreve, "Heavy traffic analysis for EDF queues with reneging," *Annals of Applied Probability*, **21**, No. 2 (2011) 484–545.
31. H. Kaspi and K. Ramanan. "Law of large numbers limits for many-server queues," *Annals of Applied Probability*, **21** (2011) 33–114.
32. W.N. Kang and K. Ramanan, "Fluid limits for many-server queues with reneging," *Annals of Applied Probability*, **20** (2010) 2204–2260.
33. A. Mandelbaum and K. Ramanan. "Directional derivatives of oblique reflection maps," *Mathematics of Operations Research*, **35** (2010) 527–558.
34. W.N. Kang and K. Ramanan, "A Dirichlet process characterization of a class of reflected diffusions," *Annals of Probability*, **38** (2010) 1062–1105.
35. K. Burdzy, W.N. Kang and K. Ramanan, "The Skorokhod map in a time-dependent interval," *Stochastic Processes and their Applications*, **119** (2009) 428–452.
36. L. Kontorovich and K. Ramanan. "Concentration inequalities for dependent random variables via the martingale method," *Annals of Probability*, **36**, No. 6 (2008) 2126–2158.
37. R. Atar, A. Budhiraja and K. Ramanan. "Deterministic and stochastic differential inclusions with multiple surfaces of discontinuity," *Probability Theory and Related Fields*, **142** (2008) 249–283.
38. K. Ramanan and M. Reiman. "The heavy traffic limit of an unbalanced generalized processor sharing model," *Annals of Applied Probability*, **18**, No. 1 (2008) 22–58.
39. L. Kruk, J. Lehoczky, K. Ramanan and S. Shreve. "An explicit formula for the Skorokhod map on $[0, a]$." *Annals of Probability*, **35**, No. 5 (2007) 1740–1768.
40. K. Ramanan. "Reflected diffusions defined via the extended Skorokhod map." *Electronic Journal of Probability*, **11** (2006), 934–992.
41. B. Luen, K. Ramanan and I. Ziedins. "Nonmonotonicity of phase transitions in a loss network with controls." *Annals of Applied Probability*, **16**, No. 3 (2006), 1528–1562.
42. M. Andrews, K. Kumaran, K. Ramanan, A. Stolyar, P. Whiting and R. Vijayakumar. "Scheduling in a queueing system with asynchronously varying service rates." *Probab. Engrg. Inform. Sci.*, **18**, No. 2 (2004) 191–217.
43. P. Winzer, H. Kogelnik and K. Ramanan. "Precise outage specifications for 1st-order PMD." *IEEE Phot. Tech. Lett.*, **16**, No. 2 (2004) 449-451.
44. K. Ramanan and M. Reiman. "Fluid and heavy traffic limits for a generalized processor sharing model." *Annals of Applied Probability*, **13**, No. 1 (2003) 100-139.
45. P. Winzer, H. Kogelnik, C.-H. Kim, H. Kim, R. M. Jopson, L.E. Nelson and K. Ramanan. "Receiver impact on first-order PMD outage." *IEEE Phot. Tech. Lett.* **15**, No. 10 (2003), 1482–1484.
46. P. Dupuis and K. Ramanan. "A time-reversed representation for the tail probabilities of stationary reflected Brownian motion." *Stochastic Processes and their Applications*, **98**, No. 2 (2002) 253-287.

47. K. Ramanan, A. Sengupta, I. Ziedins and P. Mitra. "Markov random field models of multicasting in tree networks." *Journal of Applied Probability*, **34**, No. 1 (2002) 1-27.
48. M. Andrews, K. Kumaran, K. Ramanan, A. Stolyar and P. Whiting. "Providing quality of service over a shared wireless link." *IEEE Communications*, **39**, No. 2 (2001) 150–154.
49. K. Ramanan and A. Stolyar. "Largest weighted delay first scheduling: large deviations and optimality." *Annals of Applied Probability*, **11**, No. 1 (2001) 1-49.
50. P. Dupuis and K. Ramanan. "Explicit formulas for the solution of certain optimal control problems on domains with corners." (Invited Paper), *Theor. Probab. Math. Stat.*, **63** (2000), 32-48.
51. P. Dupuis and K. Ramanan. "A multiclass feedback queueing network with a regular Skorokhod problem." *Queueing Systems*, **36** (2000) 327-349.
52. K. Ramanan and O. Zeitouni. "The quasi-stationary distribution for small random perturbations of certain one-dimensional maps." *Stochastic Processes and their Applications*, **84** (1999), 25-51.
53. P. Dupuis and K. Ramanan. "Convex duality and the Skorokhod problem – Part I." *Probability Theory and Related Fields*, **115**, No. 2 (1999) 153-195.
54. P. Dupuis and K. Ramanan. "Convex duality and the Skorokhod problem – Part II." *Probability Theory and Related Fields*, **115**, No. 2 (1999) 197-236.
55. P. Dupuis and K. Ramanan. "Large deviation properties of data sources that share a buffer." *Annals of Applied Probability*, **8** (1998) 1070-1129.
56. P. Dupuis and K. Ramanan. "A Skorokhod formulation and large deviation analysis of the generalized processor sharing model." *Queueing Systems*, **28** (1998), 109-124.

E. Refereed and Invited Conference Publications

1. M. Aghajani, X. Li and K. Ramanan. "The PDE method for analyzing randomized load balancing algorithms," Proc. ACM SIGMETRICS Meas. Anal. Comput. Syst., Vol. 1, No. 2, Article 38, 2017.
2. A. Ganguly, K. Ramanan, P. Robert and W. Sun. "A large-scale network with moving servers," ACM SIGMETRICS Performance Evaluation Review 45(2), 42-44, 2017.
3. S. Kar, J. Moura and K. Ramanan. "Sample path large deviations for the randomly sampled continuous-discrete Kalman filter," *Proceedings of the CDC conference*, Atlanta (2010).
4. S. Kar, J. Moura and K. Ramanan. "Large deviations for many server networks with long-range dependent and batch arrivals," *Proc. of 46th Annual Conf. on CCC, Allerton* (2008).
5. K. Ramanan. "From loss networks to interacting particle systems," Invited paper in *Proc. of 55th Session of the ISI*, Sydney, Australia (2005).
6. B. Luen, K. Ramanan and I. Ziedins. "Multicasting and phase transitions in tree loss networks." Invited paper in *Proc. of 41st Annual Conf. on CCC, Allerton* (2003), 1616–1625.
7. J. Cao and K. Ramanan. "A Poisson limit for buffer overflow probabilities." In *Proc. of IEEE INFOCOM'02*, **21** (2002), 1:994–1003.

8. C. Chekuri, K. Ramanan, P. Whiting and L. Zhang. "Blocking probability estimates in a partitioned sector TDMA system." In *Proc. of 4th International Conf. on Discrete Algorithms and Methods for Mobile Computing and Communications*, Boston, MA (2000), 28–34.
9. A. Bedekar, S. Borst, K. Ramanan, P. Whiting and E. Yeh. "Downlink scheduling in CDMA data networks." In *Proc. of IEEE GLOBECOM* (1999), 1984–1791.
10. K. Ramanan and A. Weiss. "Sharing Bandwidth in ATM." Invited paper in *Proc. of 34th Annual Conf. on CCC, Allerton*, (1996).
11. K. Ramanan. "Targeting heat exchanger networks," in *Heat Exchanger Network Synthesis – A Pinch Technology Approach* (1995), U. V. Shenoy, Gulf Publishing Co., Houston.

F. Technical Reports

1. K. Ramanan. "On the rate function of multi-dimensional reflected Brownian motions." Bell Labs Technical Memorandum ITD-02-43817C (2002).
2. K. Majewski and K. Ramanan. "Minimizing large deviation paths of Jackson networks." Bell Labs Technical Memorandum ITD-02-43798G (2002).
3. K. Ramanan, K. Kumaran, S. Borst and P. Whiting. "Optimal capacity regions for wireless and wireline traffic with QoS constraints." Bell Labs Technical Memorandum, ITD-02-43767Y (2002).
4. K. Ramanan, P. Winzer and H. Kogelnik. "A new method for estimation of outage probabilities due to PMD." Bell Labs Technical Memorandum ITD-02-43751F (2002).

Invited Courses Talks, Lectures and Colloquia

A. Plenary, Keynote and Tutorial Lectures

A1. Mathematics Conferences.

1. CFM-Imperial Distinguished Lecturer, Imperial College, London, UK, May-June 2017.
2. Invited Address, American Mathematical Society Eastern Sectional Meeting, New York, May, 2017
3. Hanna Neumann Plenary Lecture, 60th Annual meeting of the Australian Mathematical Society, Canberra, Australia, December, 2016.
4. Plenary lecture, Workshop on "Advances in Ergodic Theory, Hyperbolic Dynamics, and Statistical Laws," Australian National University, Canberra, December, 2016.
5. Plenary Lecture, Heilbronn Institute for Mathematical Research, Annual Conference, Bristol, UK, September 2016.

A2. Probability Conferences

1. Plenary Lecture, Charles River Probability Seminar, Oct 4, 2019.
2. Plenary Lecture, 13th German Probability and Statistics Days, Freiburg, Germany, Feb 27–Mar 2, 2018
3. Plenary Lecture, "Ergodicity of Stochastic Networks", Stochastic Networks meeting, UCSD, July 2016.
4. Keynote talk, "Scaling limits of randomized load balancing networks", YEQT conference, Eindhoven, October 2015.

5. Keynote talk, "Phase transitions in randomized load balancing", Junior Female Researchers in Probability (JFRP), Berlin, Germany, October 22-23, 2015.
6. Midwest Probability Colloquium Tutorial Lectures, Northwestern University, October 8-10, 2015.
7. IMS Medallion Lecture, "Infinite-dimensional scaling limits of stochastic networks", Applied Probability Society (APS) meeting, Istanbul, July, 2015.
8. Plenary lecture, "Obliquely reflected diffusions in non-smooth domains", 7th International Conference on Stochastic Analysis and its Applications, (Satellite conference of ICM 2014), Seoul, Korea, Aug 2014.
9. Plenary Lecture, "Reflected Brownian motions in Non-smooth Domains", Frontier Probability Days, Arizona, May 2014.
10. Plenary Lecture, "Perspectives on Obliquely Reflected Brownian Motions", 36th Conference on "Stochastic Processes and their Applications", Boulder, Colorado, Jul 2013.
11. Plenary Lecture, "Reflected diffusions, Dirichlet processes and heavy traffic limits," *Applied Probability Day*, Columbia Univ, New York, NY, Jun 2010.
12. Discussant to the Markov lecture, "Different Kinds of Diffusion Approximations," *INFORMS Annual Meeting*, Seattle, Nov 2007.
13. Plenary lecture, "Generalizations of the Skorokhod Problem," *"Skorokhod space: 50 years and Later"* conference in honour of A.V. Skorokhod, Kiev, Ukraine, Jun 2007.
14. Plenary Lecture, "Measure-valued Process Limits of some Stochastic Networks," *"Seminar on Stochastic Processes,"* Fields Institute, Toronto, Mar 2007.
15. Plenary lecture at the "Stochastic Networks" conferences held in 2002, 2008, 2012 and 2016.

A3. Interdisciplinary/Applied Math Conferences and Workshops

1. Keynote Talk, XIII Annual Meeting of the ORSI (Operations Research Society of India), IIT Mumbai, December, 2018.
2. Plenary lecture, IV AMMCS (Applied Mathematics, Modeling and Computational Science) International Conference, Waterloo, Ontario, August, 2017
3. Keynote lecture, "Stochastic networks: Scaling limits, performance analysis and optimization", INFORMS Annual Meeting, Philadelphia, November 1-4, 2015.
4. Keynote Lecture,"The Power of Randomness", Sigma-Xi Northeast Regional Meeting, WCSU, Connecticut, April 2015.
5. Invited tutorial on "Limit theorems for stochastic networks", School-cum-Workshop on Probability in Engineering Sciences, IIT-Mumbai, Mar 2013.
6. Invited Tutorial on "Large Deviations of Reflected Diffusions," *"INFORMS Annual Meeting,"* Pittsburgh, Nov 2006.

B. Invited Mini-Courses and Tutorials

1. Lecturer for AMS Short Course on "Mean-field Games", Joint Mathematical Meetings of the American Mathematical Society, Jan 2020.
2. "Mean-field games" at the Program on Advances in Applied Probability, International Centre for Theoretical Sciences in Bangalore, Aug 5-17 2019.

3. "Workshop on Phase Transitions and Particle Systems," Weierstrass Institute (WIAS) Berlin, 24–26 June, 2019.
4. "Limits of Interacting Particle Systems on Large Sparse Graphs" at 11th Cornell Probability Summer School June 11–June 20, 2019.
5. "Limits of interacting particle systems," at Lectures on Probability and Stochastic Processes (LPS), Indian Statistical Institute, Bangalore, Dec 7–11, 2018.
6. "Scaling Limits and Approximations of Stochastic Networks," at MIGSAA Summer School on Random Structures and Processes, Edinburgh, Scotland, June 18–22, 2018.
7. CFM-Imperial Distinguished Lectures, Imperial College (May 2017)
8. Invited Tutorial,"Analysis of Large-Scale Networks," INFORMS International Meeting, Kona, Hawaii, June 2016.
9. Invited tutorial on "Limit theorems for stochastic networks", School-cum-Workshop on Probability in Engineering Sciences, IIT-Mumbai, Mar 2013.
10. Invited Tutorial on "Large Deviations of Reflected Diffusions," *"INFORMS Annual Meeting,"* Pittsburgh, Nov 2006.

C1. Selected Recent Named Lectures and Colloquia

1. Achieson Duncan Lecture, Johns Hopkins University (virtual), Dec 3, 2020.
2. STOR Colloquium at UNC, Chapel Hill (virtual), Nov 16, 2020.
3. Mathematics Colloquium, Brandeis-Harvard-MIT-Northeastern Joint Colloquia (virtual), Nov 5, 2020
4. 4th Jyotiprasad Medhi Memorial Annual Lecture, IIT Guwahati (virtual), Sep 21, 2020
5. Boeing Distinguished Colloquium, Department of Applied Mathematics, University of Washington, May 9, 2019.
6. WIMAW (Women and Non-binary People in Mathematics at Wisconsin) Colloquium, Department of Mathematics, University of Madison, Wisconsin, April 26, 2019.
7. CAMS (Center for Applied Mathematical Sciences) Colloquium, USC, March 4, 2019.
8. Math Colloquium, University of Connecticut, Nov 1, 2018.
9. 2018 Distinguished Lecture in Applied Mathematics, University of Massachussetts, Amherst, Oct 11, 2018.
10. Statistics Colloquium, UPenn, Wharton, May 2, 2018.
11. Mathematics Department Colloquium, Case Western Reserve University, April 14, 2017.
12. Mathematics Department Colloquium, University of Maryland, Mar 1, 2017.
13. Distinguished Women in Mathematics Colloquium, Austin, Texas, October, 2016.

C2. Selected Invited Conference Talks

1. INFORMS Annual meeting, Special session on "New Frontiers in Queueing Theory", Nov 7–13, 2020.
2. SIAM Regional meeting, at the Mini-Symposium on "Stochastic processes on graphs and networks", Oct 17-18, 2020.

3. AMS (American Mathematical Society) Fall Southeastern Regional Conference meeting at the Special Session on "Convexity and Probability in High Dimensions," Oct 10-11, 2020
4. AMS (American Mathematical Society) Fall Eastern Regional Conference meeting at the Special Session on "Recent Probabilistic Advances in Mathematical Physics", (virtual) Oct 3-4, 2020
5. Oberwolfach Workshop on "New Perspectives and Computational Challenges in High Dimensions", Feb 2–8, 2020.
6. Conference on Spectra, Algorithms and Random Walks on Random Networks, Centre International de Rencontres Mathématiques, Marseille, France, January 13-17, 2020.
7. CLAPEM XV Conference, Merida, Mexico, Dec 3, 2019.
8. Easten Conference on Mathematical Finance, Boston University, October 27, 2019.
9. Program on Advances in Applied Probability, ICTS, Bangalore, Aug 2019.
10. INFORMS-APS 2019, Brisbane Australia, July 3–5, 2019. 2019.
11. Modern Applied Probability conference (in honor of S. Foss' 60th birthday), Edinburgh, UK, May 16 2019.
12. Workshop on Service Engineering, (workshop in honor of A. Mandelbaum's 60th birthday, Technion, Israel) Jan 7, 2019.
13. Invited Talk, AMS Sectional Meeting, Delaware, Special Session on Convex Geometry and Functional Inequalities, Sep 29–30, 2018.
14. Invited Talk, SIAM Annual Meeting, Portland, July 9–13, 2018.
15. Invited Talk, Symposium on Optimal Stopping, Houston, June 25–29, 2018.
16. Invited Talk, Stochstic Models VI, Bedlewo Conference Center, Poland, June 3–8, 2018.
17. Invited Talk, IMA Workshop on "Queueing and Networks", Minnesota, May 14–18, 2018.
18. "Convexity and Probability", AMS Spring Central Sectional Meeting, Ohio State University, Mar 16–18, 2018.
19. "Stochastic Partial Differential Equations", AMS Spring Central Sectional Meeting, Ohio State University, Mar 16–18, 2018.
20. Banff Workshop on Stochastic Analysis and its Applications, October 23rd-—27th, 2017.
21. Conference on Stochastic Processes and their Applications, Moscow, Russia, July 24–28, 2017.
22. "Women in Probability" Workshop, TUM, Munich, July 21–22 2017.
23. CRM-IMPA Joint Workshop on "Challenges at the Interface of Optimization and Stochastic Processes", July 18-21, 2017.
24. Applied Probability Society conference, Evanston, July 10–12, 2017.
25. *Thera Stochastics*, Santorini, Greece, Karatzas, June 1-3, 2017.
26. Probability seminar, University of Warwick, May 17, 2017.
27. Finger Lakes Probability Seminar, Syracuse University, April 21-22, 2017.
28. Invited talk, 85th Birthday conference of Borovkov, Novosibirsk, August, 2016.
29. Invited Talk, Bernoulli World Congress, Toronto, Canada, July 2016.

30. Invited Talk, Workshop on "Stochastic Analysis and Mathematical Finance - A Fruitful Partnership", BIRS Oaxaca, Mexico, May 2016.
31. "Hydrodynamic Limits of Randomized Load Balancing Networks", ICIAM, Beijing, China, August, 2015.
32. "Pathwise Differentiability of reflected Brownian motions in (simple) polyhedrons", Workshop on "Stochastic Processes and Random Fields: Geometry and Fine Properties", Haifa, Israel, July 2015.
33. "On the submartingale problem for reflected diffusions on piecewise smooth domains", Workshop on "Reflected Brownian motions, stochastic networks and their applications", IMA, Minneapolis, June 2015.
34. "Pathwise differentiability of a semimartingale reflected Brownian motion in a simple convex polyhedron", Workshop on "Applied Probability Frontiers: Computational and Modeling Challenges", Banff International Research Station, June 2015.
35. "A Free-Boundary Problem arising in order-book dynamics", MFPDE conference, Rutgers, May 2015.
36. "The role of correlation decay in filtering compressed signal dynamics", IMA Workshop on "Graphical models, Statistical Inference and Algorithms", May 2015.
37. "Large deviations principles for Random Projections of ℓ^p balls, and the atypicality of Cramer's theorem", AWM Symposium, Maryland, April 2015.
38. "Stationary distribution of an SPDE associated with a Many-Server Queue", AMS Sectional Meeting, Huntsville, Alabama, March 2015.
39. "Hydrodynamic limits of randomized load-balancing networks", Conference on "Stochastic Networks and stochastic geometry", a conference dedicated to Fran cois Baccelli on his 60th birthday, Institut Henri Poincaré, Paris, January 2015.
40. "The infinite-dimensional Skorokhod Map, with applications to systems with continuous priority", INFORMS Annual meeting, San Francisco, Nov 2014.
41. "Hydrodynamic limits of load balancing models", IMS Annual Meeting, Sydney, Australia, Jul 2014.
42. "Obliquely reflected diffusions in non-smooth domains", Workshop for Women in Probability, Munich, Jun 2014.
43. "Obliquely reflected diffusions in non-smooth domains", AMS Sectional Meeting, Albuquerque, NM, April 2014.
44. "Stationary distributions of (obliquely) reflected diffusions", INFORMS Annual Meeting, Oct 2013.
45. "Uniqueness of stationary distribution of the diffusion approximation of a many-server queue", APS Conference, Costa Rica, Jul 2013.
46. "Computing volumes of convex bodies", APS Conference, Costa Rica, Jul 2013.
47. "Obliquely reflecting Brownian motions in fractal domains", Workshop on New Directions in Probability Theory, Bangalore, June 2013.
48. "SPDE Limits of many-server queues", IMA Workshop, Jan 2013.
49. "Large deviations of finite-state mean-field interacting systems", 8th World Congress in Probability and Statistics, Istanbul, Jul , '12
50. "Large deviations of finite-state mean-field interacting systems", Stochastic Networks meeting, June '12

51. "Continuous Hard Core Model and Computation of Volumes of Polytopes", SAMSI Workshop, Feb '12
52. "Avatars of the Hard Core Model", IPAM Workshop, Jan '12
53. "Directional Derivatives of the Skorokhod Map", INFORMS Annual Meeting, Nov 2011
54. "Derivatives of the Oblique Reflection Map", Applied Probability Meeting, Special Session on the Skorokhod Problem, Jul 2011
55. "Concentration inequalities for dependent random variables," ICM Satellite conference on Probability and Statistics, Aug 2010
56. "Roughness of local times and heavy traffic limits," IMS Annual Meeting, Gothenburg, Sweden, Aug 2010
57. "Phase transitions for the multi-state hard core model on a tree," IMS Annual Meeting, Gothenburg, Sweden, Aug 2010
58. "Stochastic networks and measure-valued processes," Workshop on "New Topics on the Interface between Probability and the Communication Sciences," Inaugural workshop of the Newton Institute program on "Stochastic Processes in the Communication Sciences," Cambridge, UK, Jan 2010
59. "Measure-valued processes and stochastic networks," Conference on "New Directions in Applied Mathematics," Bangalore, India, Dec 2009.
60. "Reflected Brownian Motions, Queueing Networks and Dirichlet Processes," Michael Harrison's Birthday conference, Stanford, Aug 2009
61. "On Asymptotic Approximations of Many-Server Queues with Reneging," Applied Probability Meeting, Ithaca, Cornell, Jul 2009
62. "Processes with Discontinuous Dynamics: A Unified Framework," Cincinnatti Probability Symposium, Mar 2009
63. "Sample path large deviations for many-server queues," INFORMS Annual Meeting, Washington D.C., Oct 2008
64. "Real-time queues with reneging", INFORMS Annual Meeting, Washington D.C., Oct 2008
65. "Properties of reflected diffusions", *Women in Probability* Conference, Cornell University, Ithaca, Oct 2008
66. "Stochastic processes in discontinuous media:theory and applications", CMU-Portugal ICTI Workshop in Applied Mathematics, Sep 2008
67. "Measure-valued Process Limits for Many Server Systems", 7th World Congress in Probability and Statistics, Singapore, Jul 2008
68. "Asymptotic Approximations of Many-Server Queues", Stochastic Networks Conference, Paris, France, Jun 2008
69. "Phase Transitions in Loss Networks," INFORMS Annual Meeting, Seattle, Nov 2007
70. "Stochastic Differential Inclusions and Large Deviations," Applied Probability Conference, Eindhoven, Jul 2007
71. "Fluid Limit Theorems for Many-Server Queues," Applied Probability Conference, Eindhoven, Jul 2007
72. "Mappings of Measure-valued Processes and EDF queues," Workshop on *Stochastic Networks*, Edinburgh, UK, Jul 2007

73. "Measure-valued Processes and Stochastic Networks," IMS Annual meeting, Brazil, Jul 2006
74. "Asymptotically Optimal Control of Time-Inhomogeneous Queueing Networks," INFORMS Annual Meeting, San Francisco, Nov 2005
75. "Large Deviations of Jump Markov Processes with Discontinuous Interior Statistics," 13th Applied Probability Conference, Ottawa, Canada, Jul 2005.
76. "An Explicit Formula for the Two-sided Reflection Map," 13th Applied Probability Conference, Ottawa, Canada, Jul 2005.
77. "Solutions to Differential Inclusions with Applications to Fluid Limits," INFORMS Annual Meeting, Denver, Colorado, Oct 2004
78. "Gibbs Measures and Loss Networks," Workshop on *Spatial Dependence in Stochastic Networks*, ICMS, Edinburgh, U.K. Jun 2004
79. "Strong Approximations of Time-Inhomogeneous Queueing Networks," INFORMS, Annual Meeting, Atlanta, Georgia, Oct 2003
80. "Directional Derivatives and Time-Dependent Networks," Workshop on *Heavy Traffic Analysis and Process Limits of Stochastic Networks*, Eindhoven, The Netherlands, Sep 2003
81. "Tail Probabilities of Reflected Diffusions," LIDS seminar, MIT, Cambridge, Massachussetts, Apr 2003.
82. "Large Deviations and Time Reversal in the Presence of Constraints," Workshop on *Modern Problems in Applied Probability,* Edinburgh, U.K, Aug 2003
83. "Directional Derivatives of the Reflection Map: Approximations of Non-stationary Queueing networks," Conference on *Stochastic Networks*, Stanford University, California, Jun 2003.
84. "Markov Random Field Models of Multicasting in Tree Networks," AMS and MAA Spring Southeastern Sectional Meetings, Special Session on *Probability and Combinatorics*, Atlanta, Georgia, Mar 2002
85. "Large Deviations of Diffusion Approximations of Queueing Networks," 11th Applied Probability Conference, Manhattan, New York, Jul 2001.
86. "Tail Probabilities of Stationary Reflected Brownian Motion," Workshop on *The Skorokhod Problem*, Bedlewo, Poland, Jul 2001.
87. "Large Deviations of Reflected Brownian Motion," AMS Annual Meeting, Special Session on *Stochastic Analysis and its Applications*, New Orleans, Louisiana, Jan 2001.
88. "Tail Probabilities of Reflected Brownian Motion," International Workshop on *Stochastic Optimization and Adaptation*, Cochin, India, Dec 2000.
89. "On a Non-standard Diffusion Approximation," INFORMS Fall 1999 meeting, Special Session on *Queueing models and Communication Systems*, Philadelphia, Pennsylvania, Jul 1999.
90. "Large Deviation Properties of Interacting Data Streams in a Communication Network," 10th Applied Probability Conference, Ulm, Germany, Jul 1999
91. "Convex Duality and the Skorokhod Problem," ICIAM (International Congress on Industrial and Applied Mathematics) Jul 1999, the Minisymposium on *Hysteresis, Sweeping Processes and the Skorokhod Problem*, Edinburgh, U.K.

92. "Reflected Diffusions in Polyhedral Domains and the Generalized Processor Sharing Discipline," AMS-SMM Joint Meetings, Special Session on *Stochastic Analysis* in Denton, Texas, May 1999.
93. "Some New Results on the Skorokhod Problem," Symposium on *Stochastic Control and Non-linear Filtering*, Los Angeles, California, Dec 1997.
94. "Convex Duality and the Skorokhod Problem," AMS-SIAM Summer Seminar in Applied Mathematics on the *Mathematics of Stochastic Manufacturing Systems*, Williamsburg, Virginia, Jun 1996.

D. Seminars at Universities and Research Labs

Berkeley (Statistics); Boston University (Math); Brown University (Applied Math); Carnegie Mellon University (Math Sciences); City University of New York (Grad School); Columbia University (Math, ORIE and Stat); Cornell University (ORIE); Duke University (Math); Duke University (Fuqua Business School); Georgia Institute of Technology (ISYE); Lehigh University (Math); MIT (IDSS-Statistics); MIT (OR); MIT (Math); Princeton (ORFE); Princeton (Probability Seminar); Rutgers University (Math); Stanford University (MSE); University of Wisconsin, Madison (Math); University of North Carolina, Chapel Hill (Stat); University of California, Berkeley (Math); UCLA (Math); UCSB (Statistics); UCSD (Math); USC (Applied Math Center); UT Austin (Math); UIUC (Math); University of Delaware (Math); University of Washington (Math); UPenn (Wharton); UPenn (Math); Yale University (Stat); Stanford University (Business School); U. Cal Berkeley (EE); IBM, T.J. Watson; Microsoft Research, Redmond; University of Melbourne, Melbourne, Australia; Israel Institute of Technology (Technion); Paris VI, France; Ecole Normale Superieur, France; Israel; University of Cergy-Pontoise, France (Math); INRIA, Rocquencourt, France; Eindhoven University, Netherlands; Chennai Mathematical Institute, Chennai, India; University of Warwick, UK; Imperial College, UK; Oxford University, UK; Tata Institute of Fundamental Research, Mumbai and Bangalore, India; International Centre for Theoretical Sciences (ICTS) Bangalore, India; Indian Statistical Institute (ISI), Delhi and Kolkata, India; Indian Institute of Science (IISc, Math), Bangalore, India; Indian Institute of Technology, Bombay, India;