May 17, 2023

#### Ross G. Pinsky

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# Curriculum Vitae

Date and place of birth: November 26, 1955, United States Date of immigration: September 23, 1984 Family status: married, four children

## **Academic Degrees**

1978	B.A.	University of Pennsylvania, Philadelphia, Pa.
1982	Ph.D.	Courant Institute of Mathematical Sciences,
		New York University, New York, N.Y.

## Academic Appointments

2011-	Mina Gottlieb Ofer and Henry Ofer Chair, Department of Mathematics,		
	Technion-Israel Institute of Technology		
2007-2008	Visiting Professor, Hebrew University, Jerusalem.		
2000-	Professor, Department of Mathematics, Technion – Israel Institute of Technol- ogy, Haifa, Israel.		
1998-1999	Visiting Professor, Courant Institute of Mathematical Sciences,		
	New York University.		
1992-1999	Associate Professor, Department of Mathematics, Technion – Israel Institute of Technology, Haifa, Israel.		
1991-1992	Visiting Professor, Department of Mathematics, University of Maryland, College Park.		
1989-1992	Tenured Senior Lecturer, Department of Mathematics, Technion – Israel Insti-		
1987-1989	tute of Technology, Haifa, Israel. Senior Lecturer, Department of Mathematics, Technion – Israel Institute		
	Technology, Haifa, Israel.		
1985-1987	Lecturer, Department of Mathematics, Technion – Israel Institute of Technol-		
1004 1005	ogy, Haifa, Israel.		
1984-1985	Lady Davis Fellow in the Department of Mathematics,		
	Technion – Israel Institute of Technology, Haifa, Israel.		
1982-1984	(Post-Doctoral)-Assistant Professor, Department of Mathematics, University of California, Los Angeles, (UCLA).		

#### **Research Interests**

Probability and Stochastic Processes Partial Differential Equations Random Combinatorial Structures

## **Teaching Experience**

## Undergraduate courses taught:

Calculus I, Calculus II, Calculus III, Probability, Abstract Algebra, Introduction to Functional Analysis, Complex Analysis, Real Analysis, Ordinary Differential Equations, Fourier Series and Integral Transforms, Group Theory, Metric and Topological Spaces, Seminars in Analysis, Partial Differential Equations, Combinatorics, Foundations of Mathematics

## Graduate courses taught:

Advanced Probability, Stochastic Processes, Functional Analysis, Spectral Theory and Spectral Analysis of Schrödinger Operators, Diffusion Processes and Positive Harmonic Functions, Random Walks and Representation Theory on Finite Groups, Analytic Number Theory, Problems Seminar, Asymptotic Mixing for Markov Processes, Theory of Random Permutations

Filmed Courses for Technion Video Library: Probability Theory (104222) Introduction to Metric and Topological Spaces (104142)

## **Department Activities**

- Served on many committees throughout the years, including the Netanyahu Lecture committee, the library committee, and several curriculum committees
- Graduate Studies Coordinator, 1995-1997
- Dean of Mathematics Department, 2005 and 2006
- Dean's advisory sub-committee on hirings, 2013-present
- TOMBA Math Summer Camp at the Technion, 2010-present: guest lecturer most years
- Project mentor, Department of Mathematics Summer Research Project Program (for advanced undergrads in Israel), September, 2015
- Project mentor, Department of Mathematics Summer Research Project Program (for advanced undergrads in Israel), September, 2017
- Head of Post-Doc Committee, 2022-present

## **Technion Activities**

- Member of Technion Academic Promotion Committee for Non-Tenure Track Positions, 2001–2002.
- Member of Technion Thesis Committee, 2003.
- Member of Technion Academic Promotion Committee for Tenure and Tenure Track Positions, 2004.

- Moderator of Technion Professional Committees for Academic Promotions, 2007.
- Member of Technion Steering Committee, 2009-2010
- Member of Technion Prize and Honorary Degree Committee, 2011-2013
- Member of Thesis Verification Committee, 2012-2013
- Member of Graduate Student Prize Committee, 2012-2014
- Academic Advisor for the Haredi Students at the Technion program, 2014–present (there are now more than 90 students in the program)
- Technion School Project, 2014-2020: I gave about a half a dozen lectures each year to high school students.
- Member of Technion Standing Academic Promotion Committee for Tenure and and Tenure-Track Positions, 2019-2022

#### **Public Professional Activities**

- Associate Editor: Electronic Journal of Probability and Electronic Communications in Probability, 2009-2014
- Associate Editor: Positivity, 1996–2008
- Judge for the Israel Science Foundation Mathematics Section Grants
- Referee for more than a dozen journals
- Reviewer for Mathematical Reviews, 1987-present
- Reviewer for the Statistics and Probability Program and for the Classical Analysis Program of the United States National Science Foundation
- Reviewer for the United States National Security Agency Grants
- Reviewer for the United States–Israel Bi-National Science Foundation
- Reviewer for Israel Science Foundation

#### Membership in Professional Societies

- American Mathematical Society
- Israel Mathematical Society
- Institute of Mathematical Statistics

#### Honors and Awards

- Graduated Phi Beta Kappa, summa cum laude with honors in mathematics from University of Pennsylvania, 1978
- Mahler Prize in Mathematics, 1989
- Technion Excellence in Teaching Award: 1997, 2008, 2010, 2015, 2016, spring semester 2020-2021, winter semester 2021-2022, winter semester 2022-2023
- Yanai Prize For Excellence in Academic Education, 2015

#### Graduate Students

#### Ph.D.

Dmitri Ioffe Ph.D. 1991 Thesis title: "Probabilistic Methods in Partial Differential Equations" (D. Ioffe was a full professor at the Technion until his death in 2020)

Janos Englander Ph.D 1997 Thesis title: "Applications of Criticality Theory" (J. Englander is a full professor at the University of Colorado–Boulder)

Iddo Ben-Ari Ph.D. 2005 Thesis title: "Topics in Diffusion Processes" (I. Ben-Ari is a full professor at the University of Connecticut)

#### $\mathbf{M.S.}$

Janos Englander M.S. 1993 Thesis title: "A Probabilistic Investigation of the Martin Boundary for Certain Elliptic operators in a Strip"

Evgenii Koifman M.S. 1996 Thesis title: "Asymptotic Behavior of Solutions for some Second Order Ordinary and Partial Differential Equations"

Iddo Ben-Ari M.S. 2002 Thesis title: "Absolute continuity/singularity and relative entropy properties for probability measures induced by diffusions on infinite time intervals"

Rachel Hess–Green M.S. 2009 Thesis title: "A probabilistic approach to bounded solutions to the Schrödinger equation "

Nitai Arcusin M.S. 2011 Thesis title: "Asymptotic Behavior of the Principal Eigenvalue for a Class of Non-Local Elliptic Operators Related to Brownian Motion with Spatially Dependent Random Jumps"

Anat Gat M.S. 2012 Thesis title: "Random Walks in Cookie Environments"

#### **Post-Doctoral Mentoring**

Nicholas Travers	2013-2015
Orli Herscovici	2018-2019
Hugo Panzo	2019-2022

#### Other Mentoring

Tomer Zilka, 2022-2023, Research project for student from the Technion's Alonim Program in Data Science.

#### **Research Grants**

• Israel Science Foundation, 2007-2010, \$40,000 per year, PI: R. Pinsky

## LIST OF PUBLICATIONS

#### Ph.D. Thesis:

An analysis of the Donsker-Varadhan I-function for diffusion processes with boundaries. Thesis advisor: S.R.S. Varadhan

#### **Refereed Papers in Professional Journals**

- R. Pinsky, On evaluating the Donsker-Varadhan I-function, Ann. Probab. 13 (1985), 342-362.
- R. Pinsky, On the convergence of diffusion processes conditioned to remain in a bounded region for large time to limiting positive recurrent diffusion processes, Ann. Probab. 13 (1985), 363-378.
- R. Pinsky, The I-function for diffusion processes with boundaries, Ann. Probab. 13 (1985), 676-692.
- R. Pinsky, A classification of diffusion processes with boundaries by their invariant measures, Ann. Probab. 13 (1985), 693-697.
- R. Pinsky, A spectral criterion for the finiteness or infiniteness of stopped Feynman-Kac functionals of diffusion processes, Ann. Probab. 14 (1986), 1180-1187.
- R. Pinsky, Recurrence, transience and bounded harmonic functions for diffusions in the plane, Ann. Probab. 15 (1987),954-984.

- R. Pinsky, The dead core for reaction diffusion equations with convection and its connection with the first exit time of the related Markov diffusion process, *Nonlinear Anal.* 12 (1988), 451-471.
- R. Pinsky, A mini-max variational formula giving necessary and sufficient conditions for the transience or recurrence of multidimensional diffusion processes, Ann. Probab. 16 (1988), 662-671.
- 9. R. Pinsky, A generalized Dirichlet principle for second order non-selfadjoint elliptic operators with boundary conditions, *SIAM*, *J. Math. Anal.* **19** (1988), 204-213.
- R. Pinsky, Hypercontractivity estimates for nonselfadjoint diffusion semigroups, Proc. Amer. Math. Soc. 104 (1988), 532-536.
- 11. R. Pinsky, The averaging principle for diffusions with a small parameter in the case of a noncharacteristic boundary, Ann. Probab. 17 (1989), 559-572.
- R. Pinsky, On comparing the solutions of linear diffusion equations with those of singular nonlinear "fast" diffusion equations, J. Differential Equations 78 (1989), 144-159.
- R. Pinsky, The lifetimes of conditioned diffusion processes, Ann. Inst. H. Poincaré, Probab. Statist. 26 (1990), 87-99.
- R. Pinsky, The asymptotic behavior of the solution of the exterior Dirichlet problem for Brownian motion perturbed by a small parameter drift, Ann. Probab. 18 (1990), 1602-1618.
- R. Pinsky, A probabilitic approach to a theorem of Gilbarg and Serrin, Israel J. Math. 74 (1991), 1-12.
- R. Pinsky and M. Scheutzow, Some remarks and examples concerning transience and recurrence of random diffusions, Ann. Inst. H. Poincaré, Probab. Statist. 28 (1992), 519-536.
- R. Pinsky, The interplay of nonlinear reaction and convection in dead core behavior for reaction-diffusion equations, *Nonlinear Anal.* 18 (1992), 1113-1123.
- M. Pinsky and R. Pinsky, Transience/recurrence and central limit theorem behavior for diffusions in random temporal environments, Ann. Probab. 21 (1993), 433-452.
- 19. R. Pinsky, A new approach to the Martin boundary via diffusions conditioned to hit a compact set, Ann. Probab. 21 (1993), 453-481.
- D. Ioffe and R. Pinsky, Positive harmonic functions vanishing on the boundary for the Laplacian in unbounded horn-shaped domains, *Trans. Amer. Math. Soc.* 342 (1994), 773-791.
- 21. R. Pinsky, Second order elliptic operators with periodic coefficients: criticality theory, perturbations and positive harmonic functions, J. Funct. Anal. **129** (1995), 80-107.
- 22. R. Pinsky, K-P-P asymptotics for nonlinear diffusion in a large ball with infinite boundary data and on  $\mathbb{R}^d$  with infinite initial data outside a large ball, *Comm. Partial Differential Equations* **20** (1995), 1364-1393.

- 23. J. Englander and R. Pinsky, The asymptotic behavior of the principal eigenvalue for small perturbations of critical one-dimensional Schrodinger operators with  $V(x) = \frac{\ell_{\pm}}{x^2}$  for  $\pm x \gg 1$ , J. Funct. Anal. 133 (1995), 501-515.
- 24. R. Pinsky, On the large time growth rate of the support of supercritical super-Brownian motion, Ann. Probab. 23 (1995), 1748-1754.
- 25. R. Pinsky, Transience, recurrence and local extinction properties of the support for supercritical finite measure valued diffusions, Ann. Probab. 24 (1996), 237-267.
- 26. R. Pinsky, Existence and nonexistence of global solutions of  $u_t = \Delta u + a(x)u^p$  in  $\mathbb{R}^d$ , J. Differential Equations 133 (1997), 152-177.
- 27. R. Pinsky, The behavior of the life span for solutions to  $u_t = \Delta u + a(x)u^p$  in  $\mathbb{R}^d$ , J. Differential Equations 147 (1998), 30-57.
- 28. J. Englander and R. Pinsky, On the construction and support properties of measure-valued diffusions on  $D \subseteq \mathbb{R}^d$  with spatially dependent branching, Ann. Probab. 27 (1999), 684-730.
- 29. R. Pinsky, Finite time blow-up for the inhomogeneous equation  $u_t = \Delta u + a(x)u^p + \lambda \phi$  in  $R^d$ , Proc. Amer. Math. Soc. **127** (1999), 3319-3327.
- 30. R. Pinsky, Decay of mass for the equation  $u_t = \Delta u a(x)u^p |\nabla u|^q$ , J. Differential Equations **165** (2000), 1-23.
- R. Pinsky, A probabilistic approach to positive harmonic functions in a slab with alternating Dirichlet and Neumann boundary conditions, *Trans. Amer. Math. Soc.* 352 (2000), 2445-2477.
- R. Pinsky, Invariant probability distributions for measure-valued diffusions, Ann. Probab. 29 (2001), 1476-1514.
- 33. R. Pinsky, Asymptotics for the heat equation in the exterior of a shrinking compact set in the plane via Brownian hitting times, *Proc. Amer. Math. Soc.* **130** (2002), 1673-1679.
- R. Pinsky, Strong law of large numbers and mixing for the invariant distributions of measure-valued diffusions, *Stochastic Process. Appl.* 105 (2003) No. 1, 117–137.
- 35. J. Englander and R. Pinsky, Uniqueness/nonuniqueness for nonnegative solutions of second order parabolic equations of the form  $u_t = Lu + Vu \gamma u^p$  in  $\mathbb{R}^n$ , J. Differential Equations **192** (2003), No. 2, 396–428.
- 36. R. Pinsky, Asymptotics of the principal eigenvalue and expected hitting time for positive recurrent elliptic operators in a domain with a small puncture, J. Funct. Anal. 200 (2003), No. 1, 177–197.
- I. Ben-Ari and R. Pinsky, Absolute continuity/singularity and relative entropy properties for probability measures induced by diffusions on infinite time intervals, *Stochastic Process. Appl.* **115** (2005), No. 2, 179–206.
- R. Pinsky, Spectral gap and rate of convergence to equilibrium for a class of conditioned Brownian motions, *Stochastic Process. Appl.* 115 (2005), No. 6, 875–889.

- 39. R. Pinsky, Global existence/nonexistence for sign-changing solutions to  $u_t = \Delta u + |u|^p$  in  $\mathbb{R}^d$ , Bull. London Math. Soc. **37** (2005), No. 3, 417–426.
- R. Pinsky, Comparison theorems for the spectral gap of diffusions on an interval and their connection to corresponding results for one-dimensional Schrödinger operators, J. London Math. Soc. 72 (2005), 621–631.
- R. Pinsky, Law of large numbers for increasing subsequences of random permutations, Random Structures and Algorithms 29 (2006), 277–295.
- 42. R. Pinsky and J. Englander, The compact support property for measure-valued processes, Ann. Inst. H. Poincaré Probab. Statist. 42 (2006), 535–552.
- R. Pinsky, Positive solutions of reaction diffusion equations with super-linear absorption: universal bounds, uniqueness for the Cauchy problem, boundedness of stationary solutions, J. Differential Equations 220 (2006), 407–433.
- 44. R. Pinsky, When the law of large numbers fails for increasing subsequences of random permutations, Ann. Probab., **35** (2007), 758-772.
- I. Ben-Ari and R. Pinsky, Spectral analysis of a family of second order elliptic operators with nonlocal boundary conditioned indexed by a probability measure, J. Funct. Anal., 251 (2007), 122-140.
- 46. R. Pinsky, Regularity properties of the Donsker-Varadhan rate functional for non-reversible diffusions and random evolutions, *Stochastics and Dynamics*, **7** (2007), 123-140.
- 47. R. Pinsky, A probabilistic approach to bounded/positive solutions for Schrodinger operators with certain classes of potentials, *Trans. Amer. Math. Soc.*, **360** (2008), 6545-6554.
- R. Pinsky, The Fujita exponent for semilinear heat equations with quadratically decaying potential or in an exterior domain, J. Differential Equations, 246 (2009), 2561-2576.
- 49. R. Pinsky, Explicit and almost explicit spectral calculations for diffusion operators, *Journal of Functional Analysis* **256** (2009), 3279–3312.
- 50. R. Pinsky, Spectral analysis of a class of non-local elliptic operators related to Brownian motion with random jumps, *Transactions of Amer. Math. Soc.* **361** (2009), 5041–5060.
- 51. R. Pinsky, Transience/recurrence for normally reflected Brownian motion in unbounded domains, Annals of Probability **37** (2009), 676–686.
- I. Ben-Ari and R. Pinsky, Ergodic behavior of diffusions with random jumps from the boundary, Stochastic Processes and their Applications 119 (2009), 864–881.
- 53. R. Hess-Green and R. Pinsky, A probabilistic approach to the Liouville property for Schrödinger operators with an application to infinite configurations of balls, *Proc. Amer. Math. Soc.* **138** (2010), 4487-4496.
- R. Pinsky, One-dimensional diffusions that eventually stop down-crossing, Bulletin of London Math. Soc. 42 (2010), 634-638.
- R. Pinsky, Transience/Recurrence and the speed of a one-dimensional random walk in a "have your cookie and eat it" environment, Ann. Inst. H. Poincaré Probab. Statist. 46 (2010), 949-964.

- 56. N. Arcusin and R. Pinsky, Asymptotic behavior of the principal eigenvalue for a class of non-local elliptic operators related to Brownian motion with spatially dependent random jumps Communications in Contemporary Mathematics 13 (2011), 1077-1093.
- 57. R. Pinsky, Asymptotics for exit problem and principal eigenvalue for a class of non-local elliptic operators related to diffusion processes with random jumps and vanishing diffusion Bulletin of the Institute of Mathematics Academia Sinica (New series) 7 (2012), 545-564.
- R. Pinsky, Detecting tampering in random graphs *Electronic J. of Probab.* 18 (2013), 1-12.
- 59. R. Pinsky, Transience, recurrence and speed of diffusions with a non-Markovian two-phase "use it or lose it" drift, Ann. Inst. Henri Poincaré Probab. Stat. 50 (2014), 1198-1212.
- 60. R. Pinsky, Probabilistic and combinatorial aspects of the card-cyclic to random insertion shuffle, *Random Structures and Algorithms* 46 (2015), 362-390.
- 61. R. Pinsky, The speed of a random walk excited by its recent history, *Journal of Applied Probability* 48 (2016), 215-234.
- 62. R. Pinsky, The behavior of the free boundary for reaction-diffusion equations with convection in an exterior domain with Neumann or Dirichlet boundary condition, *Journal of Differential Equations* 260 (2016), 5075-5102.
- R. Pinsky, Transience/recurrence for diffusion processes in time-dependent domains, *Electronic Journal of Probability* 21 (2016), Paper No. 46, 24 pp.
- R. Pinsky and N. Travers, Transience, recurrence and the speed of a random walk in a site-based feedback environment, *Probability Theory and Related Fields* 167 (2017), no. 3-4, 917-978.
- 65. R. Pinsky, Some connections between permutation cycles and Touchard polynomials and between permutations that fix a set and covers of multisets, *Electronic Communications* in Probability 22 (2017), Paper No. 17, 9 pp.
- 66. R. Pinsky, On the strange domain of attraction to generalized Dickman distributions for sums of independent random variables, *Electronic Journal of Probability* 23 (2018) Paper No. 3, 17 pp.
- 67. R. Pinsky, A natural probabilistic model on the integers and its relation to Dickmantype distributions and Buchstab's function, *Probability and analysis in interacting physical* systems, 267-294, Springer Proc. Math. Stat., 283, (2019).
- R. Pinsky, Kemeny's constant for one-dimensional diffusions. *Electron. Commun. Probab.* 24, Paper No. 36, 5 pp. (2019).
- R. Pinsky, Optimizing the drift in a diffusive search for a random stationary target, *Electron. J. Probab.* 24, Paper No. 82, 22 pp. (2019).
- R. Pinsky, The infinite limit of random permutations avoiding patterns of length three, Combin. Probab. Comput. 29 (2020), 137-152.
- R. Pinsky, Diffusive search with spatially dependent resetting, *Stochastic Process. Appl.*, 130 (2020), 2954-2973.

- 72. R. Pinsky, The speed of a general random walk reinforced by its recent history, *Stochastic Process. Appl.*, 130 (2020), 4793-4807.
- 73. R. Pinsky, Permutations avoiding a certain pattern of length three under Mallows distributions, *Random Structures Algorithms* 58 (2021), 676-690.
- 74. R. Pinsky, The infinite limit of separable permutations, *Random Structures Algorithms* 59 (2021), 622-639.
- 75. R. Pinsky, A view from the bridge spanning combinatorics and probability, *Enumerative Combinatorics and Applications* 1, article S2S3, (2021) 31 pp.
- 76. R. Pinsky, Comparing the inversion statistic for distribution-biased and distributionshifted permutations with the geometric and the GEM distributions, ALEA Lat. Am. J. Probab. Math. Stat. 19 (2022), 209-229.
- 77. R. Pinsky, The secretary problem with biased arrival order via a Mallows distribution, *Adv. in Appl. Math.* 140 (2022), Paper No. 102386.
- 78. R. Pinsky, Clustering of consecutive numbers under Mallows distributions and superclustering under general *p*-shifted distributions, *Electron. J. Probab, 27, (2022), 20 pp.*

#### Accepted for Publication

1. R. Pinsky, Large time probability of failure in diffusive search with resetting in arbitrary dimension–a functional analytic approach, to appear in *Trans. Amer. Math. Soc.* 

#### Submitted for Publication

- 1. R. Pinsky, Clustering of consecutive numbers in permutations avoiding a pattern of length three or avoiding a finite number of simple patterns.
- 2. R. Pinsky, Comparison of jump and bridge resetting in diffusive search for a random target on the line and in space
- 3. R. Pinsky, Two measures of efficiency for the secretary problem with multiple items at each rank.

#### **Book Reviews**

 Review of Diffusions and Elliptic Operators, by Richard Bass, Ann. Probab. 27 (1999), 610-614.

#### Books

- Positive Harmonic Functions and Diffusion, Cambridge Studies in Advanced Mathematics 45, Cambridge University Press, 1995, 474 pages.
- 2. Problems from the Discrete to the Continuous. Probability, Number Theory, Graph Theory, and Combinatorics, Universitext. Springer, 2014. xiv+154 pp.

## **Refereed Conference Proceedings**

- R. Pinsky, Transience and recurrence for multidimensional diffusions: a survey and a recent result, in: Geometry of Random Motion, Contemporary Mathematics Series, Vol.73 (1988), 273-285.
- 2. D. Ioffe and R. Pinsky, Asymptotics for the solution of the exterior Dirichlet problem for second order elliptic operators with small first order perturbations, Lectures in Applied Mathematics, 27 (1991), 185-191.
- 3. R. Pinsky, On domain monotonicity for the principal eigenvalue of the Laplacian with a mixed Dirichlet–Neumann boundary condition, Geometry, Spectral Theory, Groups, and Dynamics, Robert Brooks Memorial Conference Proceedings, Contemporary Mathematics, Vol. 387 (2005), 245-252.
- 4. J. Englander and R. Pinsky, Uniqueness/nonuniqueness for nonnegative solutions of a class of second-order parabolic equations, Equadiff-11 2005 Conf. Proceedings (2006), 67-76.

## Conferences

## Plenary or Invited Talks

- The Southern California Probability Symposium, UC-Irvixne, December 1982.
- IMS Probability Conference, Humboldt State College, Arcata, California, June 1983.
- AMS Summer Research Conference Geometry of Random Motion, Cornell University, July 1987.
- Large Deviations, Oberwolfach, Germany, August 1988.
- Mathematics of Random Media, Virginia Polytechnical Institute, June 1989.
- Random Partial Differential Equations, Oberwolfach, Germany, November 1989.
- Probabilistic Methods in Differential Equations, Technion, Haifa, May 1991.
- Stochastics and Analysis, ETH Zurich, January 1992.
- Stochastic Analysis and Geometry, Max Planck Institute, Bonn, March 1992.
- AMS Summer Research Conference Stochastic Analysis, Cornell University, July 1993.
- Stochastic Dynamics, Hebrew University, Jerusalem, March 1994.
- Nonlinear Partial Differential Equations, Hebrew University, Jerusalem, December 1995.
- Interacting Particle Systems, Technion, Haifa, June 1996.
- Stochastic Partial Differential Equations, MSRI, Berkeley, September 1997.
- Workshop on Partial Differential Equations (gave series of 3 talks), Rome, 2001.
- Blow-up Phenomena in Partial Differential Equations, Bratislava, May 2003.
- Robert Brooks Memorial Conference, Technion, December 2003.

- Analytic and Geometric Aspects of Stochastic Processes, Banff International Research Station, CA, invited plenary talk forced to decline for personal reasons, April 2004.
- AMS-IMS-SIAM Summer Research Conference on "Interactions of Random Matrix Theory, Integrable Systems, and Stochastic Processes", Snowbird, Utah, June 2007.
- AIMS Conference on Dynamical Systems and Differential Equations, Arlington, Texas, May 2008.
- Workshop on Stochastic Analysis and Stochastic Finance, Ben Gurion University, December 2008.
- Conference in honor of the 70th birthday of S.R.S. Varadhan, Taipei, Taiwan, July 2011.
- Getting Started with PDE Summer Workshop for Graduate Students (gave mini-course), Technion, September 2011.
- Front Propagation and Particle Systems, Banff International Research Station, CA, (gave a mini-course), August 2014.
- Getting started with PDE, Summer Workshop for Graduate Students, (gave mini-course), Technion, September 2014.
- Laplacians, Random Walks, Bose Gas, Quantum Spin Systems, Bristol, UK, September 2014.
- Mostly Markov Mixing Research Conference, Technion, September, 2015.
- Stochastic Processes Under Constraints, Augsburg, Germany, July 2016.
- Conference in Honor of the 75th birthday of S. R. S. Varadhan, Berlin, Germany, August 2016.
- Mathematical Aspects of Physics with Non-Self-Adjoint Operators: 10 Years After, Marseille France and by Zoom, February 2021 (postponed from March 2020).
- Conference in honor of the 80th birthday of S. R. S. Varadhan, South Korea, June 2022 (postponed from 2021).
- Conference in memory of Dima Ioffe, Technion, September 2022.

#### **Contributed Talks**

- Stochastic Processes and Applications Annual Conference, Palo Alto, Ca., July 1987.
- Summer Probability Workshop, Cornell University, July 2009.
- Summer Probability Workshop, University of Washington, July 2010.
- Stochastic Processes and Applications Annual Conference, Denver, Co., July 2013.
- Institute of Mathematical Statistics (IMS) Annual Conference, London, June 2022.

## Conference organizing

- Principal organizer of workshop and special semester on Probabilistic Methods in Differential Equations, sponsored by the Institute for Advanced Studies in Mathematics at the Technion, May 1991.
- Coorganizer of workshop and special semester on Positive Solutions of Elliptic and Parabolic Differential Equations, sponsored by the Institute for Advanced Studies in Mathematics at the Technion, May 1997.
- Coorganizer of workshop on Differential Equations in honor of Moshe Marcus' 60th birthday, Technion, December 1997.
- Israeli Principal organizer of Hungarian-Israeli Probability Workshop, Technion, January 2009.
- Coorganizer of conference in honor of Robert Adler and Haya Kaspi, Technion, June, 2015.
- Principal organizer of Student Workshop and Research Conference: Mostly Markov Mixing, Technion, August-September, 2015.