

January 2017.

RESUME

Full name: Yehuda Pinchover

Date and place of birth: 20.9.1953, Haifa, Israel.

Marital status: Married with five children.

ACADEMIC DEGREES

1977 B.Sc., Mathematics and Physics, the Hebrew University, Jerusalem.

1980 M.Sc., Mathematics, the Hebrew University, Jerusalem.

1986 Ph.D., Mathematics, the Hebrew University, Jerusalem.

ACADEMIC APPOINTMENTS

2007 Professor, Department of Mathematics, Technion, Haifa, Israel.

2005 (August–September) Visiting Professor of the Forschungsinstitut für Mathematik, ETH, Zürich, Switzerland.

2004–05 Visiting Professor, Institute of Mathematics, the Hebrew University, Jerusalem.

1998–2006 Associate Professor, Department of Mathematics, Technion, Haifa, Israel.

1994–95 Visiting member of the Forschungsinstitut für Mathematik, ETH, Zürich, Switzerland.

1991–97 Senior Lecturer, Department of Mathematics, Technion, Haifa, Israel (tenure 1993).

1991 (June–July) Visiting Professor, Université Pierre et Marie Curie (Paris VI), Paris, France.

1988–91 Lecturer, Department of Mathematics, Technion, Haifa, Israel.

1986–88 Adjunct Assistant Professor, Department of Mathematics, University of California, Los Angeles, U.S.A.

1981–86 Teaching Assistant, Institute of Mathematics, the Hebrew University, Jerusalem.

1977–80 Reader, Institute of Mathematics, the Hebrew University, Jerusalem.

RESEARCH INTERESTS

Partial Differential Equations, Spectral Theory, Variational methods.

TEACHING EXPERIENCE

Undergraduate courses: Calculus, Ordinary Differential Equations, Introduction to Applied Mathematics, Numerical Analysis, Linear Programming, Fourier Methods for Differential Equations, Methods of Applied Mathematics, Discrete Mathematics, Introduction to Topology, Functions of One Complex Variables, Partial Differential Equations, Introduction to Partial Differential Equations, Analytic Methods in PDE, Seminar in PDE.

Graduate courses: Selected Topics in PDE, Spectral Theory of Partial Differential Operators, Methods in Nonlinear PDE, Mathematical Biology.

Videotaped courses: Partial Differential Equations (1997).

TECHNION ACTIVITIES

2014– Professors' Representatives on the Board of Governors and the Council of the Technion.

2016–2017 Member of the Technion Senate Committee for Honorary Degrees and Prizes.

2016–2017 Member of the Special Committee for the Nomination of Distinguished Professors.

2017– Member of the Search Committee for the Recommendation of Public Representatives to the Board of Governors.

2012–2015 Member of the Technion Academic Senate.

2011–2013 Member of the Technion Senate Preparatory Committee.

2010–2014 Member of the Technion Library Committee.

2007–2009 Vice Dean of the Department of Mathematics for Teaching and Undergraduate and Graduate Studies.

- 2006–2009 Vice-Chairman, Students Disciplinary Court.
- 2003–2009 Member of the Technion’s Academic Disciplinary Court for Faculty.
- 2002, 2006–2007 Member of the Board of the Center for Mathematical Sciences, and the Elisha Netanyahu Institute of Advanced Studies in Mathematics.
- 2003–2006, 2014–2017 Judge, Students Disciplinary Court.
- 2001–2002 Representative of the Department of Mathematics at the Technion Academic Senate.
- 2000–2010 Interviewer for the Technion Excellence Program.
- 1999 Mathematics Dean’s Search Committee.

PUBLIC PROFESSIONAL ACTIVITIES

- 1988– Reviewer for the Mathematical Reviews.
- 2008– Reviewer for Zentralblatt MATH
- 1990– **Referee for journals:** Acta Appl. Math., Acta Mathematica, Adv. in Differential Equations, Adv. in Math., Adv. Nonlinear Stud., Amer. Math. Monthly, Ann. Inst. H. Poincaré-Anal. Non Linéaire, Ann. Inst. Fourier (Grenoble), Ann. Inst. H. Poincaré-Physique Théorique, Ann. Mat. Pura Appl., Ann. Sc. Norm. Super. Pisa Cl. Sci., Appl. Math. Comput., Arch. Math. (Brno), Asymptotic Analysis, Boll. Un. Mat. Ital., Bull. Lond. Math. Soc., Calc. Var. Partial Differential Equations, Commun. Contemp. Math., Comm. Math. Anal., Comm. Math. Physics, Comm. Partial Differential Equations, Comm. Pure Appl. Math., Compos. Math., C. R. Acad. Sci. Paris Sér. I Math., Discrete Contin. Dyn. Syst. Ser. B, Doc. Math., Duke Math. J., Indian J. Pure Appl. Math. (Indian Nat. Sci. Acad.), Indiana Univ. Math. J., Internat. Math. Res. Notices, Inverse Problems, Israel J. Math., J. Analyse Math., J. Differential Equations, J. Eur. Math. Soc., J. Functional Analysis, J. Geom. Anal., J. London Math. Soc., J. Math. Anal. Appl., J. Math. Physics, J. Math. Pures Appl., J. Phys. A: Math. Theor., J. Reine Ang. Mathematik (Crelle’s Journal), J. Spectr. Theory, Manuscripta Math., Math. Ann., Math. Nachr., Math. Scand., Math. Z., Mem. Amer. Math. Soc., Nonlinearity, Mediterr. J. Math., Osaka J. Math., Pacific J. Math., Positivity,

Probab. Theory Related Fields, Proc. Amer. Math. Soc., Proc. London Math. Soc., Proc. Roy. Soc. Edinburgh Sect. A, Publ. Mat., Statist. Probab. Lett., Rev. Mat. Complut., Rev. Mat. Iberoam., Turkish J. Math., and Z. Anal. Anwendungen.

- 1993– Reviewer for the Israel Ministry of Science and Technology.
- 1999– Reviewer for the German-Israeli Foundation for Scientific Research and Development.
- 1999– Reviewer and later also a member of the board of advisors of the Israel Science Foundation.
- 2006– Reviewer for the European Research Council.
- 2007– Reviewer for VolkswagenStiftung.
- 2010– Reviewer for Bikura Individual Grants (Israel Science Foundation).
- 2010–2011 Member of the Editorial Board of ISRN Mathematical Analysis.
- 2014 Member of the professional evaluation committee for the Harvey Prize.
- 2014 Selection Board for public selection full professor positions in Mathematical Analysis, Politecnico di Milano.
- 2014– Reviewer for the United States-Israel Binational Science Foundation.
- 2014– Member of the Editorial Board of Israel J. Math.
- 2017– Treasurer of the Israel Mathematical Union.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Israel Mathematical Union
American Mathematical Society
European Mathematical Society
International Association of Mathematical Physics

HONORS

- 1977 Graduation with Excellence, the Hebrew University.
- 1980 M.Sc with Excellence, the Hebrew University.

- 1981 Giora Yashinski Prize for excellence in graduate studies, the Hebrew University.
- 1990 The Mahler Prize in Mathematics, Technion.
- 1991–1994 Harry Goldman Academic Lectureship.
- 1994 Prize of the Zehava and Tzevi Friedenberg Foundation for Promotion of Education and Research, Israel Science Foundation.
- 1997 The Mahler Prize in Mathematics, Technion.

GRADUATE STUDENTS

Completed Theses

- 1994 Vladislav Zepenyuk, M. Sc., *On absolutely continuous spectra of Schrödinger operator with slowly decreasing potential*, primary supervisor: Y. Pinchover, secondary supervisor: M. Goldstein.
- 2001 Tiferet Saadon (Suez), Ph. D., *On the generalized principal eigenvalue of degenerate boundary value problems for second-order elliptic equations*, supervisor: Y. Pinchover.
- 2005 Peter Paneah, M. Sc., (summa cum laude), *Nonlocal problems related to hyperbolic differential equations*, supervisor: Y. Pinchover.
- 2005 Daphne Zelig, Ph. D., *Properties of solutions of partial differential equations defined on human lung-shaped domains*, primary supervisor: G. Wolansky, secondary supervisor, Y. Pinchover.
- 2015 Natanel Regev, M. Sc., *Criticality Theory of Half-Linear Equations with the (p,A) -Laplacian*, supervisor: Y. Pinchover.

Thesis in Progress

- 2016– Idan Versano, Ph. D..

Sponsoring Postdoctoral Fellows

- Dr. Alexander Zaslavsky, 1991.
- Dr. Elena Braverman, 1992–1994.
- Dr. Daniel Levin, 2002–2005.

- Dr. Jean-David Hoernel, 2005–2006.
- Dr. Martin Fraas, 2008–2011.
- Dr. Baptiste Devyver, 2011–2014
- Dr. Georgios Psaradakis, 2013–2015
- DR. Debdip Ganguly, 2015–
- Dr. Siegfried Beckus, 2016–

Supervision of International Graduate Research Associates

- Mattias Enstedt, 2008.
- Hoang Hung Vo, 2013.
- Milena Mandic, Summer 2015.
- Maximilian Muellenbach, Summer 2016.
- Mei Liu, Spring 2017.

Hosting Senior Visitors for Long Periods

- Alexander G. Ramm, Fulbright Research Professorship, 1991–1992.
- Minoru Murata, Japan Society of Promotion of Science, 1994.
- Minoru Murata, April 1997.
- Kyril Tintarev, Lady Davis Professorship, Spring 2004.
- Elio Cabib, Spring and Summer 2006.
- Bruce Solomon, Lady Davis Professorship, 2006.
- Kyril Tintarev, Winter, 2008.
- Vitali Liskevich, Coleman-Cohen Fellowship, Spring 2011.
- Cyril Tintarev, Lady Davis Professorship, Spring 2014.
- Israel Sigal, Technion-Toronto Fund, 2016.

RESEARCH GRANTS

- 1993–1996 The Israel Science Foundation, \$66,000, PI: V. Lin and Y. Pinchover.
- 2000–2004 The United States-Israel Binational Science Foundation, \$40,000, PI: P. Kuchment, V. Lin and Y. Pinchover.
- 2004–2007 The Israel Science Foundation, NIS99,000 (Annual Budget), PI: Y. Pinchover.
- 2008–2012 The Israel Science Foundation, NIS151,000 (Annual Budget), PI: Y. Pinchover.
- 2012–2015 The Israel Science Foundation, NIS175,500 (Annual Budget), PI: Y. Pinchover.
- 2015–2019 The Israel Science Foundation, NIS230,000 (Annual Budget), PI: Y. Pinchover.

Large group grants

- 1994–1995 Arc en Ciel – France-Israel Scientific Cooperation, PI: H. Brezis and M. Marcus.
- 1998–1999 Arc en Ciel – France-Israel Scientific Cooperation, PI: H. Brezis and M. Marcus.
- 2000–2001 European TMR Network, Nonlinear Parabolic Partial Differential Equations: Methods and Applications, PI: H. Brezis and G. I. Sivashinsky.
- 2002–2006 The Fifth Framework Programme of the European Community, Research Training Network Programme, Fronts-Singularities, EU151,000, PI: M. Bertsch and M. Marcus.
- 2002–2007 The European Science Foundation’s programme on Spectral Theory and Partial Differential Equations (SPECT), PI: A. Laptev and M. Ben-Artzi.

PUBLICATIONS

Thesis

- M. Sc. Thesis:

- Y. Pinchover, *Numerical solutions of the hydrodynamics equations for compressible flow*.
- Supervisor: Professor Shmuel Kaniel.
- Ph. D. Thesis:
 - Y. Pinchover, *Positive solutions of second order elliptic equations*.
 - Supervisor: Professor Shmuel Agmon.

Refereed papers in professional journals

Published Papers

- [1] Y. Pinchover, *Sur les solutions positives d'equations elliptiques et paraboliques dans \mathbb{R}^n* , C. R. Acad. Sc. Paris **302 I** (1986), 447–450.
- [2] Y. Pinchover, *Representation theorems for positive solutions of parabolic equations*, Proc. Amer. Math. Soc. **104** (1988), 507–515.
- [3] Y. Pinchover, *On positive solutions of second-order elliptic equations, stability results and classification*, Duke Math. J. **57** (1988), 955–980.
- [4] Y. Pinchover, *Criticality and ground states for second-order elliptic equations*, J. Differential Equations **80** (1989), 237–250.
- [5] Y. Pinchover, *On criticality and ground states of second-order elliptic equations II*, J. Differential Equations **87** (1990), 353–364.
- [6] Y. Pinchover, *Large scale properties of multiparameter oscillation problems*, Comm. Partial Differential Equations **15** (1990), 647–673.
- [7] Y. Pinchover, *Large time behavior of the heat kernel and the behavior of the Green function near criticality for nonsymmetric elliptic operators*, J. Functional Analysis **104** (1992), 54–70.
- [8] Y. Pinchover, *On the equivalence of Green functions of second order elliptic equations in \mathbb{R}^n* , Differential and Integral Equations **5** (1992), 481–493.
- [9] R. D. Nussbaum and Y. Pinchover, *On variational principles for the generalized principal eigenvalue of second order elliptic operators and some applications*, J. Anal. Math. **59** (1992), 161–177.

- [10] V. Lin and Y. Pinchover, *Manifolds with group actions and elliptic operators*, Memoirs Amer. Math. Soc. **Vol. 112, No. 540** (1994), 1–78.
- [11] Y. Pinchover, *On positive Liouville theorems and asymptotic behavior of solutions of Fuchsian type elliptic operators*, Ann. Inst. H. Poincaré. Anal. Non Linéaire **11** (1994), 313–341.
- [12] Y. Pinchover, *Nonexistence of any λ_0 -invariant positive harmonic function, a counter example to Stroock's conjecture*, Comm. Partial Differential Equations **20** (1995), 1831–1846.
- [13] Y. Pinchover, *On the localization of binding for Schrödinger operators and its extension to elliptic operators*, J. Anal. Math. **66** (1995), 57–83.
- [14] Y. Pinchover, *On positivity, criticality and spectral radius of the shuttle operator for elliptic operators*, Duke Math. J. **85** (1996), 431–445.
- [15] Y. Pinchover, *On uniqueness and nonuniqueness of the positive Cauchy problem for parabolic equations with unbounded coefficients*, Math. Zeitschrift **233** (1996), 569–586.
- [16] Y. Pinchover, *Generalized principal eigenvalues for indefinite-weight elliptic problems*, C. R. Acad. Sc. Paris **326** (1998), 697–702.
- [17] M. Marcus, V. J. Mizel and Y. Pinchover, *On the best constant for Hardy's inequality in \mathbb{R}^n* , Trans. Amer. Math. Soc. **350** (1998), 3237–3255.
- [18] Y. Pinchover, *Maximum and anti-maximum principles and eigenfunctions estimates via perturbation theory of positive solutions of elliptic equations*, Math. Ann. **314** (1999), 555–590.
- [19] P. Kuchment and Y. Pinchover, *Integral representations and Liouville theorems for solutions of periodic elliptic equations*, J. Functional Analysis, **181** (2001), 402–446.
- [20] Y. Pinchover, *Anti-maximum principles for indefinite-weight elliptic problems*, Comm. Partial Differential Equations, **26** (2001), 1861–1877.
- [21] Y. Pinchover and T. Saadon (Suez), *On positivity of solutions of degenerate boundary value problems for second-order elliptic equations*, Israel J. Math. **132** (2002), 125–168.

- [22] Y. Pinchover, *Large time behavior of the heat kernel*, J. Functional Analysis **206** (2004), 191–209.
- [23] Y. Pinchover and K. Tintarev, *Existence of minimizers for Schrödinger operators under domain perturbations with application to Hardy’s inequality*, Indiana Univ. Math. J. **54** (2005), 1061–1074.
- [24] Y. Pinchover and K. Tintarev, *Ground state alternative for singular Schrödinger operators*, J. Functional Analysis **230** (2006), 65–77.
- [25] Y. Pinchover and K. Tintarev, *Ground state alternative for p -Laplacian with potential term*, Calc. Var. Partial Differential Equations **28** (2007), 179–201.
- [26] Y. Pinchover, *A Liouville-type theorem for Schrödinger operators*, Comm. Math. Phys. **272** (2007), 75–84.
- [27] P. Kuchment and Y. Pinchover, *Liouville theorems and spectral edge behavior on abelian coverings of compact manifolds*, Trans. Amer. Math. Soc. **359** (2007), 5777–5815.
- [28] Y. Pinchover, A. Tertikas and K. Tintarev, *A Liouville-type theorem for the p -Laplacian with potential term*, Ann. Inst. H. Poincaré. Anal. Non Linéaire **25** (2008), 357–368.
- [29] Y. Pinchover and K. Tintarev, *On positive solutions of minimal growth for singular p -Laplacian with potential term*, Adv. Nonlinear Stud. **8** (2008), 213–234.
- [30] Y. Pinchover, G. Wolansky and D. Zelig, *Spectral properties of Schrödinger operators on radial N -dimensional infinite trees*, Israel J. Math. **165** (2008), 281–328.
- [31] M. Fraas, D. Krejčířík and Y. Pinchover, *On some strong ratio limit theorems for heat kernels*, Discrete Contin. Dyn. Syst. Ser. A, a special volume dedicated to Louis Nirenberg on the occasion of his 85th birthday, **28** (2010), 495–509.
- [32] M. Fraas and Y. Pinchover, *Positive Liouville theorems and asymptotic behavior for p -Laplacian type elliptic equations with a Fuchsian potential*, Confluentes Mathematici **3** (2011), 291–323.
- [33] B. Devyver, M. Fraas and Y. Pinchover, *Optimal Hardy-type inequalities for elliptic operators*, C. R. Acad. Sci. Paris, Ser. I **350** (2012), 475–479.

- [34] M. Fraas and Y. Pinchover, *Isolated singularities of positive solutions of p -Laplacian type equations in \mathbb{R}^d* , J. Differential Equations **254** (2013), 1097–1119.
- [35] B. Devyver, M. Fraas and Y. Pinchover, *Optimal hardy weight for second-order elliptic operator: An answer to a problem of Agmon*, J. Functional Analysis **266** (2014), 4422–4489.
- [36] G. Grillo, H. Kovařík and Y. Pinchover, *Sharp two-sided heat kernel estimates of twisted tubes and applications*, Arch. Rational Mech. Anal. **213** (2014), 215–243.
- [37] B. Devyver, Y. Pinchover, and G. Psaradakis, *On optimal Hardy inequalities in cones*, Bruno Pini Math. Anal. Semin. **2014** (2014), 67–82, Univ. Bologna, Alma Mater Stud., Bologna.
- [38] Y. Pinchover, and N. Regev, *Criticality theory of half-linear equations with the (p, A) -Laplacian*, Nonlinear Anal. **119** (2015), 295–314.
- [39] B. Devyver, and Y. Pinchover, *Optimal L^p Hardy-type inequalities*, Ann. Inst. H. Poincaré. Anal. Non Linéaire **33** (2016), 93–118.
- [40] Y. Pinchover, and G. Psaradakis, *On positive solutions of the (p, A) -Laplacian with a potential in Morrey space*, Anal. PDE **9** (2016), 1317–1358.
- [41] A.E. Kogoj, Y. Pinchover, and S. Polidoro, *On Liouville-type theorems and the uniqueness of the positive Cauchy problem for a class of hypoelliptic operators*, J. Evol. Equ. **16** (2016), 905–943.
- [42] B. Devyver, Y. Pinchover, and G. Psaradakis, *Optimal Hardy inequalities in cones*, Proc. Roy. Soc. Edinburgh, Sect. A, **147** 89–124, (2017).

Accepted (or in press) papers

- [A1] M. Keller, Y. Pinchover, and F. Pogorzelski, *An improved discrete Hardy inequality*, to appear in Amer. Math. Monthly, 4pp.

Submitted for publication

- [S1] D. Ganguly, and Y. Pinchover, *On the equivalence of heat kernels of second-order parabolic operators*, 36 pp. arXiv: 1606.08601.

- [S2] D. Ganguly, and Y. Pinchover, *On Green functions of second-order elliptic operators on Riemannian manifolds: The critical case*, 18pp. arXiv: 1609.08200.
- [S3] P. D. Lamberti, and Y. Pinchover, *L^p Hardy inequality on $C^{1,\gamma}$ domains*, 21 pp. arXiv: 1611.00563.
- [S4] M. Keller, Y. Pinchover, and F. Pogorzelski, *Optimal Hardy inequalities for Schrödinger operators on graphs*, 46 pp. arXiv: 1612.04051.
- [S5] S. Beckus, and Y. Pinchover, *Shnol-type theorem for the Agmon ground state*, 12 pp. arXiv: 1706.04869

Review papers

- [R1] Y. Pinchover, *Topics in the theory of positive solutions of second-order elliptic and parabolic partial differential equations*, in “Spectral Theory and Mathematical Physics: A Festschrift in Honor of Barry Simon’s 60th Birthday”, eds. F. Gesztesy, et al., Proceedings of Symposia in Pure Mathematics **76**, American Mathematical Society, Providence, RI, 2007, 329–356.
- [R2] Y. Pinchover, Book Review: *The maximum principle*, by P. Pucci and J. Serrin [Progress in Nonlinear Differential Equations and their Applications **73**, Birkhäuser Verlag, Basel, 2007], Bull. Amer. Math. Soc. **46** (2009), 499–404.
- [R3] Y. Pinchover and K. Tintarev, *On positive solutions of p -Laplacian-type equations*, in “Analysis, Partial Differential Equations and Applications - The Vladimir Maz’ya Anniversary Volume”, eds. A. Cialdea et al., Operator Theory: Advances and Applications, Vol. **193**, Birkhäuser Verlag, Basel, 2009, 245–268.
- [R4] Y. Pinchover, *Some aspects of large time behavior of the heat kernel: an overview with perspectives*, in “Mathematical Physics, Spectral Theory and Stochastic Analysis”, eds. M. Demuth and W. Kirsch, Operator Theory: Advances and Applications, Vol. **232**, Springer Verlag, Basel, 2013, 299–339.
- [R5] Y. Pinchover, *Commentary on James Serrin’s papers concerning the theory of the Dirichlet problem*, in: James Serrin. Selected Papers, Vol. 1, P. Pucci, V.D. Radulescu, and H. Weinberger (Eds.), Birkhäuser Verlag, Basel, 2014, 117–119.

Books

- [B1] Y. Pinchover and J. Rubinstein, “Introduction to Partial Differential Equations”, (in Hebrew), Technion, 312 pp., First Edition 2001, Enlarged Second Edition, 2003, Enlarged Third Edition, 2006, Fourth Edition, 2011.
- [B2] Y. Pinchover and J. Rubinstein, “An Introduction to Partial Differential Equations”, 400 pp., Cambridge University Press, 2005.
- [B3] M. Entov, Y. Pinchover and M. Sageev (Editors), *Geometry, Spectral Theory, Groups, and Dynamics: Proceedings in Memory of Robert Brooks*, Contemporary Mathematics, 300 pp., American Mathematical Society, Providence, RI, 2005.

Refereed papers in conference proceedings

- [CP1]¹ Y. Pinchover, *On positive solutions of elliptic equations with periodic coefficients in unbounded domains*, in: “Maximum Principles and Eigenvalue Problems in Partial Differential Equations (Knoxville, TN, 1987)”, ed. P. W. Schaefer, Pitman Res. Notes in Math. **175**, Longman Sci. Tech., London, 1988, 218–230.
- [CP2]¹ Y. Pinchover, *Binding of Schrödinger particles through conspiracy of potential wells in \mathbb{R}^4* , in: “Progress in Partial Differential Equations: the Metz Surveys 4”, eds. M. Chipot and I. Shafrir, Pitman Research Notes in Mathematics **345**, Longman Press, London, 1996, 118–133.
- [CP3]¹ Y. Pinchover, *On principal eigenvalues for indefinite-weight elliptic problems*, in: “Spectral and Scattering Theory”, ed. A. G. Ramm, Plenum, New York, 1998, 77–87.
- [CP4]¹ Y. Pinchover, *On the maximum and anti-maximum principles*, in: “Differential Equations and Mathematical Physics”, eds. R. Weikard and G. Weinstein, AMS/IP Studies in Advanced Mathematics, Vol. **16**, American Mathematical Society, Providence, 2000, 323–338.
- [CP5]¹ Y. Pinchover and T. Saadon (Suez), *Degenerate elliptic mixed boundary value problems: positive solutions, principal eigenvalue, Green function, and criticality theory*, in: “Progress in Analysis, Proceedings of the 3rd ISAAC Congress”, eds. H. G. W. Begehr, R. P. Gilbert and M. W. Wong, World Scientific, New Jersey, 2003, 623–634.

¹Results have not appeared elsewhere.

- [CP6] ¹ Y. Pinchover, *Davies' conjecture and strong ratio limit properties for the heat kernel*, in "Potential Theory in Matsue", Proceedings of the International Workshop on Potential Theory, 2004, eds. H. Aikawa, et al., Advanced Studies in Pure Mathematics **44**, Mathematical Society of Japan, Tokyo, 2006, 339–352.
- [CP7] ¹ Y. Pinchover and K. Tintarev, *On the Hardy-Sobolev-Maz'ya inequality and its generalizations*, in "Sobolev Spaces in Mathematics I: Sobolev Type Inequalities", ed. V. Maz'ya, International Mathematical Series **8**, Springer, 2009, 281–297.
- [CP7] ¹ Y. Pinchover, *On the boundedness and compactness of weighted Green operators of second-order elliptic operators*, "Functional Analysis and Operator Theory for Quantum Physics", Pavel Exner Anniversary Volume, eds. J. Dittrich, H. Kovařík, and A. Laptev, EMS Publishing House, 2017, 459–490. arXiv: 1601.01464.

CONFERENCES

Plenary or invited talks

- June 1987 Conference on Maximum Principles and Eigenvalue Problems in Partial Differential Equations, Knoxville, Tennessee. *On positive solutions of elliptic equations with periodic coefficients in unbounded domains.*
- Jan. 1988 Conference on One Parameter Semigroups and Differential Operators, Oberwolfach, Germany. *On positive solutions of parabolic equations with periodic coefficients in some unbounded domains.*
- April 1989 Conference on Spectral and Scattering Theory of Differential Operators, Jerusalem, Israel. *On criticality and ground states for elliptic operators.*
- June 1990 Conference on Partial Differential Equations in Honor of Professor Shmuel Agmon, Jerusalem, Israel. *On variational principles for the generalized principal eigenvalue of second order elliptic operators.*
- June 1991 First European Conference on Elliptic and Parabolic Problems, Pont-à-Mousson, France. *Large time behavior of the heat kernel.*
- May 1992 Fourth French-Israeli Conference on Partial Differential Equations, Paris, France. *Manifolds with group actions and elliptic operators.*

- July 1992 Workshop on Partial Differential Equations, Jerusalem, Israel. *Manifolds with group actions and elliptic operators.*
- June 1993 Conference in honor of Professor Jean-Pierre Kahane, Orsay, France. *On positive solutions of elliptic and parabolic equations on manifolds with group actions.*
- Nov. 1994 Conference on Calculus of Variations, Metz, France. *On localization of binding for Schrödinger operators and its extension to elliptic operators.*
- March 1995 Workshop on Elliptic and Parabolic Problems, Basel, Switzerland. *Related aspects of positivity in the theory of elliptic and parabolic equations.*
- December 1995 Germany-Israel Workshop on Partial Differential Equations and Mathematical Physics, Jerusalem, Israel. *Nonexistence of any λ_0 -invariant positive harmonic function, a counter example to Stroock's conjecture.*
- June 1997 First Congress of the International Society for Analysis, Applications and Computation, University of Delaware, Newark, USA. *On principal eigenvalues for indefinite-weight elliptic problems.*
- August 1997 Eighth International Colloquium on Differential Equations, Plovdiv, Bulgaria. *On principal eigenvalues for indefinite-weight elliptic problems.*
- December 1997 Geometric Methods in Analysis, Haifa, Israel. *On the best constant for Hardy's inequality in \mathbb{R}^n .*
- June 1998 Mathematical Physics Workshop, Institute of Theoretical Physics, Technion. *On principal eigenvalues for indefinite-weight elliptic problems - the last theorem in Reed and Simon revisited.*
- August 1998 Functional Analysis, Partial Differential Equations, and Applications, a conference in honor of Vladimir Maz'ya, Rostock, Germany. *On perturbations of Green functions and eigenfunction estimates for elliptic operators.*
- March 1999 International Conference on Differential Equations and Mathematical Physics, University of Alabama, Birmingham, USA. *On perturbations of Green functions, Maximum and anti-maximum principles and eigenfunction estimates for elliptic operators.*

- May 1999 Workshop on Spectral and Scattering Theory, Jerusalem, Israel, *Eigenfunctions estimates for Schrödinger operators via perturbation theory of positive solutions of elliptic operators.*
- May 1999 Braude College Days on Differential Equations and Applied Analysis, ORT Braude College, Karmiel, Israel. *On the anti-maximum principle.*
- August 1999 International Conference on Analysis and Mathematical Physics in Honour of Lars Gårding on his 80th birthday, Lund, Sweden. *On the anti-maximum principle for indefinite-weight elliptic problems.*
- June 2000 Conference of the European TMR Network “Nonlinear Parabolic Partial Differential Equations”, Tel Aviv, Israel. *Liouville theorems for periodic elliptic equations.*
- June 2001 Workshop on Nonuniqueness of Solutions to Parabolic Equations, University of Rome “La Sapienza”, Rome, Italy. Series of invited talks: *I. Uniform Harnack inequality and uniqueness of the positive Cauchy problem. II. Some nonuniqueness results for the positive Cauchy problem. III. Nonexistence of any λ_0 -invariant positive solution and applications.*
- August 2001 3rd International ISAAC Congress, Freie Universität, Berlin, Germany. *Liouville theorems for periodic elliptic equations.*
- May 2003 RTN Conference on Singularities in Nonlinear Problems, Comenius University, Bratislava, Slovakia. *Large time behavior of the heat kernel.*
- July 2004 Workshop on Spectral Theory of Schrödinger Operators, CRM, Montreal, Canada. *Large time behavior of the heat kernel.*
- August 2004 International Workshop on Potential Theory, Matsue, Japan. *Large time behavior of the heat kernel: Davies’ conjecture.*
- March 2005 The 2005 UAB International Conference on Differential Equations and Mathematical Physics, University of Alabama, Birmingham, USA. *Existence of minimizers for Schrödinger operators under domain perturbations.*
- August 2005 XXth Nevanlinna Colloquium, EPF Lausanne, Switzerland. *Liouville theorems on abelian coverings.*
- April 2006 Workshop on Nodal Domains, Department of Physics of Complex Systems, The Weizmann Institute of Science, Rehovot, Israel. *A Liouville-type theorem for Schrödinger operators.*

- July 2006 Workshop on Spectral Theory and its Applications, Isaac Newton Institute, Cambridge, UK, *Liouville theorems and spectral edge behavior for periodic operators on Abelian coverings of compact manifolds* (talk delivered by P. Kuchment).
- October 2006 Workshop on Recent Topics on Differential Equations, Gunma University, Tokyo, Japan, *Liouville comparison theorems for Schrödinger and p -Laplacian-type operators*.
- November 2007 Brauday on Partial Differential Equations II, ORT Braude College, Karmiel, Israel, *On positive solutions and Liouville comparison principle for p -Laplacian-type equations*.
- June 2008 Equations of Fluid Mechanics, Analysis, Spectral Analysis, Numerical Methods, and Simulation. Conference in Honour of Matania Ben-Artzi, Paris, France, *On the Hardy-Sobolev-Maz'ya inequality and its generalizations*.
- July 2008 Analysis, PDEs and Applications, on the Occasion of the 70th Birthday of Vladimir Maz'ya, Rome, Italy, *On positive solutions and Liouville comparison principle for p -Laplacian-type equations*.
- May 2009 Complex Analysis & Dynamical Systems IV, Nahariya, Israel, *On Liouville theorems for p -Laplacian-type equations*.
- August 2009 XVI International Congress on Mathematical Physics, Prague, Czech Republic, *On positive solutions and Liouville theorems for p -Laplacian-type equations*.
- December 2009 Colloque en l'honneur des 60 ans de Michelle Schatzman, Lyon, France. *On positive solutions and Liouville theorems for p -Laplacian-type equations*.
- May 2010 The 8th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Dresden, Germany, *Positive Liouville theorems and asymptotic behavior for p -Laplacian type elliptic equations with Fuchsian potential*.
- July 2010 Recent Advances in Nonlinear Evolutionary Equations and Analysis of Multi-scale Phenomena, Weizmann Institute of Science, Israel, *Large time behavior of the heat kernel*.
- June 2011 Waves and Quantum Fields on Fractals, Technion, Israel, *Large time behavior of the heat kernel: the twisted waveguide as a case study*.

- September 2011 Mathematical Physics, Spectral Theory and Stochastic Analysis, Goslar, Germany, *Large time behavior of the heat kernel: the twisted waveguide as a case study.*
- June 2012 Advances in Nonlinear Partial Differential Equations, a conference in honour of Professor Adimurthi on the occasion of his 60th birthday, TIFR-CAM, Bangalore, India, *Optimal Hardy-type inequalities*
- December 2012 Applications of Analysis: Game Theory, Spectral Theory and Beyond, A workshop in honor of Yakar Kannai's 70th birthday, The Weizmann Institute of Science, Israel, *Optimal Hardy-type inequalities and the spectrum of the corresponding operator.*
- August 2013 Equadiff 13, Prague, *Optimal Hardy-type inequalities and the spectrum of the corresponding operator.*
- June 2014 Second Joint International Meeting of the Israel Mathematical Union and the American Mathematical Society, Tel Aviv, *Optimal Hardy-type inequality for nonnegative second-order elliptic operator: an answer to a problem of Shmuel Agmon.*
- July 2014 Workshop on Analysis of PDEs: Theory, Methods and Applications, Protaras, Cyprus, *Optimal L^p -Hardy-type inequalities.*
- June 2015 Mini-courses in Mathematical Analysis 2015, Padova, Italy, *A mini-course on optimal Hardy inequalities for second-order elliptic operators.*
- September 2015 Mostly Maximum Principle, Agropoli, Italy, *Some aspects of Hardy-type inequalities.*
- July 2016 8th St. Petersburg Conference in Spectral Theory Dedicated to the Memory of M. Sh. Birman, Euler Institute, Saint-Petersburg, Russia, *Optimal Hardy-type inequality for nonnegative second-order elliptic operator: an answer to a problem of Shmuel Agmon.*
- April 2017 Mostly Maximum Principle, BIRS, Banff, Canada, *L^p Hardy inequality on $C^{1,\gamma}$ domains.*
- May 2017 Contemporary Aspects of Analysis, Protaras, Cyprus, *On Green functions of second-order elliptic operators on Riemannian Manifolds: the critical case.*

June 2017 Mathematical aspects of the physics with non-self-adjoint operators, CIRM conference, Marseille, France, *On Green functions of second-order elliptic operators on Riemannian Manifolds: the critical case.*

Participation in organizing conferences

- 2018 “The Batsheva de Rothschild Seminar on Hardy-type inequalities and elliptic PDEs”, Sde Boker, January 2018.
- 2017 The 2017 annual meeting of the Israel Mathematical Union in Akko, May 2017.
- 2016 A PDE Day with Professor Louis Nirenberg A tribute to Louis Nirenberg and a celebration of his 2015 Abel Prize, September 2016
- 2015 Algebraic Geometry, Braids, Analysis: A conference in Honor of Vladimir Lin’s 80th Birthday, May 2015.
- 2014 Getting Started with PDE, Summer Workshop for Undergraduate and Graduate Students, September 2014.
- 2011 Getting Started with PDE, Summer Workshop for Graduate Students, Technion, September 2011.
- 2010 Workshop on Nonlinear PDE and Boundary Value Problems with Measure Data, Technion, March 2010
- 2007 EckmannFest, a special day in honour of Prof. Beno Eckmann’s 90th birthday, Technion, April 2007.
- 2007 Conference on Partial Differential Equations and Spectral Theory. A golden jubilee of PDE in Israel on the Occasion of Shmuel Agmon’s 85th Birthday, the Hebrew University, February 2007.
- 2006 Conference on Spectral Theory of Differential Operators on the Occasion of Michael Solomyak’s 75th Birthday, Weizmann Institute, May 2006.
- 2004 Workshop on Singularities Phenomena in Elliptic and Parabolic Equations, Technion, March 2004.
- 2003 Robert Brooks’ Memorial Conference on Geometry and Spectral Theory, Technion, December 2003.

- 2003 Israel Mathematical Union Annual Meeting, Zichron Yaakov, May 2003, co-organizer of the session on PDE.
- 2003 Conference on Partial Differential Equations and Applications in Celebration of Aizik I. Volpert's 80th Birthday, Technion, June 2003.
- 2002 Israel Mathematical Union Annual Meeting, Technion, May 2002, co-organizer of the session on PDE.
- 1997 International Workshop on Differential Equations and Applications in honor of Moshe Marcus' 60th birthday, Technion, December 1997.
- 1997 Conference on Positive Solutions of Elliptic and Parabolic Equations, Technion, May 1997.
- 1997 Special Semester on Positive Solutions of Elliptic and Parabolic Equations, Technion, March-June 1997.

Seminar and colloquium talks

Bar-Ilan University (2010 (Colloquium), 2015), BCAM Basque Center for Applied Mathematics (2013) California Inst. of Technology (1987), Czech Technical University in Prague (2010), Collège de France (1994), Daido Inst. of Technology (Nagoya, 1998), Ecole Normale Supérieure de Cachan (1992), ETH Zürich (1994), Friedrich-Schiller-Universität Jena (2011), the Hebrew University of Jerusalem (many talks), Imperial College (London, 1999), Meijo University (Nagoya, 2009), New York University (1991, 2015), Politecnico di Milano (2015), Royal Institute of Technology (Stockholm, 2000), Rutgers University (1991, 2017), Shimane University (Japan, 1998), Stanford University (1988), Tata Institute of Fundamental Research, Bangalore (2015), Technion - Israel Institute of Technology (many talks), Technische Universität Berlin (1989), Technische Universität Clausthal (2009), Tel Aviv University (colloquium, 2012), Texas A&M University (2004), Tokyo Institute of Technology (1998, 2004), Università degli Studi di Perugia (2015), Università di Pavia (2012), Universität Basel (1995), Universität Frankfurt (1989), Universität München (2014), Universität Potsdam (2006), Université de Tours (1999), Université Claude Bernard (Lyon 1, 1992), Université Paris-Sud (Orsay, 1999), Université Pierre et Marie Curie (Paris 6, 1992), Université Toulouse 1 (2000), University "La Sapienza" (Rome, 1993), University of Bologna (2014), University of California at Irvine (1987), University of California at Los Angeles (1986), University of Crete (2006), University of Geneve (1993), University of Haifa (1999, 2016), University of

Indiana (2004), University of Modena and Reggio Emilia (2014), University of Missouri (2010), University of Padova (2015), University of Zürich (1994, 2007), Uniwersytet Wrocławski (Wrocław, 2014), Uppsala University (2010), Weizmann Institute of Science (2003), Wichita State University (2000).