

Curriculum Vitae SVETLANA JITOMIRSKAYA

PERSONAL: born in June 1966, Kharkov, Ukraine.

EDUCATION AND DEGREES:

- 1991 Ph.D. in Mathematics. Moscow State University
Thesis: Spectral and Statistical Properties of Lattice Hamiltonian. Advisor: Ya. G. Sinai
- 1987 Honors M.S. and B.S. (Summa Cum Laude) in Mathematics. Moscow State University
Thesis: Localization Problems in the Kicked Rotor Model. Advisor: Ya. G. Sinai.

PROFESSIONAL EXPERIENCE:

- July 2018- Distinguished Professor, UC Irvine
July 2000 - Professor, UC Irvine.
January-March 2003 Research Professor, MSRI
1997-2000 Associate Professor, UC Irvine.
1996 (Fall) Visiting Assistant Professor, Caltech.
1994-97 Assistant Professor, UC Irvine.
1992-94 Visiting Assistant Professor, UC Irvine.
1991-92 Lecturer (part-time), UC Irvine.

RESEARCH DIRECTIONS AND FIELDS OF PUBLICATIONS:

Spectral theory of quasiperiodic Schrödinger operators
Spectral theory of periodic and magnetic operators
Quantum dynamics
Fractal properties of singular continuous spectra
Spectral theory of random operators
Diophantine approximation
Spectral theory of Laplacians on noncompact Riemannian manifolds

AWARDS:

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|---|----------------------|
| APS & AIP Dannie Heineman Prize for Mathematical Physics | 2020 |
| Member, American Academy of Arts and Sciences | 2018 |
| Aisenstadt Chair, CRM, Montreal | 2018 |
| Chancellor's Award for Excellence in Fostering Undergraduate Research | 2018 |
| Simons Fellow | 2014-2015, 2020-2021 |
| UCI Chancellor's Fellow | 2012-2015 |
| Named the Most Influential UCI Faculty by an Honors graduate, | 2005, 2012, and 2018 |
| EPSRC Fellowship, Cambridge University | Fall 2008 |
| AMS Satter prize | 2005 |
| UCI Distinguished Faculty Midcareer Award | 2004 |
| UCI School of Physical Sciences Outstanding | |
| Contributions to Undergraduate Education | 2003 |
| A.P.Sloan Research Fellowship | 1996-2000 |

RESEARCH GRANTS:

- NSF:1994-2024
BSF: 2003-2011

SELECTED PUBLICATIONS:

- [76] Critical almost Mathieu operator: hidden singularity, gap continuity, and the Hausdorff dimension of the spectrum (with I. Krasovsky) <https://arxiv.org/abs/1909.044290>
- [71] Universal reflective-hierarchical structure of quasiperiodic eigenfunctions and sharp spectral transitions in phase (with W. Liu). <https://arxiv.org/abs/1802.00781>
- [69] Cantor spectrum of graphene in magnetic fields. (with S. Becker and R. Han). *Inventiones Math.*, 2019, **218**, 3, 9791041 (2019)
- [61] Universal hierarchical structure of quasiperiodic eigenfunctions. (with W. Liu), *Annals of Math.* **187** no. 3, 721-776 (2018)
- [58] Spectral theory of extended Harper's model and a question by Erdős and Szekeres, (with A. Avila and C. Marx) *Inventiones Math.* **210**, no. 1, 283–339. (2017)
- [39] The Ten Martini problem. *Annals of Math* **170** no. 1, 303-342. (2009) (with A. Avila)
- [27] Absolutely continuous spectrum for 1D quasiperiodic operators *Inventiones Math.* 148 (2002), no. 3, 453–463, (with J. Bourgain).
- [22] Power-Law Subordinacy and Singular Spectra, I. Half-line Operators. *Acta Math.*, 183 (1999), no. 2, 171–189. (with Y. Last).
- [21] Metal-Insulator Transition for the Almost Mathieu Operator. *Annals of Math.*, 150, 1159-1175 (1999)
- [17] Duality and Singular Continuous Spectrum in the Almost Mathieu Equation. *Acta Math.* 178, 169-183 (1997) (with A. Gordon, Y. Last and B. Simon).

FURTHER SELECTED PUBLICATIONS:

- [80] On point spectrum of critical almost Mathieu operators, *Advances*, to appear <https://www.math.uci.edu/mathphysics/preprints/point.pdf>
- [78] Anderson localization for multi-frequency quasiperiodic operators on Z^d . (with W.Liu,Y.Shi) *GAFA*, (2020), **2**, 457–481.
- [73] Noncompact complete Riemannian manifolds with dense eigenvalues embedded in the essential spectrum of the Laplacian. *GAFA*, **29** 238-257 (2019) (with W. Liu)
- [70] Inhomogeneous Diophantine approximation in the coprime setting (with W. Liu). *Adv. Math.* **355** (2019), 106773
- [68] Discrete Bethe-Sommerfeld Conjecture. *Comm. Math. Phys.*,361, 205-216 (2018) (with R. Han)
- [60] Quantitative continuity of singular continuous spectral measures and arithmetic criteria for quasiperiodic Schrödinger operators (with S. Zhang), *J.Eur. Math.Soc.*, to appear
- [56] All couplings localization for quasiperiodic operators with monotone potentials. *J.Eur. Math.Soc.*, **21** 777-795 (2019) (with I Kachkovskii)
- [54] Arithmetic spectral transitions for the Maryland model. (with W. Liu), *Comm. Pure Appl. Math.* 70 (2017), no. 6, 1025-1051.

- [52] Complex one-frequency cocycles, *J. Eur. Math. Soc. (JEMS)*, **16**, 1915-1935 (2014) (with A. Avila and C. Sadel).
- [46] Analytic quasi-periodic Schrodinger operators and rational frequency approximants, *GAFSA* 22 (2012), 1407-1443. (with C. Marx)
- [40] Almost Reducibility and Almost Localization. *JEMS* 12 (2010), 93-131. (with A. Avila)
- [30] Delocalization in random polymer chains, *Comm. Math. Phys.* 233 (2003), 27- 48 (with H. Schulz-Baldes and G.Stolz).
- [29] Continuity of the Lyapunov exponent for quasiperiodic operators with analytic potential. *JSP* 108(5): 1203-1218; Sep 2002, special issue dedicated to D. Ruelle and Ya. Sinai in honor of their 65th birthday anniversaries (with J. Bourgain).
- [16] Dimensional Hausdorff Properties of Singular Continuous Spectra. *Phys. Rev. Lett.* 76, 1765-1769 (1996) (with Y. Last).
- [15] What is Localization? *PRL* 75, 117-119 (1995) (with R. del Rio, Y. Last and B. Simon).
- [13] Operators with singular cont. spectrum, IV. Hausdorff dimensions, rank one perturbations and localization. *J.D'Analyse Math.* 69, 153-200 (1996) (with R. del Rio, Y. Last and B.Simon).
- [11] Operators with Singular Continuous Spectrum, III. Almost Periodic Schrodinger Operators. *Comm. Math. Phys.* 165, 201-206 (1994) (with B. Simon).
- [10] Singular Continuous Spectrum is Generic. *Bull. AMS* 31, 208-212 (1994) (with R. del Rio, N. Makarov and B. Simon)
- [9] Anderson Localization for the Almost Mathieu Equation: A Nonperturbative Proof. *Comm. Math. Phys.* 165, 49-58 (1994)

SELECTED PLENARY LECTURES

- 2022 ICM, to be held July 2022
- 2019 Current Developments in Mathematics Conference, Harvard/MIT, Nov. 2019
- Distinguished lecture, Tel Aviv University, January 2017
- QMath 13, Atlanta, Oct. 2016
- Frontiers in Mathematical Physics, Montreal, Aug. 2016
- Bullitt Lecture, April 2016
- XV International Congress of Mathematical Physics, Rio de Janeiro, Aug. 06
- Joint AMS-MAA address, San Antonio, January 2006
- QMath 9, Marseille, France, September 2004
- Fractal Geometry and Applications, Satell. Conference to ICM 2002, Nanjing, 08/02
- IX ICDEMP, UAB, March 2002
- AMS Meeting, Santa-Barbara, one hour address, March 2000
- VII ICDEMP, GATECH, March 1997

SELECTED SECTIONAL LECTURES:

Dannie Heineman Prize for Math. Physics Talk, APS meeting, 03/2021
ICM 2002, Beijing, August 2002
XIII International Congress of Mathematical Physics, London, July 2000
XI International Congress of Mathematical Physics, Paris, July 1994

SELECTED MINI-COURSES:

Aisenstadt lectures, CRM, Montreal, November 2018
2018 PCMI program on Harmonic Analysis, Park City, July 2018
Summer school in mathematical physics, UNAM, June 2017
Nanjing University, 6 lectures, June 2015
Informal Analysis Seminar, Kent State University (4 lectures), March 2014
Recent Advances in Harmonic Analysis and Spectral Theory 08/12, Texas A&M
Workshop on Spectral Theory of Schrödinger Operators, Montreal, July 2004

GRADUATE STUDENTS:

Michael Landrigan (Ph.D. 2001, UBS, Associate Director)
Melinda Schulteis (Ph.D. 2004, Concordia University, Irvine, Professor)
Deborah Koslover (Ph.D. 2005, UT Tyler, Associate Professor)
Martin Gartner (MS 2007, US Navy)
Yi Sun (MS 2011, Facebook)
Chris Marx (Ph.D. 2012, Bateman at Caltech, now Oberlin, Associate Professor)
Rajinder Mavi (Ph.D. 2012, Whyburn at U of Virginia; now University of Cincinnati)
Mustafa Said (Ph.D. 2014, College of the Canyons)
Wencai Liu (Ph. D. 2015 (Fudan University), visiting long-term in 2014, 2015; Tenure track assistant professor, Texas A&M)
Shiwen Zhang (Ph.D. 2016, MSU; now U Minnesota, Visiting Assistant Professor)
Rui Han (PhD 2017, IAS, member; now Tenure track assistant professor, LSU)
Fan Yang (visiting 2014-16, PhD 2016 (Ocean Univ.), IAS; now MSI, ANU, Fellow)
Simon Becker (MS 2017, TU Munich & LMU; PhD student at University of Cambridge)
I directed 1/2 of Simon's MS thesis
Yunfeng Shi (PhD 2018 Fudan; visiting long-term in 17-18; Assoc. Prof. Sichuan Univ.)
Xiaowen Zhu (current)
Nishant Rangamani (current)
Matthew Powell (current)
Xin Zhao (visiting long-term 2019-2021)

POSTDOCTORAL SCHOLARS:

J. Sahbani (WS 1999; Paris VII, Maitre-de-Conference)
F. Germinet (Fall 1999; now U Cergy-Pontoise, President),
I. Krasovsky (Fall 2000; now Imperial College, London, Reader),
H. Schulz-Baldes (1999-01, now Erlangen, Professor)
D. Damanik (2000-01, Caltech; now Rice, Wiess Career Development Chair Professor)
S. Klein (2006-2009, Tenure Track Assist. Prof., PUC Rio de Janeiro).
C. Sadel (2009-2012, joint w. A. Klein; now Tenure Track Assistant Prof., PUC de Chile)
I. Kachkovkiy (2013-2016, IAS, now Tenure Track Assistant professor, Michigan State)
Q. Zhou (2015, now Full Professor, Chern Institute of Mathematics, Nankai University)
F. Yang (2017, IAS; now: Mathematical Sciences Institute, ANU, Fellow)
W. Liu (2015-2019, Tenure Track Assistant professor, Texas A&M)
L. Ge (2019-current)

UNDERGRADUATE RESEARCH:

Matthew Powell (2017-18; graduate student, UCI), Honors Thesis.

EDITOR:

Book Reviews of the BAMS (Associate Editor) (2021-24)
GAFA (2018-)
JMP special issue celebrating Jean Bourgain's contributions to Mathematical Physics (2019-)
PAFA special issue on Dynamical Systems, Ergodic Theory and Mathematical Physics dedicated to Yakov Sinai on the occasion of his 85th birthday (2019-)
Pure and Applied Functional Analysis (2018-)
CRM Short Course Series (2016-)
IMRN (2014 -)
Journal of Fractal Geometry (2013 -)
Journal of Spectral Theory (2009-);
JMP (2006-2009);

INTERNATIONAL ASSOCIATION OF MATHEMATICAL PHYSICS (IAMP)

ICMP 21, Organizer, Session "Quantum Mechanics and Spectral Theory" ;
IAMP, Vice-President (2012-2014);
IAMP, Executive committee (2009-2014);

ICMP 09 International Advisory Committee;

IAMP Early Career Award Committee, 2009;

CONFERENCE ORGANIZATION:

Key organizer:

Summer School on Periodic and Ergodic Spectral Problems, Montreal, to be held 07/23

Almost-Periodic Spectral Problems, BIRS workshop, Banff, to be held April 2022

Computational math in computer assisted proofs, AIM, to be held 09/22

Analysis and Mathematical Physics, to be held 06/2022, Kharkov, Ukraine

A. Klein's 75th birthday conference, U Cergy-Pontoise, Paris, to be held 06/2022

Barry Simon's 75th birthday meeting, zoom, April 2021

37th Western States Mathematical Physics Meeting, UCI, March 2020,

36th Western States Mathematical Physics Meeting, UCI, February 2018,

Fields Institute Young Researchers Symposium, Toronto, August 2016. Organizer and moderator of "Spectral theory of quasi-periodic operators".

Analysis and beyond: celebrating Jean Bourgain's work and its impact, Princeton, May 2016

Ya. Sinai's 80s Birthday Conference, Princeton, December 2015

Spectral Theory of Ergodic Schrödinger Operators and related models, AMS Fall Western Sec. meeting, Fullerton, October 2015,

Almost-periodic and Other Ergodic Problems, INI, Cambridge, April 2015

USA-Uzbekistan Conference on Analysis and Mathematical Physics, session on Schrödinger operators and related problems, CSUF, May 2014

Arbeitsgemeinschaft on Quasiperiodic Schrödinger operators, Oberwolfach, 04/12

SCAPDE meeting, UCI, Dec. 2011

SCAPDE meeting, UCI, Nov. 2009

QMath 9, Marseille, France, Sept. 2004, Session "Spectral theory"

AMS Session "Random and Deterministic Schrödinger Operators", Irvine, November 2001

AMS Session "Schrödinger-type Operators", Santa-Barbara, 03/00

Committee member

New trends in Lyapunov Exponent, Lisbon, to be held 07/21,

Fields Symposium, Toronto, Nov. 2019

Non-self adjoint and magnetic operators in mathematical physics. Nantes, April 2019

ICMP 2018, July 2018, Montreal, local organizing committee member

2nd USA-Uzbekistan conference; Aug 2017, Urgent, Uzbekistan

Barry Simon's 70th Birthday Conference, Montreal, August 2016, Scientific Committee

SCAPDE meeting, UCSD, April 2011

Spectral theory and Math. Physics, Caltech, March 2006

AMS-IMS-SIAM Summer Research Conference on Spectral and inverse spectral theory for Jacobi operators, Snowbird, Utah, June 2003;

Fractal Geometry and Applications, Satellite Conference to ICM02, Nanjing, China, 08/02,

AMS Conference on Wave Phenomena in Complex Media. UC Boulder, June 1999

OTHER INTERNATIONAL SERVICE:

European Research Council Advanced Grant Panel (2009-2017);

McGill-Cergy MS program in Mathematical Physics, Scientific Comm. member, 2019-

Scientific committee of the GDR CNRS dynqua (French research network), 2016-

EMS/EWM scientific committee, 2014 -

Expert evaluator, KTH, 2019

Newton Institute, Cambridge, Periodic/Ergodic Spectral Problems, 01/15-06/15, Organizer

Advanced Studies Institutes in Uzbekistan (2018 -), organizing committee member.

AMS:

AMS Centennial Fellowship Committee, 2016-2018. Chair 2017-18

AMS Satter Prize Committee, 2012-2016

AMS Western Section Program Committee, 2004-2006, chair 2005-2006

AMS Editorial Boards Committee, 2002-05; CPUB representative, 2003;

OTHER US/CANADA SERVICE:

APS AIP Dannie Heineman Prize Committee, 2020

American Academy of Arts and Sciences Mathematics Membership Panel, 2019-20

CRM-Fields-PIMS Prize committee, 2018, 2019. Chair 2019

UC Davis Mathematics Program, External Reviewer, 2018

Mathematical Physics Thematic Program, CRM, 2018, Org. Committee member

ICMP US travel grant (Committee member), 2000 & 2018

Random physical systems US travel grant (Committee member), 2018

Probabilistic methods in geometry, topology, and spectral theory, CRM, Montreal, Scientific Committee member, 2014-2016

Simons Foundation Collaboration Grants Review Committee member (2014)

Luther Marion Defoe Distinguished Professor Selection Committee 2012

Fields Institute, Toronto, Program on Dynamics and Transport in Disordered Systems, Scientific Committee (2011);

RECENT INVITED SEMINARS/COLLOQUIA:

Colloquium, U Toronto, postponed

Operator Algebras seminar, U Toronto, postponed

Colloquium, LANL Center for Nonlinear Studies , postponed

Colloquium, Baylor University, postponed

Colloquium, UCSD, postponed

One World IAMP Mathematical Physics seminar, zoom, to be held 2021

Mathematical Picture Language Seminar, Harvard/zoom, to be held 05/21

EIMI/Chebyshev laboratory spectral theory seminar, Feb 2021

London Analysis seminar, March 2021

Webinar on Diophantine approximation and homogeneous dynamics, 12/2020

Colloquium, Physics, UMass Boston, zoom, October 2020

Lisbon Seminar “Quantum Matter Meets Maths”, zoom, September 2020

Open PDE & Analysis Seminar, zoom, June 2020

Colloquium, U Minnesota, zoom, April 2020

Colloquium, GaTech, February 2020

Colloquium, PennState, January 2020

Calderon-Zygmund seminar, U Chicago, January 2020

Academies Forum, UCI, November 2019

Caltech/UCLA joint analysis seminar, October 2019

Applied Math Seminar, Stanford, May 2019

Math-physics seminar, PUC Chile, Santiago, Chile, April 2019

Colloquium, UMD, April 2017

Quebec Math Colloquium, November 2018

Mini-course (5 lectures), University College London, July 2018

Colloquium, UC Santa Cruz, May 2018
Colloquium, Queen's University, Canada, January 2018
Noncommutative geometry seminar, Caltech, April 2017
TWIM Distinguished lecture, Tel Aviv University, January 2017
Analysis and PDE seminar, Hebrew University, December 2016
Berkeley Analysis and PDE seminar, May 2016
Applied Math seminar, CAS, Beijing, July 2015
Department of Mathematics, Nanjing University, a series of six lectures, June-July 2015
Mathematical Physics seminar, University of Bristol, May 2015
Colloquium, Open University, Milton Keynes, UK, April 2015
Paris-London Analysis seminar, March 2015
Dep. Colloquium, Indiana University-Purdue University Indianapolis, November 2014
Dynamical Systems seminar, Courant Institute, October 2014
Mathematical Physics seminar, IAS, October 2014
Current Topics in Mathematical Physics seminar, McGill, Montreal, July 2014
Department Colloquium, U Wisconsin, February 2014
Applied Math seminar, Stanford University, October 2013
CRM-ISM Mathematics Colloquium, Montreal, September 2013
Mathematical Physics Working Seminar, McGill University, Montreal, September 2013
Sinai's seminar, IITP Moscow, July 2013
Math Physics seminar, Caltech, May 2013
Analysis seminar, University College London, February 2013
Sinai's seminar, IITP Moscow, July 2012
Mathematical Physics seminar, UCD, May 2012
Analysis seminar, Imperial College, London, November 2011
Department Seminar, University College London, November 2011
Analysis seminar, University College London, July 2011
Mathematical Physics seminar, Caltech, June 2011
Colloquium, Stony Brook, March 2011
Dynamical Systems seminar, Stony Brook, March 2011

RECENT INVITED CONFERENCE TALKS:

Workshop "Machine-Checked Mathematics", Lorentz Center, Netherlands, to be held 03/22
Conference of the Intern. Lab. of Stoch. Anal. and its Apps, Moscow, to be held 12/21

Learning from Insulators: New Trends Lorentz Center, Netherlands, to be held 08/21
ECM Satellite conference in Analysis, plenary, to be held June 2021
Analysis and Applications conference, Wroclaw, Poland, postponed until 2023
Spectral Theory, St. Petersburg, Russia, to be held June 2021
Dannie Heineman Prize for Math. Physics Talk, APS meeting, 03/21
Workshop “Many faces of renormalization”, Stony Brook, March 2021
Workshop ”Mathematics of topological insulators”, AIM, zoom, 12/20
Dynamique Quantique meeting, Strasbourg, Feb. 2020
2019 Current Developments in Mathematics Conference, Harvard/MIT, Nov. 2019
Fields Symposium, Toronto, November 2019
Workshop on Conservative dynamics and its interactions, Lausanne, August 2019
QMath14, Aarhus, Denmark, August 2019
Honoring the Life and Work of Jean Bourgain, Princeton, May 2019
Mathematical Physics at the Crossings, Virginia Tech, May 2019
Quasiperiodicity and Fractality in Quantum Statistical Physics, Rutgers, May 2019
Maryland Dynamical Systems Conference, April 2019
Aisenstadt lectures, CRM, Montreal, November 2018
Conference on quasi-periodic dynamics and Schrödinger operators, Nanjing, Sep 2018
2018 PCMI program on Harmonic Analysis, Park City, July 2018 (mini-course)
Transport and localization in random media, Columbia University, May 2018
Classical and Quantum motion in disordered environment QMUL, London, December 2017
Summer school in mathematical physics, UNAM, June 2017 (mini-course)
Western States Meeting, Caltech, February 2017
Harmonic Analysis, January 2017, MSRI, Berkeley, California
Distinguished lecture, Tel Aviv University, January 2017
Workshop in Dynamical Systems and Related Topics, October 2016, PennState
QMath 13, Atlanta, plenary, Oct. 2016
Barry Simon 70th birthday conference, CRM, Aug 2016
Mathematics, Theoretical Physics and Data Science 2016, dedicated to anniversaries of Yakov Sinai and Grigory Margulis, Moscow, July 2016
Spectral Theory of Periodic, Quasi-periodic, and random problems, London, June 2016
“Interplay between dynamical systems and spectral theory”, Simons, Stony Brook, June 2016
Analysis and beyond: celebrating Jean Bourgain’s work and its impact, Princeton, May 2016

114th Statistical Mechanics conference (celebrating 80th birthdays of D. Ruelle and Y. Sinai), Rutgers, December 2015
SCAPDE, San Diego, May 2015
Periodic and other ergodic spectral problems, Cambridge INI, March 2015
ORAM 5, Cincinnati Ohio, February 2015
Fourth Abel Conference, IMA, October 2014
Spectral Days 2014, Marseille, June 2014
USA-Uzbekistan Conference on Analysis and Mathematical Physics, Plenary, May 2014
Informal Analysis Seminar, Kent State University (4 lectures), March 2014
Western States Meeting, Caltech, February 2014
TexAMP 2013, Rice University, October 2013
Avronfest, July 2013, Jerusalem Israel
Mathematics and Physics of disordered systems, Cambridge, UK, 9/12
3-hour mini-course, "Recent Advances in Harm. Analysis and Spectral Theory", 08/12, TAMU
Birman 2012, July 2012, St. Petersburg, Russia
Fractal Geometry and Dynamical Systems: IAMIS, June 2012, Riverside
Spectral Days 2012, April 2012, Munich, Germany
Western States mathematical physics meeting, Feb. 2012, Caltech

COMMUNITY

UCI Math Circle, founder (2007); advisor, 2007-;
Bay Area Math Olympiad at UCI*, organizer: 2010-;
Tournament of the Towns at UCI* (four yearly events), organizer, 2012-;
Formulo Integreco at UCI*, organizer, 2014-;
*I organize/advise a team of grad. students/postdocs who run these proof-based competitions
NACLO at UCI, 2014 and 2015, organizer.
Euler winter math camp by S. Rubinstein-Salzedo, UCI, local organizer (2017-18)
Mathcounts coach, 2008-2011 and 2015-2017
Russian Cultural Association, UCI, (founding) Chair (2003 -); Since 2016 I have organized eight cultural events for the Orange County's Russian community, such as lectures by D. Bykov, V. Shenderovich, concerts by Y. Kim, T. Shaov.
Russian school "Karandash", founding organizer, board member, and teacher of math circle and literature circle, 2003-2015
Advisor to 3 research projects by high-schoolers with Intel/Siemens honors 2003-2005;
Cosmos Summer program for gifted high-schoolers, 2003;
JSHS reviewer;

PUBLICATIONS:

1. Singular spectrum and scaling for Schrodinger operator with binary quasiperiodic potential. *Rus. Math. Surveys* 45, No.5, 179 (1990).
2. Aharonov-Bohm Problem on a Square Lattice. *Theor. Math. Phys.* 86, 241-251 (1991) (with V. A. Mandelshtam).
3. Spectral properties of one dimensional quasiperiodic operators, *Rus. Math. Surveys*, 91, No. 2 (1991).
4. Singular spectral properties of a one dimensional discrete Schrodinger operator with quasiperiodic potential. *Adv. of Sov. Math.* v.3, 215-254 (1991).
5. 1D-Quasiperiodic Operators. Latent Symmetries. *Comm. Math. Phys.* 139, 589 -604 (1991) (with V. A. Mandelshtam).
6. Anyon Gas on a Lattice in the Low Density Regime -Sov. Phys. *JETP Lett.* (*Pis'ma Zh. Eksp. Teor. Fis.*) 52, 767-768 (1990) (with A. A. Belov, Yu. E. Lozovik, and V. A. Mandelshtam).
7. Anyon Gas on a Lattice. *Sov. Phys. JETP* 73, 188-192 (1991) (with A. A. Belov, Yu. E. Lozovik, and V. A. Mandelshtam).
8. Ising Model In a Quasi-periodic Transverse Field and Percolation and Contact Processes in Quasi-periodic Environments. *J. Stat. Phys.* V73 N1-2:319-344. (1993) (with A. Klein).
9. Anderson Localization for the Almost Mathieu Equation: A Nonperturbative Proof. *Comm. Math. Phys.* 165, 49-58 (1994)
10. Singular Continuous Spectrum is Generic. *Bull. AMS* 31, 208-212 (1994) (with R. del Rio Castillo, N. Makarov and B. Simon).
11. Operators with Singular Continuous Spectrum, III. Almost Periodic Schrodinger Operators. *Comm. Math. Phys.* 165, 201-206 (1994) (with B. Simon).
12. Anderson Localization for the Almost Mathieu Equation, II: Point Spectrum for $\lambda > 2$. *Comm. Math. Phys.* 168, 563-570 (1995).
13. Operators with Singular Continuous Spectrum, IV. Hausdorff Dimensions, Rank One Perturbations and Localization. *J.D'Analyse Math.* 69, 153-200 (1996) (with R. del Rio, Y. Last and B.Simon).
14. Almost Everything About the Almost Mathieu Operator, II. "Proceedings of XI International Congress of Mathematical Physics", *Int. Press*, 373-382 (1995).
15. What is Localization? *Phys. Rev. Lett.* 75, 117-119 (1995) (with R. del Rio, Y. Last and B. Simon).
16. Dimensional Hausdorff Properties of Singular Continuous Spectra. *Phys. Rev. Lett.* 76, 1765-1769 (1996) (with Y. Last).

17. Duality and Singular Continuous Spectrum in the Almost Mathieu Equation. *Acta Math.* 178, 169-183 (1997) (with A. Gordon, Y. Last and B. Simon).
18. Continuous Spectrum and Uniform Localization for Ergodic Schrodinger Operators. *J. Funct. Anal.* 145, 312-322 (1997).
19. Anderson Localization for the Almost Mathieu Equation, III. Uniform Localization, Continuity of Gaps, and Measure of the Spectrum. *Comm. Math. Phys.* 195, 1-14 (1998) (with Y. Last).
20. Power-Law Subordinacy and Singular Spectra, I. Half-line Operators. *Acta Math.*, 183 (1999), no. 2, 171–189. (with Y. Last).
21. Metal-Insulator Transition for the Almost Mathieu Operator. *Annals of Math.*, 150, 1159-1175 (1999)
22. Power-Law Subordinacy and Singular Spectra, II. Line Operators. *Comm. Math. Phys.*, 211 (2000) 643-658. (with Y. Last).
23. Zero-dimensional spectrum for quasiperiodic operators with analytic potential. *J. Stat. Phys.*, 100, 791-796. (2000) (with M. Landrigan).
24. Strong dynamical localization for the almost Mathieu model. *Rev. Math. Phys.*, 13 (2001), no. 6, 755–765 (with F. Germinet).
25. Nonperturbative analysis of quasiperiodic operators. *Proceedings of XIIIth International Congress on Mathematical Physics (London, 2000)*, 423–424, Int. Press, Boston, (2001).
26. Anderson localization for the band model. *Geometric aspects of functional analysis*, 67–79, *Lecture Notes in Math.*, 1745, Springer, Berlin, 2000. (with J. Bourgain).
27. Absolutely continuous spectrum for 1D quasiperiodic operators with J. Bourgain. *Invent. Math.* 148 (2002), no. 3, 453–463.
28. Continuity of the measure of the spectrum for discrete quasiperiodic operators, *Math. Res. Letters* 9 (2002), no. 4, 413–421 (with I. Krasovsky).
29. Continuity of the Lyapunov exponent for quasiperiodic operators with analytic potential. *JSP* 108(5): 1203-1218; Sep 2002, special issue dedicated to D. Ruelle and Ya. Sinai in honor of their 65th birthday anniversaries (with J. Bourgain).
30. Delocalization in random polymer chains, *Comm. Math. Phys.* 233 (2003), 27- -48 (with H. Schulz-Baldes and G.Stolz).
31. Nonperturbative localization. *Proceedings of the ICM 2002, Vol III*, 445-457, Higher Ed. Press, Beijing 2002.
32. Localization for a family of one dimensional quasiperiodic operators of magnetic origin, *Annales Henri Poincare.* **6**, 103-121 (2005) (with D. Koslover, M. Schulteis)

33. Solving the Ten Martini problem. *Mathematical Physics of quantum mechanics*, 5-16, *Lecture Notes in Physics*, 690, Springer, Berlin, 2006 (with A. Avila)
34. Localization for quasiperiodic potentials, *Encyclopedia of Mathematical Physics*, Academic Press, 2006
35. Ergodic Schrödinger operators (on one foot). *Spectral theory and mathematical physics: a Festschrift in honor of Barry Simon's 60th birthday*, 613–647, *Proc. Sympos. Pure Math.*, 76, Part 2, Amer. Math. Soc., Providence, RI, 2007.
36. Treating small denominators without KAM, 33-36, *Proceedings of "The legacy of Ladyzhenskaya and Oleinik"*, MSRI, 2007.
37. Upper bounds on wavepacket spreading for random polymer models. *Comm. Math. Phys.*, **273** (2007) (with H. Schulz-Baldes)
38. Continuity of the Lyapunov Exponent for analytic quasiperiodic cocycles. *Erg. Theory. Dyn. Syst.*, 29 (2009), 1881-1905 (with D. Koslover and M. Schulteis).
39. The Ten Martini problem. *Annals of Math.*, **170** no. 1, 303-342. (2009) (with A. Avila)
40. Almost localization and almost reducibility. *J. Eur. Math. Soc. (JEMS)* 12 (2010), no. 1, 93-131. (with A. Avila)
41. Hölder continuity of absolutely continuous spectral measures for one-frequency quasiperiodic Schrödinger operators. *Comm. Math. Phys.*, 301 (2011), 563-581 (with A. Avila)
42. Continuity of the Lyapunov exponents for analytic quasiperiodic cocycles with singularities. *JFPTA*, 10 (2011), no. 1, 129-146, Special issue dedicated to the 80th birthday of R. Palais (with C. Marx)
43. Arbeitsgemeinschaft: Quasiperiodic Schrödinger Operators, Oberwolfach Report 17/12, p.1-69 (with A. Avila and D. Damanik)
44. Arbeitsgemeinschaft mit aktuellem Thema: Quasiperiodic Schrödinger Operators, p. 1-26 (with A. Avila and D. Damanik)
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