

CURRICULUM VITAE

Elisabeth M. Werner
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Education

Diploma in Mathematics, University of Tübingen, Germany, 1985
Ph.D. in Mathematics at Université P. et M. Curie, Paris VI, 1989

Appointments

Research Professor at the Simons Institute, Berkeley, August - December, 2020
Visiting Professor, Goethe University Frankfurt International Campus Program,
June/July 2018
Research Professor at MSRI, Berkeley, August - December, 2017
Associate Director, IMA, University of Minnesota, August 2014 - May 2015
Professor, Case Western Reserve University, Cleveland, OH, 2002-present
Associate Professor, Case Western Reserve University, 1995-2002
Maitre de Conférences, Université de Lille 1, France, 1991-present
Assistant Professor, Case Western Reserve University, 1989-1995

Research Interests

- convex geometry
- analysis
- probability
- applications of the above to approximation theory, mathematical physics, quantum information theory

Honors

Public Lecture, University of Bonn, Germany, March 2024
Invited Plenary Speaker, Biannual Meeting of the Austrian Mathematical Society,
September 2023, Graz (Austria)
Public Lecture, Canadian Mathematical Society Summer Meeting
Memorial University St. John's, Newfoundland, June 2022
Caroline Herschel Visiting Professor, University of Bochum, Summer Semester 2022
Simons Fellowship 2020-2021
Simons Visiting Professor (Oberwolfach and Vienna) 2015 & 2018
Fejes Tóth Lecture (University of Calgary), Winter 2016
Case Faculty Distinguished Research Award, 2015
Elected Fellow of the AMS, Inaugural Class, 2012
Invited Address at the AMS Spring Eastern Section meeting, 2007

Grants

National Science Foundation Grants, Summer 89 - Summer 93, Summer 94 - Summer 97 and Summer 00 - present

FRG Collaborative Research Grant from National Science Foundation (Co-PI at the lead institution), 2007-2012

Bi-national Science Foundation Grant (Israel/US), 2007-2012

NSF travel award (to support travel of US participants to “Workshop on Asymptotic Analysis and Applications” at Institut Henri Poincaré, Paris, France, Summer 2006

NSF Advance Opportunity Grant, Fall 04 - Summer 05

NATO Collaborative Linkage Grants, March 00 - 01 and April 03 - 05

Travel grants from the AWM, May 94 and July 99

Grant U.S.-Poland Research on Convexity and Operators, Spring 93 - Summer 96

Research Grant from the French Government, October 85 - June 89

Professional Activities

- co-organizer of Trimester Program at the Hausdorff Institute, Bonn, Germany, January 2024 - April 2024
“Synergies between modern probability, geometric analysis and stochastic geometry”
- 2 1/2 hour mini course “Recent advances in convex geometry”, at the Probability, Convex Geometry and complex variables meeting, TIFR-CAM, Bangalore, India (January 2024)
- 2 hour lecture series “Affine surface area” at the “Recent Advances in Applications of Harmonic Analysis to Convex Geometry” conference, North Dakota State University, Fargo (April 2023)
- European Research Council panel member, Brussels, Belgium (April 2022, September 2022)
- group leader (with S. Plosker) of Research Group “POVM-measures and f -divergences” at the “Women in Operator Algebra II” meeting, BIRS, Canada, (December 2021)
- organizer of Trimester Program at the Hausdorff Institute, Bonn, Germany, January 2021 - April 2021
“The Interplay between High-Dimensional Geometry and Probability”
- Lectures Series “Floating bodies and Approximation of convex bodies by polytopes” at the Winter School “Randomness online” at the Euler International Mathematical Institute, (November 2020)
- 3 hour lecture series “Floating bodies and Approximation” at the “Convexity and Harmonic Analysis” workshop, Georgia Tech, Atlanta (December 2019)
- Summer school “Floating bodies and affine invariants” at Goethe Universität Frankfurt (July 2018)

- 3 hour lecture series “Approximation of convex bodies by polytopes” at the “Concentration Week on Geometric Functional Analysis”, Texas A&M University (July 2016)
- 4 hour tutorial “Local Banach space theory and Quantum Channels” at the “Advanced Topics of Analysis Applied to Quantum Information Problems” meeting, CIEM International Center for Mathematical Meetings, Bilbao, Spain (September 2010)

Numberphile <https://youtu.be/c4pgWd8V8HU>

Editorial work

- co-editor of Convexity and Concentration, The IMA volumes in Mathematics and its Applications 161, Springer 2017
- editorial board member of Proceedings “High Dimensional Probability: The Bedlewo Volume”

Organizer or co-organizer of

- Workshop “Convex Geometry and its Applications”, Oberwolfach, Germany (December 2024)
- Session “Probabilistic and Analytic Aspects in Convexity” at the AMS meeting University at Albany (October 2024)
- Workshop “High dimensional phenomena: geometric and probabilistic aspects”, Hausdorff Institute Bonn, Germany (March 2024)
- Winter School on “Geometry and Probability”, Hausdorff Institute Bonn, Germany (January 2024)
- Mini-Symposium “Probabilistic Methods in Convexity” at the Meeting of the Austrian Mathematical Society, Graz, Austria (September 2023)
- Workshop “High Dimensional Probability”, Bedlewo, Poland (June 2023)
- 2022 CMS summer meeting, session “Convex geometry and PDE” (June 2022)
- Workshop “Stochastic Aspects in Convexity”, University of Bochum, Germany (May 2022)
- Workshop “Calculus of Variations in Probability and Geometry”, IPAM, Los Angeles (February 2022)
- Workshop “Interaction between Partial Differential Equations and Convex Geometry” at BIRS, Hangzhou, China (October 2021)
- Session “Convexity and Probability in High Dimensions” at the AMS online meeting University of Tennessee, Chattanooga (October 2020)
- “New Perspectives and Computational Challenges in High Dimensions”, Oberwolfach, Germany (February 2020)
- “Symmetry and Convexity in geometric inequalities” at AIM, San Jose (May 2019)

- Session “Convex Geometry and Functional Inequalities” at the AMS meeting University of Delaware (September 2018)
- Workshop “Convex Geometry and Geometric Functional Analysis”, TSIMF, Sanya, China (May 2018)
- Workshop “Emerging Trends in Geometric Functional Analysis”, at the Banff International Research Station, Banff, Canada (March 2018)
- Session “Probability in Convexity and Convexity in Probability” at the AMS meeting in Columbus, Ohio (March 2018)
- Connections for Women: geometry and probability in high dimensions, MSRI, Berkeley, California (August 2017)
- Mini-Workshop “Perspectives in High-dimensional Probability and Convexity”, Oberwolfach, Germany (February 2017)
- Session “Discrete Structures: Analysis and Applications” at the AMS meeting in Minneapolis/St. Paul (October 2016)
- Session “Probabilistic and Analytic tools in Convexity” at the AMS meeting in Athens, Georgia (March 2016)
- Workshop “Affine Geometric Analysis ” at BIRS-CMO, Oaxaca (September 2015)
- Minisymposium “Asymptotic Geometric Analysis” at Case Western Reserve University (August 2015)
- Session “High dimensional convexity and applications” at the AMS meeting in San Francisco (October 2014)
- Workshop “Interplay of convex geometry and Banach space theory”, at the Banff International Research Station, Banff, Canada (March 2013)
- Workshop “Invariants in convex geometry and Banach space theory” at AIM, Palo Alto (August 2012)
- Workshop “Geometry of Entanglement” at Centre International de Rencontres Mathématiques (CIRM), Marseille, France (January 2012)
- Conference “Perspectives in High Dimensions”, Cleveland, OH (August 2010)
- Workshop “Geometry of Quantum Entanglement” at MFO, Oberwolfach, Germany (December 2009)
- Workshop “Affine Convex Geometric Analysis” at the Banff International Research Station, Banff, Canada (January 2009)
- Summer School on “Fourier analytic and probabilistic methods in functional analysis and convexity”, Kent State (August 2008)
- Session on convex geometry at the AMS meeting in Hoboken (April 2007)
- Workshop *Asymptotic Analysis and Applications* during the “Phenomena in High Dimensions” event at Institut Henri Poincaré, Paris (Summer 2006)

- Workshop “Convex Geometric Analysis” at the Banff International Research Station, Banff, Canada (July 2004)
- Session “Analytic Convex Geometry” at the AMS meeting in Lawrenceville (April 2004)
- Session on convex geometry at the AMS meeting in Boston (October 2002)
- Session “Invariance in Convex Geometry” at the AMS meeting in Lowell (April 2000)
- Session “Harmonic Analysis and Convexity” at the AMS meeting in Memphis (March 1997)

Visiting positions

Research Fellow, Hausdorff Institute, Bonn, Spring Semester 2024
 Research Fellow, ICERM (Brown University), Fall Semester 2022
 Visiting Researcher, Charles University, Prague, August/September 2018
 Visiting Researcher at Technical University of Vienna, June/July 2016
 Visiting Research Professor at University of Paris Est, Paris, France, May/June 2016
 Visiting Researcher at Technical University of Vienna, May/June 2014
 Visiting Researcher at University Paris Est, France, February/March 2012
 Visiting Researcher at the Institute for Mathematics and its Applications,
 University of Minnesota, Minneapolis, fall semester 2011
 Visiting Researcher at the Renyi Institute, Budapest, Summer 2008
 Visiting Professor at University of Paris VI, Paris, France, February 07 - July 07
 Visiting Researcher at Institut Henri Poincaré, Paris, France, Summer 2006
 Visiting Researcher at Schrödinger Institute, Vienna, Austria, Summer 2005
 Visiting Researcher at Pacific Institute of Mathematical Sciences, Vancouver,
 Canada, July 2002
 Visiting Researcher at Schrödinger Institute, Vienna, Austria, March 99
 Invited Member at the Mathematical Sciences Research Institute,
 Berkeley, January 96 - May 96
 Lecturer, Oklahoma State University, Stillwater, OK, August 87 - December 88
 Lecturer, University of Missouri, Columbia, MO, January 86 - May 86
 Graduate assistant, University of Tübingen, Germany, April 83 - October 84

Theses Direction

Stephanie Egler, PhD (Fall 2023)
 Victor Glasgo, PhD (Spring 2020), Kennesaw State University, GA

Ben Li, PhD (Summer 2018), Ningbo University, China

Steven Hoehner, PhD (Spring 2016), Assistant Professor, Longwood University, VA

Umut Caglar, PhD (Summer 2014), Florida International University

Justin Jenkinson, PhD (Spring 2013), Case Western Reserve University
Cleveland

Deping Ye, PhD (Summer 2009), Professor, Memorial University,
Canada

Mark Meckes, PhD (Spring 2003), Professor, Case Western
Reserve University

Postdoctoral supervision

Yossi Lonke, Attila Por, Marisa Zymonopoulou (2008/2009),
Pawel Wolff (Fall 2008-Spring 2010), Florian Besau (Spring 2014), Turkey Yolcu (2013/2014),
Olaf Mordhorst (Fall 2015 - Spring 2016), Florian Besau (Fall 2015 - Summer 2016),
Julian Grote (Spring 2017), Mathias Sonnleitner (Spring 2022),
Michael Juhos (Fall 2023), Michael Roysdon (Fall 2023 - ongoing)

Research Publications

- Random approximation of convex bodies in Hausdorff metric (with J. Prochno, M. Sonnleitner and C. Schütt), submitted
- Weighted floating functions and weighted functional affine surface areas (with C. Schütt, Ch. Thäle, N. Turchi), submitted
- Extremal affine surface areas in a functional setting (with Stephanie Egler), submitted
- Floating Bodies and Duality in Spaces of Constant Curvature (with F. Besau), submitted
- Geometric representation of classes of concave functions and duality (with G. Ivanov), submitted
- Spherical convex hull of random points on a wedge (with Florian Besau, Anna Gusakova, Matthias Reitzner, Carsten Schütt, Christoph Thäle), *Mathematische Annalen* DOI: 10.1007/s00208-023-02704-9 (2023)
- Ulam floating functions (with Chunyan Liu, Deping Ye and Ning Zhang), *Journal of Geometric Analysis* **33** (2023)
- Curvature functionals on convex bodies (with Kateryna Tatarko), *Canadian Mathematical Bulletin* **66** 761–779 (2023)
- The convex hull of random points on the boundary of a simple polytope (with M. Reitzner, C. Schütt), *J. Discrete & Computational Geometry* **69** 453–504 (2023)
- Affine Surface Area (with C. Schütt), <https://doi.org/10.1515/9783110775389-010>, *Harmonic Analysis and Convexity* (De Gruyter) 427–444 (2023)
- L_p -Steiner quermassintegrals (with Kateryna Tatarko), *Advances in Math.* **430** (2023)

- Best and random approximation of a convex body by a polytope (with J. Prochno, C. Schütt), *J. of Complexity* **71** (2022)
- Pinsker inequalities and related Monge-Ampère equations for log-concave functions (with U. Caglar and A. V. Kolesnikov), *Indiana Univ. Math. J.* **71** 2309–2333 (2022)
- Floating bodies and approximation of convex bodies by polytopes, *Probability Surveys* **19**, 113–128 (2022)
- Affine invariant maps for log-concave functions (with Ben Li and C. Schütt), *J. Geometric Analysis* **32**, 113–128 (2022)
- Blaschke–Santaló inequality for many functions and geodesic barycenters of measures (with A. V. Kolesnikov), *Advances in Math.* **396** (2022)
- Convex Floating Bodies of Equilibrium (with D.I. Florentin, C. Schütt, N. Zhang), *Proceedings of the AMS* **150** 3037–3048 (2022)
- Surface area deviation between smooth convex bodies and polytopes (with J. Grote and Ch. Thäle), *Advances in Applied Mathematics* **129**, Article 102218 (2021)
- The Löwner function of a log-concave function (with Ben Li and C. Schütt), *Journal of Geometric Analysis* **31** 423–456 (2021)
- Asymptotic normality for random simplices and convex bodies in high dimensions (with D. Alonso-Gutiérrez, F. Besau, J. Grote, Z. Kabluchko, M. Reitzner, C. Thäle, B. Vritsiou), *Proceedings AMS* **149** 355–367 (2021)
- Duality of Floating and Illumination Bodies (with O. Mordhorst), *Indiana Univ. Math. J.* **69** 15071541 (2020)
- Constrained convex bodies with extremal affine surface areas (with O. Giladi, H. Huang, C. Schütt), *Journal of Functional Analysis* **279**, (2020)
- Floating and Illumination Bodies for Polytopes: Duality results (with O. Mordhorst), *Discrete Analysis* **11**, (2019)
- A Steiner formula in the L_p Brunn Minkowski theory (with Kateryna Tatarko), *Advances in Math.* **355** (2019)
- Data depth and floating body (with S. Nagy and C. Schütt), *Statistics Surveys* **13**, No. 0 52–118 (2019)
- Ulam Floating bodies (with Han Huang and B. Slomka), *Journal of London Math. Society* **100**, 425–446 (2019)
- Floating functions (with Ben Li and C. Schütt), *Israel J. Math.* **231**, 181–210 (2019)
- Flag Numbers and Floating Bodies (with F. Besau and C. Schütt), *Advances in Math.* **338**, 912–952 (2018)
- The Floating Body in Real Space Forms (with F. Besau), *Journal Diff. Geometry*, **110**, No. 2, 187–220 (2018)

- Weighted floating bodies and polytopal approximation (with F. Besau and M. Ludwig), Transactions of the AMS **370**, 7129–7148 (2018)
- Some open problems in Asymptotic Geometric Analysis (with B. Klartag), June/July 2018 Notices of the AMS
- Approximation of smooth convex bodies by random polytopes (with J. Grote), Electronic Journal of Probability **23**, 1–21 (2018)
- The Surface Area Deviation of the Euclidean Ball and a Polytope (with S. Hoehner and C. Schütt), Journal of Theoretical Probability **31**, 244–267 (2018)
- On the geometry of projective tensor products (with O. Giladi, J. Prochno, C. Schütt and N. Tomczak-Jaegermann), Journal of Functional Analysis **273**, 471–495 (2017)
- Stability results for some geometric inequalities and their functional versions (with U. Caglar), The IMA Volumes in Mathematics and its Applications 161: Convexity and Concentration, Springer (2017)
- Mixed f -divergence for multiple pairs of measures (with Deping Ye), Canadian Mathematical Bulletin **60** (3), 641–654 (2017)
- The Spherical Convex Floating Body (with F. Besau), Advances in Mathematics **301**, 867–901 (2016)
- Functional versions of L_p -affine surface area and entropy inequalities (with U. Caglar, M. Fradelizi, O. Guédon, J. Lehec and C. Schütt), Int. Math. Res. Not. IMRN **4**, 1223–1250 (2016)
- Affine invariant points (with M. Meyer and C. Schütt), Israel J. Math. **208**, Issue 1, 163–192 (2015)
- Dual affine invariant points (with M. Meyer and C. Schütt), Indiana J. Math. **64**, 753–768 (2015),
- Mixed f -divergence and inequalities for log concave functions (with U. Caglar), Proc. Lond. Math. Soc. (3) **110**, 271–290 (2015)
- Divergence for s -concave and log concave functions (with U. Caglar), Advances in Mathematics **257**, 219–247 (2014)
- Relative entropies for convex bodies (with J. Jenkinson), Transactions of the AMS **366**, 2889–2906 (2014)
- On the approximation of a polytope by its dual L_p -centroid bodies (with G. Paouris), Indiana Univ. Math. J. **62**, 235–247 (2013)
- f -divergence for convex bodies, Proceedings of the “Asymptotic Geometric Analysis” workshop, Fields Institute, Toronto, (2013)
- Rényi Divergence and L_p -affine surface area for convex bodies, Advances in Mathematics **230**, 1040–1059 (2012)

- Functional affine-isoperimetry and an inverse logarithmic Sobolev inequality (with S. Artstein-Avidan, B. Klartag and C. Schütt), *Journal of Functional Analysis* **262**, 4181–4204 (2012)
- Uniform estimates for order statistics and Orlicz functions (with Y. Gordon, A. Litvak and C. Schütt), *Positivity* **16**, 1–28 (2012)
- Relative entropy of cone measures and L_p centroid bodies (with G. Paouris), *Proc. London Math. Soc.*, **104**, 253–286, (2012)
- Mahler’s conjecture and curvature (with S. Reisner and C. Schütt), *International Mathematics Research Notices, IMRN* **2012** 1, 1–16 (2012)
- On the Homothety Conjecture (with Deping Ye), *Indiana Univ. Math. J.* **60** No. 1, 1–20, (2011)
- New affine measures of symmetry for convex bodies (with M. Meyer and C. Schütt), *Advances in Mathematics* **228**, 2920–2942 (2011)
- Hastings’s additivity counterexample via Dvoretzky’s theorem (with G. Aubrun and S. Szarek), *Comm. Math. Phys.* **305**, no. 1, 85–97 (2011)
- How often is a random quantum state k -entangled? (with S. Szarek and K. Życzkowski), *J. Phys. A* **44**, no. 4, 045303 (2011)
- Nonadditivity of Rényi entropy and Dvoretzky’s theorem (with G. Aubrun and S. Szarek), *J. Math. Phys.* **51**, no. 2, 022102 (2010) and *Virtual Journal of Quantum Information* 10 (2010)
- Inequalities for mixed p -affine surface area (with Deping Ye), *Math. Annalen* **347**, 703–737 (2010)
- New Higher-Order Equiaffine Invariants (with Alina Stancu), *Israel J. of Math.* **171**, 221–235 (2009)
- Bipartite states of low rank are almost surely entangled (with M. B. Ruskai), *J. Phys. A* **42**, no. 9, 095303, 15 pp (2009)
- New L_p affine isoperimetric inequalities (with Deping Ye), *Advances in Math.* **218**, no. 3, 762–780 (2008)
- Geometry of sets of quantum maps: a generic positive map acting on a high-dimensional system is not completely positive (with S. Szarek and K. Życzkowski), *J. Math. Phys.* **49**, no. 3, 032113 (2008)
- On L_p -affine surface areas, *Indiana Univ. Math. J.* **56**, No. 5, 2305–2324 (2007)
- On the minimum of several random variables (with Y. Gordon, A. Litvak and C. Schütt), *Proc. Amer. Math. Soc.* **134**, no. 12, 3665–3675 (2006)
- Floating bodies and Illumination bodies, *Integral Geometry and Convexity*, Proc. Conf. Wuhan, E. Grinberg, S. Li, G. Zhang, J. Zhou editors, World Scientific Pub. (2006).
- Approximation of the Euclidean ball by a polytope (with M. Ludwig, C. Schütt), *Studia Math.* **173**, 1–18 (2006)

- Minima of sequences of Gaussian random variables (with Y. Gordon, A. Litvak and C. Schütt), *C.R.Acad.Sci.Paris, Ser.I* **340**, 445–448 (2005)
- Surface bodies and p - affine surface area (with C. Schütt), *Advances in Math.* **187**, 98-145 (2004)
- Geometry of spaces between polytopes and related zonotops (with Y. Gordon, A. Litvak and C. Schütt), *Bulletin des sciences mathématiques*, **126**, 733 –762 (2002)
- Orlicz norms of sums of random variables (with Y. Gordon, A. Litvak and C. Schütt), *Annals of Probability* **30** 1833 –1853 (2002)
- The p - affine surface area and geometric interpretations, *Rendiconti Circ. Mat. Palermo Serie II*, **70**, 367– 382 (2002)
- Random polytopes of points chosen from the boundary of a convex body (with C. Schütt), *GAFSA Seminar Notes, Lecture Notes in Mathematics* **1807**, Springer-Verlag, 241–422 (2002)
- An Analysis of Completely positive Trace preserving maps on \mathcal{M}_2 (with M. B. Ruskai and S. Szarek), *Linear Algebra and its Applications* **347**, 159–187 (2002)
- Dropping a vertex or a facet from a convex polytope (with S. Reisner and C. Schütt), *Forum Math.* **13**, 359–378 (2001)
- Random polytopes with vertices on the boundary of a convex body (with C. Schütt), *Comptes Rendus de l'Académie des Sciences Paris* **331**, 697–201 (2001)
- Study of a class of regularizations of $1/|x|$ using Gaussian integrals, (with M. B. Ruskai), *SIAM J. of Math. Analysis* **32**, 435–463 (2000)
- One Dimensional Regularizations of the Coulomb Potential with Application to Atoms in Strong Magnetic Fields, (with M. B. Ruskai and R. Brummelhuis), *Differential Equations and Mathematical Physics*, ed. by G.Weinstein and R. Weikard, 43–51, International Press, (2000)
- On the p -affine surface area (with M. Meyer), *Advances in Math.* **152**, 288–313 (2000)
- A general geometric construction of affine surface area, *Studia Math.***132** (3), 227–238 (1999)
- A nonsymmetric correlation inequality for Gaussian measure (with S. Szarek), *Journal of Multivariate Analysis* **68**, 193–211 (1999)
- The Santaló-regions of a convex body (with M. Meyer), *Transactions of the AMS* **350**, no.11, 4569–4591 (1998)
- The illumination body of almost polygonal bodies, *Geom. Ded.* **64** No. 3, 343–354 (1997)
- The illumination bodies of a simplex, *Journal of Discrete and Computational Geometry* **15**, 297–306 (1996)

- Some remarks on norm-attaining n -linear forms (with R. Aron, C. Finet), Lecture Notes in Pure and Applied Mathematics **172** Proceedings of the Second Conference on Function Spaces, Marcel Dekker, 19–28 (1995)
- Illumination bodies and the affine surface area, *Studia Math.* **110**, 257–269 (1994)
- Homothetic floating bodies, (with C. Schütt), *Geom. Dedic.* **49**, 335–348 (1994)
- The convex floating body of almost polygonal bodies (with C. Schütt), *Geom. Dedic.* **44**, 169–188 (1992)
- The convex floating body (with C. Schütt), *Math. Scand.* **66**, 275–290 (1990)
- Non-dentable solid subsets in Banach lattices failing Radon Nikodym Property, Applications to renormings. *Proc. AMS* **107**, 611–620 (1989)
- Moduli of non-dentability and the Radon-Nikodym property in Banach spaces (with W. Schachermayer, A. Sersouri), *Israel Journal of Math.* **65**, 225–257 (1989)
- Quasi-Banach spaces which are unique predual, *Mathem. Annalen* **280**, 559–563 (1988)
- Some results about the floating body, *Sminaire d’Initiation l’Analyse, Exp. No. 15*, 4 pp., *Publ. Math. Univ. Pierre et Marie Curie*, **107**, Univ. Paris VI, Paris (1990)
- Le corps flottant convexe, *Sminaire d’Initiation l’Analyse, Exp. No. 11*, 3 pp., *Publ. Math. Univ. Pierre et Marie Curie*, **94**, Univ. Paris VI, Paris (1989)
- Thèse de doctorat de l’Université Paris VI, May (1989)

Invited Talks, Conferences, Workshops

- January 2024 Colloquium talk, University of Osnabrück, “On the L_p Brunn Minkowski theory”
- November 2023 Workshop “Harmonic Analysis and Convexity” at the Banff International Research Station, Banff, Canada, “Approximation of convex bodies in Hausdorff distance by random polytopes”
- October 2023, Quantum Information Seminar, University of Delaware, “On the geometry of projective tensor products”
- September 2023, Conference on Convex Geometry and Geometric Probability, Salzburg University, Salzburg, Austria, “Approximation of convex bodies in the Hausdorff distance”
- September 2023, Convex and Discrete Geometry Workshop, Erdős Center, Rényi Institute, Budapest, Hungary “Extremal affine surface areas”
- July 2023, Goethe Universität Frankfurt, Germany, “Extremal affine surface areas in a functional setting”
- June 2023, “Convex Geometry - Analytic Aspects”, Scuola Normale Superiore di Pisa, Cortona, Italy
- June 2023, “Geometric Inequalities, Convexity and Probability”, University of Granada, Spain
- June 2023, “Geometric Valuation Theory - from convex sets to functions”, CIEM, Castro Urdiales, Spain “Extremal affine surface areas in a functional setting”
- April 2023, AGA seminar (virtual) talk, “Spherical convex hull of random points on a wedge”

- March 2023, Colloquium talk, Syracuse University, “On the L_p Brunn Minkowski theory”
- March 2023, AMS special session meeting “High-dimensional Convexity and Probability”, Atlanta GA, “Extremal affine surface areas in a functional setting”
- October 2022, workshop “Probabilistic Methods in Geometry and Analysis” ICERM, Brown University
“Approximation of convex bodies in Hausdorff distance by random polytopes”
- October 2022, workshop “Approximation and geometry in high dimensions”, Bedlewo, Poland
“Spherical convex hull of random points on a wedge”
- September 2022, workshop “Harmonic Analysis Methods in Geometric Tomography”, ICERM, Brown University
“Inequalities for L_p Steiner coefficients”
- June 2022, Conference “geOmetry, anaLysis & convExity”, Sevilla, Spain
“Spherical convex hull of random points on a wedge”
- June 2022, Phenomena in High Dimension Conference, Paris, France
“Spherical convex hull of random points on a wedge”
- June 2022 Canadian Mathematical Society summer meeting, Session “Advances in Operator Algebras”
“On the Geometry of Projective Tensor Products”
- May 2022, online workshop “Integral and Metric Geometry”, BIRS Oaxaca, “A Steiner formula in the L_p Steiner Brunn Minkowski theory”
- April 2022, workshop “Geometric Probability and Valuation Theory”, Vienna Technical University, “ L_p Steiner coefficients”
- March 2022, Colloquium talk, Florida International University, “On the L_p Brunn Minkowski theory”
- January 2022, Simons Institute, Berkeley workshop “Probability, Geometry and Computations in High Dimensions”
“Blaschke-Santaló inequality for many functions and geodesic barycenters of measures”
- December 2021, Oberwolfach (hybrid) workshop “Convex Geometry and its Applications”
“Blaschke-Santaló inequality for many functions and geodesic barycenters of measures”
- December 2021, Women in Operator Algebra II, Banff International Research Station, Banff, Canada, Research Group “POVM-measures and f -divergences”
- October 2021, University of Waterloo, Canada, “Blaschke-Santaló inequality for many functions and sets”
- June 2021, Online meeting of the Canadian Mathematical Society, “Blaschke-Santaló inequality for many functions and sets”
- March 2021, Online conference University of Bremen, Germany “Current trends in Convex Geometry”
“Blaschke-Santaló inequality for many functions and geodesic barycenters of measures”
- December 2020, Shaanxi Normal University colloquium talk, Shaanxi, China, “Convex floating bodies of equilibrium”
- December 2020, Virtual Combinatorics and Geometry Days III workshop, MIPT, Moscow
“Convex floating bodies of equilibrium”
- October 2020, Simons Institute, Berkeley Online Seminar, “Thin shell estimates for maximal affine surface area”

- June 2020, Vienna Technical University Online Seminar, “Convex floating bodies of equilibrium”
- May 2020, University of Bochum Online Seminar, “Maximal and minimal p -affine surface areas”
- April 2020, Carnegie Mellon Algorithm Combinatorics and Optimization Online Seminar “ L_p -affine surface areas and maximal affine surface areas”
- April 2020, Online Asymptotic Geometric Analysis Seminar “Constrained convex bodies with extremal affine surface areas”
- February 2020, Workshop “Geometric Tomography” at the Banff International Research Station, Banff, Canada, “Constrained convex bodies with extremal affine surface areas”
- November 2019, AMS meeting “Probabilistic and Geometric Tools in High-Dimension”, Gainesville, FL, “Constrained convex bodies with extremal affine surface areas”
- September 2019, Conference “Stochastic Geometry”, Euler Institute, St. Petersburg, Russia, “Constrained convex bodies with extremal affine surface areas”
- July 2019, Technical University Berlin, Germany “Maximal affine surface area”
- June 2019, Seminaire Analyse Fonctionnelle, University Paris VI, Paris, France “Maximal affine surface area”
- June 2019, CMS meeting University of Regina, Regina, Canada “Entropy inequalities for log concave functions”
- May 2019, “Analytic-Geometric Inequalities and Related Topics”, Mittag-Leffler Institute, Stockholm, Sweden “Entropy inequalities for log concave functions”
- March 2019, AMS meeting “Analytic and Probabilistic Methods in Convex Geometry”, Honolulu, HI, “Surface area deviation between smooth convex bodies and polytopes”
- March 2019, Springschool and Workshop on Polytopes, Ruhr Universität Bochum, Germany “Random Polytopes”
- December 2018, Mathematisches Forschungsinstitut Oberwolfach, Germany “The convex hull of random points on the boundary of a simple polytope”
- November 2018, Technical University of Vienna, Austria “The Löwner ellipsoid of a log concave function”
- November 2018, Functional Inequalities in Probability workshop, University of Connecticut, “Random points in convex bodies”
- August 2018, Charles University, Prague, Czech Republic “Floating bodies and Approximation of convex bodies by polytopes”
- July 2018, Asymptotic and Affine Geometric Analysis, PUC, Rio de Janeiro, Brazil, “Floating Functions”
- March 2018, South Eastern Analysis meeting, Georgia Tech, Atlanta “Geometry of projective tensor products”
- November 2017, MSRI “Geometric Functional Analysis and Applications” Program “Duality of floating body and illumination body”
- September 2017, Conference “Convex and Integral Geometry” Frankfurt, Germany, “Everything floating”
- June 2017, Workshop “Convex, Discrete and Integer Geometry” Bedlewo, Poland, “Recent results on approximation of convex bodies by polytopes”
- May/June 2017, Workshop “High Dimensional Probability” at BIRS-CMO, Oaxaca, Mexico, “Geometry of projective tensor products”

- May 2017, Workshop “Recent Advances in Discrete and Analytic Aspects of Convexity” at the Banff International Research Station, Banff, Canada, “Recent results on approximation of convex bodies by polytopes”
- April 2017, Workshop on “Information Theoretic Inequalities”, University of Delaware “Entropy inequalities and their stability for convex bodies and log concave functions”
- January 2017, Ruhr Universität Bochum, “Approximation of convex bodies by polytopes”
- October 2016 Indam workshop “Analytic Aspects of Convexity”, Rome, Italy “On the geometry of projective tensor products”
- July 2016 “Conference on convex and Discrete Geometry”, Vienna Technical University, Vienna, Austria, “The surface deviation of the Euclidean ball and a polytope”
- May 2016 “Convex and discrete geometry Day”, Université Paris Est, “Approximation of convex bodies by polytopes”
- May 2016 Conference on “Geometric Functional Analysis”, University of Alberta, Edmonton, Canada
- May 2016, Conference “New Developments in Probability; jointly hosted by Women in Probability”, Northwestern University, Chicago, “Best and Random Approximation”
- April 2016, AMS meeting “Harmonic Analysis and Convexity”, Fargo, ND, “Approximation of convex bodies by polytopes”
- April 2016, University of Calgary, “Approximation of convex bodies by polytopes” and “Approximation of a polytope by its dual L_p -centroid bodies”
- February 2016, Oberwolfach workshop “Asymptotic Geometric Analysis”, “The Surface Area Deviation of the Euclidean Ball and a Polytope”
- December 2015, Vienna Technical University, Vienna, Austria “Approximation of convex bodies by polytopes”
- December 2015, Oberwolfach conference “Convex Geometry and its Applications”, “The floating body in real space forms”
- November 2015, University of Delaware, “Approximation of convex bodies by polytopes” and “Geometric inequalities for functions”
- November 2015, workshop “Analytic and Probabilistic Techniques in Modern Convex Geometry”, University of Missouri, Columbia, “The Floating Body in Real Space Forms”
- October 2015, Colloquium, Georgia Tech University, Atlanta, “Best and random approximation of convex bodies by polytopes”
- June 2015, Workshop “Integral Geometry and Valuation Theory”, at the ETH, Zürich “Valuations for log concave and s -concave functions”
- April 2015, Workshop “Analytic Tools in Probability and Applications”, at the IMA, Minneapolis “Entropy inequalities for log concave functions”
- March 2015, Iowa State University, Ames, Iowa. “Functional affine-isoperimetry and an inverse logarithmic Sobolev inequality”
- July 2014, A. Pelczynski Memorial conference, Bedlewo, Poland
- May 2014, Johannes Kepler University, Linz, Austria. “Entropy inequalities for convex bodies and log concave functions”
- March 2014, University of Edmonton, Canada
- March 2014, Workshop “Geometric Tomography and Harmonic Analysis” at the Banff International Research Station, Banff, Canada, “Equality characterization and stability for entropy inequalities”

- October 2013, AMS meeting, Washington University, St. Louis “Divergence for log concave functions”
- September 2013, Memorial University, St. John’s, Canada. “Divergence for log concave functions”
- August 2013, Workshop on “Sections of convex bodies” American Institute of Mathematics, Palo Alto “Sections of convex sets appearing in quantum information theory”
- June 2013, “Asymptotic Geometric Analysis II”, St. Petersburg, Russia. “ L_p -affine surface areas for log concave functions”
- May 2013, “Lindenstrauss Memorial conference”, Jerusalem. “Divergence for log concave functions”
- February 2013, Oberwolfach workshop “Integral Geometry and its Applications”. “Affine invariant points”
- January 2013, University of Magdeburg “Functional affine-isoperimetry and an inverse logarithmic Sobolev inequality”
- December 2012, Oberwolfach conference “Convex Geometry and its Applications”. “Divergence inequalities for log concave functions”
- October 2012, AMS meeting, University of Akron, “Inverse log Sobolev and Poincaré inequalities”
- July 2012, University of Osnabrück, “Entangled states and maps”
- June 2012, Conference “Phenomena in high dimensions in geometric analysis, random matrices, and computational geometry”, Roscoff, France
- June 2012, Conference “Probability and Analysis”, Polish Academy of Sciences in Bedlewo, Poland “Inverse log Sobolev and Poincaré inequalities”
- May 2012, GPOTS Plenary Talk, University of Houston, “Entangled states and maps”
- April 2012, Workshop on Convexity and Asymptotic Geometric Analysis at CRM and University of Montreal, Canada, “Entropies for convex bodies”
- March 2012, Université Franche Comté, Becanson, “Inverse log Sobolev and Poincaré inequalities”
- March 2012, German Probability and Statistics Days, Mainz “Functional affine-isoperimetry and an inverse logarithmic Sobolev inequality”
- December 2011, Nankai University, Tianjin, China “Functional affine-isoperimetry and an inverse logarithmic Sobolev inequality”
- November 2011, University of Michigan, Ann Arbor “Inverse log Sobolev and Poincaré inequalities”
- November 2011, Wayne State University, Detroit “Entropies of cone measures of convex bodies”
- October 2011, University of Minnesota, Minneapolis “Functional affine-isoperimetry and an inverse logarithmic Sobolev inequality”
- June 2011, Fifth International Workshop on Convex Geometry Analytic Aspects, Cortona, Italy “How often is a random quantum state k -entangled?”
- May 2011 Workshop “Harmonic analysis in convex geometry” at the Banff International Research Station, Banff, Canada, “How often is a random quantum state k -entangled?”
- September 2010 “Advanced Topics of Analysis Applied to Quantum Information Problems” meeting, CIEM International Center for Mathematical Meetings, Bilbao, Spain, 4 hour tutorial: “Local Banach space theory and Quantum Channels”

- September 2010 Workshop on "Asymptotic Geometric Analysis and Convexity" Fields Institute, Toronto, Canada
- August 2010 Workshop on "Mahler's conjecture and duality in convex geometry" American Institute of Mathematics, Palo Alto "Affine isoperimetric, Santaló and inverse Santaló Inequalities"
- August 2010 co-organizer of Conference "Perspectives in High Dimensions", Cleveland, OH
- July 2010 Conference "Asymptotic Geometric Analysis", Euler Institute, St. Petersburg, Russia "Entropy and Dvoretzky's theorem"
- April 2010 Workshop "Algebraic and Random Topology", University of Chicago, "Relative entropy of cone measures"
- March 2010 Workshop "Volume inequalities" at the Banff International Research Station, Banff, Canada, "Relative entropy of cone measures and L_p centroid bodies"
- December 09 co-organizer of Mini-Workshop "Geometry of Quantum Entanglement" MF Oberwolfach, Germany
- December 09 Conference "Convex Geometry and its Applications" MF Oberwolfach, Germany, "Relative entropy of cone measures and L_p centroid bodies"
- August 09 Workshop on "Topological Complexity of Random Sets" American Institute of Mathematics, Palo Alto
- June 09 Conference in honor of V. Milman, Tel Aviv University, Israel "Homothetic floating bodies"
- February 09 Conference in honor of Y. Gordon, Technion, Haifa, Israel "Mixed p -affine isoperimetric inequalities"
- December 08 AMS-SMS joint meeting, Shanghai University, Shanghai China "Geometry of quantum maps"
- October 08 AMS meeting, University of Vancouver, Vancouver, Ca "Geometry of quantum maps"
- August 08 Texas A&M University, Sumirfas conference, "Orlicz norms and order statistics"
- June 08 Conference on "Phenomena in High Dimensions", Sevilla, Spain "New L_p -affine isoperimetric inequalities"
- May 08 Conference in honor of L. Tzarfiri, Hebrew University, Jerusalem, Israel " L_p -affine isoperimetric inequalities"
- November 07 Workshop on "Algorithmic Convex Geometry" American Institute of Mathematics, Palo Alto
- September 07 Conference on "Geometrization of probability" Fields Institute, Ottawa, Canada "Maxima and minima of sequences or random variables"
- August 07 Workshop on "Fourier analytic methods in convex geometry" American Institute of Mathematics, Palo Alto " L_p -affine isoperimetric inequalities"
- July 07 Conference on "Phenomena in High Dimensions", Samos, Greece "Geometry of states and superoperators"
- July 07 Conference on Convexity, Cortona, Italy "On the L_p affine surface area"
- April 07 AMS meeting, Stevens College, Hoboken, NJ co-organizer of a special session on Convexity
- December 06 Conference on "Convex Geometry" Oberwolfach, Germany
- September 06 Colloquium talk, Columbia, Missouri "Approximation of convex bodies by polytopes"

- June/July 06 “Phenomena in High Dimensions”, Institut Henri Poincaré, Paris, France co-organizer of the workshop “Asymptotic Analysis and Applications”
- April 06 AMS meeting, University of New Hampshire, Durham, NH “Spaces between zonotopes and polytopes”
- April 06 AMS meeting, Florida International University, Miami, FL ”Minima of sequences of Gaussian random variables”
- March 06 Colloquium talk, Brooklyn Polytechnical University “Approximation of convex bodies by polytopes”
- March 06 Conference on “Convex and Discrete Geometry” Banff International Research Station, Banff, Canada “Spaces between zonotopes and polytopes”
- January 06 AMS meeting, San Antonio, Texas “Approximation of the Euclidean ball by polytopes”
- December 05 Colloquium talk, University of Massachusetts, Lowell, Ma “Approximation of convex bodies by polytopes”
- September 05 Colloquium talk, Kent State University, Kent “Approximation of the Euclidean ball by polytopes”
- July/August 05 Workshop “Asymptotic Theory of Geometry of Finite-Dimensional Spaces” Erwin Schrödinger Institute, Vienna, Austria
- July 05 Conference on “Convex Geometry and High Dimensional Phenomena” Technical University, Vienna, Austria
- June 05 2 Conferences on Banach Space Theory and Convex Geometry Jerusalem and Dead Sea, Israel
- May 05 Conference on Convex Geometry, Florence, Italy
- October 04 Conference on Integral Geometry, Wuhan, China “Floating bodies, Illumination bodies, Surface bodies”
- July 04 co-organizer of “Convex Geometric Analysis” at the Banff International Research Station, Banff, Canada
- April 04 AMS meeting, Rider University, Lawrenceville co-organizer of a special session on Convexity
- April 04 Colloquium talk, University of Montreal, Canada
- June 03 Conference on Convexity, Cortona, Italy “Aspects of Approximation of convex bodies by polytopes”
- April 03 Conference on Geometry of Banach spaces, Mathematisches Forschungsinstitut Oberwolfach, Germany
- April 03 Conference on local Banach space theory, University of Kiel, Germany “Random polytopes and surface bodies”
- November 02 Conference on Quantum information theory and cryptography, Mathematical Science Research Institute, Berkeley, Ca
- October 02 AMS meeting, Northeastern, Boston co-organizer of a special session on Convexity
- September 02 Conference on Banach Space theory, Bedlewo, Poland
- July 02 3 Workshops at PIMS Vancouver, Canada:
Convexity and Asymptotic Theory of normed spaces (“Approximation of convex bodies by polytopes and and surface bodies”),
Measure Transportation and Geometric inequalities,
Phenomena of large dimensions

- June 02 AMS-UMI Meeting, Pisa, Italy “ L_p -affine surface areas and surface bodies”
- June 02 Hebrew University, Jerusalem, Israel “Approximation of convex bodies by polytopes and surface bodies”
- May 02 2 Conferences at Technion and Haifa University, Haifa, Israel
- April 02 Conference on Geometry and Topology, Bedlewo, Poland “Random and best approximation of convex bodies by polytopes”
- March 02 Oakland University, MI “Random and best approximation of convex bodies by polytopes”
- March 02 University of Alberta, Edmonton, Canada
- January 02 Workshop on Quantum Information Processing, IBM Watson Research Center, Yorktown, NY
- August 01 Workshop on Convexity theory, Crete, Greece
- June 01 University of Tübingen, Germany “Random and best approximation of convex bodies by polytopes”
- April 01 Convexity theory conference, Oberwolfach, Germany “Aspects of random variables in convexity theory”
- March 01 AMS Meeting, Columbia, SC “Extreme points of completely positive trace preserving maps”
- March 01 Technion, Haifa, Israel “Extreme points of completely positive trace preserving maps”
- March 01 Tel Aviv University, Tel Aviv, Israel “Extreme points of completely positive trace preserving maps”
- October 00 Schrödinger Institute, Vienna, Austria “A characterization of completely positive trace preserving maps”
- September 00 University of Missouri, Columbia Missouri, “Regularizations of the Coulomb potential using Gaussian integrals”
- July 00 University of Karlsruhe, Germany “Dropping a vertex from a convex polytope”
- May 00 Franking, Austria “Dropping a vertex from a convex polytope”
- April 00 AMS Meeting, Lowell, Ma., “Extreme points of completely positive trace preserving maps” and co-organizer of a special session on Convexity
- March 00 Conference and Workshop on Local Theory of Banach spaces, “Santaló regions” Technion and University of Haifa, Haifa, Israel Tel Aviv University, Tel Aviv, Israel
- June/July 99 Conference and Workshop on Local Theory of Banach spaces, PIMS Vancouver, Canada
- May 99 Conference on Convexity, Cortona, Italy “Random polytopes”
- April 99 University of Massachusetts, Lowell “A correlation inequality for the Gaussian measure”
- March 99 University of Vienna, Vienna, Austria “A class of regularizations of $1/|x|$ using Gaussian integrals”
- March 99 University of Linz, Austria “A class of regularizations of $1/|x|$ using Gaussian integrals”
- October 98 Brooklyn Polytechnical University, New York “On the Gaussian measure”
- September 98 Miami University, Oxford, Ohio “Affine invariants in convexity theory”
- May 98 Academy of Sciences, Warsaw, Poland “The p -affine surface area”

- April 98 Academy of Sciences, Budapest, Hungary
- April 98 University of Vienna, Vienna, Austria “Affine invariants in convexity theory”
- March/April 98 Technion and Haifa University, Haifa, Israel “On the Gaussian measure”
Invited member at the Landau Institute at the Hebrew University, Jerusalem, Israel “The p-affine surface area”
- November 97 Convexity theory conference, Oberwolfach, Germany “The p-affine surface area”
- October 97 AMS Meeting, Atlanta, GA, “On the p-affine surface area”
- October 97 Georgia Tech. University, Atlanta, GA, “Correlation inequalities for the Gaussian measure”
- August 97 Conference on Analysis and Logic, Mons, Belgium
- May 97 University of Denver “Convex bodies and Differential Geometry”
- March 97 AMS Meeting, Memphis, TN, co-organizer of Special Session on Harmonic Analysis and Convexity “A general construction of Affine surface area”
- October 96 AMS Meeting, Lawrenceville, NJ, “On the Santalo-regins of a convex body”
- September 96 Conference on Banach space Theory, Oberwolfach, Germany
- March 96 Conference Women in Analysis, Berkeley, California “Convexity and Affine Differential Geometry”
- November 95 AMS SMM Meeting, Guanajuato, Mexico “Illumination bodies of almost polygonal bodies”
- November 95 AMS Meeting, Kent, Ohio “Norm attainig n-linear forms”
- June 95 Conference on Convex and Discrete Geometry, Cortona, Italy “On a Gaussian correlation inequality”
- June 95 Université de Mons, Belgium “Sur l’aire de la surface affine”
- May 95 AMS Meeting, Jerusalem, Israel “On a Gaussian correlation inequality”
- September 94 International Conference on Convexity, Paris, France “On the problem of positive Gaussian correlation for convex sets”
- August 94 Regional Conference Texas A & M University “On the affine surface area”
- June 94 Convex and Discrete Geometry, Bydgoszcz, Poland “Affine surface area and polytopes”
- May 94 Conference on Functional Analysis, Harmonic Analysis and Probability, Columbia, MO
- April 94 AMS meeting, New York “On the affine surface area”
- June 93 Polish Academy of Sciences, Warsaw, Poland “On the affine surface area”
- April 93 University of South Carolina, Columbia, SC “Floating bodies”
- January 93 Meeting of the AMS, San Antonio, Texas, “Homothetic floating bodies”
- November 92 University of Alberta, Edmonton, Canada, “Floating bodies”
- May 92 North European Analysis Conference, St. Amand les Eaux, France
- November 91 Polish Academy of Sciences, Warsaw, Poland “The convex floating body”
- September 91 Geometrie der Banachräume, Oberwolfach, Germany, “The convex floating body of almost polygonal bodies”
- June 91 Banach space conference, Jerusalem, Israel
- January 91 Journée d’Analyse Fonctionnelle Lille-Paris, “Le corps flottant des corps de type presque polytope”

- April 90 Kent State University, Kent, Ohio “Banach lattices without RNP”
- June 89 Conference on Geometry of Banach spaces, Strobl, Austria “The convex floating body”
- July 88 Microprogram on Banach spaces, Berkeley, California
- September 87 University of Missouri, Columbia, MO “Banach spaces failing RNP”
- April 87 Ohio State University, Columbus, OH “The RNP in Banach spaces”
- October 86 Conference on Banach space Theory, Oberwolfach, Germany
- June 86 Conference on Banach Space Theory, Sandbjerg, Denmark

Teaching Experience

I have taught a variety of graduate and undergraduate courses including Calculus, Advanced Calculus, Complex Analysis, Real Analysis, Probability Theory, Measure Theory, Functional Analysis, Linear Algebra.

I have developed a new course at Case Western Reserve University on “Convexity and Applications”.