

Department of Pure Mathematics
School of Mathematical Sciences
Tel Aviv University

Shiri ARTSTEIN-AVIDAN, Ph.D., Puiblication List

1. Shiri Artstein, *Proportional concentration phenomena on the sphere*, Israel J. Math., Vol 132 (2002), 337–358.
2. Shiri Artstein, Vitali D. Milman and Stanislaw J. Szarek, *More on the duality conjecture for entropy numbers*, Comptes Rendus Mathematique, Volume 336, Issue 6 (2003), no. 6, 479–482.
3. Shiri Artstein, Vitali D. Milman and Stanislaw J. Szarek, *Duality of metric entropy in Euclidean space*, Comptes Rendu Mathematique, Volume 337, Issue 11 (2003), no. 11, 711–714.
4. Shiri Artstein, Keith M. Ball, Franck Barthe and Assaf Naor, *Solution of Shannon's problem on the monotonicity of entropy*, Journal of Amer. Math. Soc. Vol. 17 (2004), no. 4, 975–982.
5. Shiri Artstein, Vitali D. Milman, Stanislaw J. Szarek and Nicole Tomczak-Jagermann, *On Convexified packing and entropy duality*, Geometric And Functional Anal. Vol. 14, (2004), no. 5, 1134–1141.
6. Shiri Artstein, Vitali D. Milman and Stanislaw J. Szarek *Duality of metric entropy*, Annals of Math. (2) 159 (2004), no. 3, 1313–1328.
7. Shiri Artstein, Keith M. Ball, Franck Barthe and Assaf Naor, *On the rate of convergence in the entropic central limit theorem*, Probability Theory and Related Fields, Vol. 129 (2004), no. 3, 381–390.
8. Shiri Artstein-Avidan, Bo'az Klartag and Vitali D. Milman, *On the Santaló point of a function and a functional form of the Santaló inequality*, Mathematika 51 (2004) no. 1-2, (2005) 33–48.
9. Shiri Artstein-Avidan, Omer Friedland and Vitali D. Milman, *Geometric Applications of Chernoff-type estimates and a zigzag approximation for balls*, Proc. Amer. Math. Soc. 134 (2006) no. 1, 1735–1742.
10. Shiri Artstein-Avidan and Vitali D. Milman, *Logarithmic reduction of the level of randomness in some probabilistic geometric constructions*, J. Func. Anal. Vol. 235 (2006), no.1 , 297–329.
11. Shiri Artstein-Avidan, Omer Friedland, Vitali D. Milman and Sasha Sodin *Polynomial bounds for large Bernoulli sections of ℓ_1^N* , Israel J. Math, Vol. 156 (2006) 141–155.
12. Shiri Artstein-Avidan, *A Bernstein-Chernoff deviation inequality and geometric properties of random families of operators*, Israel J. Math, Vol. 156 (2006) 187–204.

13. Shiri Artstein-Avidan and Vitali D. Milman, *Using Rademacher permutations to reduce randomness*, Algebra i Analiz 19 (2007), no. 1, 23–45 (Vol. dedicated to 85th birthday of V.A. Zalgaller); translation in St. Petersburg Math. J. 19 (2008), no. 1, 15–31 .
14. Shiri Artstein-Avidan and Vitali D. Milman, *A characterization of the concept of duality*, Electron. Res. Announc. Math. Sci. 14 (2007), 42–59.
15. Shiri Artstein-Avidan and Yaron Ostrover, *On Symplectic Capacities and Volume Radius*, <http://arxiv.org/pdf/math.SG/0603411.pdf>
16. Shiri Artstein-Avidan, Vitali D. Milman and Y. Ostrover, *The M-ellipsoid, symplectic capacities and volume*, Comment. Math. Helv. 83 (2008), no. 2, 359–369.
17. Shiri Artstein-Avidan and Vitali D. Milman, *The concept of duality for measure projections of convex bodies*, J. Funct. Anal. 254 (2008) no. 10 2648–2666.
18. Semyon Alesker, Shiri Artstein-Avidan and Vitali D. Milman, *A characterization of the Fourier transform and related topics*, C. R. Math. Acad. Sci. Paris 346 (2008), no. 11–12, 625–628.
19. Shiri Artstein-Avidan and Yaron Ostrover, *A Brunn-Minkowski Inequality for Symplectic Capacities of Convex Domains*, Int. Math. Res. Not. IMRN 2008, no. 13, Art. ID rnn044, 31pp.
20. Shiri Artstein-Avidan, Aviezri Fraenkel and Vera Sós, *A two parameter family of an extension of Beatty sequences*, Discrete Math. 308 (2008) no. 20, 4578–4588.
21. Shiri Artstein-Avidan and Vitali D. Milman, *A New Duality Transform ; Une Nouvelle Transformée de Dualité*. C. R. Math. Acad. Sci. Paris 346 (2008), no. 21–22, 1143–1148.
22. Shiri Artstein-Avidan and Vitali D. Milman, *The concept of duality in convex analysis and the characterization of the Legendre transform*. Annals of mathematics (2), Vol. 169 (2009) no. 2, 661–674.
23. Semyon Alesker, Shiri Artstein-Avidan and Vitali D. Milman, *A characterization of the Fourier transform and related topics*, Linear and Complex Analysis, 11–26, Amer. Math. Soc. Transl. Ser. 2, Vol. 226, a special volume in honour of Prof. V. Havin, Amer. Math. Soc., Providence, RI, 2009.
24. Shiri Artstein-Avidan and Vitali D. Milman, *A Characterization of the Support Map*, Adv. Math. 223 (2010), no. 1, 379–391.

25. Shiri Artstein-Avidan, Hermann König and Vitali D. Milman, *The chain rule as a functional equation*, J. Funct. Anal. 259 (2010), no. 11, 2999-3024.
26. Semyon Alesker, Shiri Artstein-Avidan, Dmitry Faifman and Vitali D. Milman, *A characterization of product preserving maps with applications to a characterization of the Fourier transform*, Illinois J. Math. 54 (2010), no. 3, 1115-1132 (2012).
27. Shiri Artstein-Avidan and Orit Raz, *Weighted covering numbers of convex sets*, Adv. Math. 227 (2011), no. 1, 730-744.
28. Shiri Artstein-Avidan and Vitali D. Milman, *Hidden structures in the class of convex functions and a new duality transform*, J. Eur. Math. Soc. (JEMS) 13 (2011), no. 4, 975-1004.
29. Shiri Artstein-Avidan, Dan I. Florentin and Vitali D. Milman, *Order isomorphisms in windows*, Electron. Res. Announc. Math. Sci. 18 (2011), 112-118.
30. Shiri Artstein-Avidan, Bo'az Klartag, Carsten Schütt and Elisabeth Werner, *Functional affine-isoperimetry and an inverse logarithmic Sobolev inequality*, J. Funct. Anal. 262 (2012), no. 9, 4181-4204.
31. Shiri Artstein-Avidan and Boaz A. Slomka, *Order isomorphisms in cones and a characterization of duality for ellipsoids*, Selecta Math. (N.S.) 18 (2012), no. 2, 391-415.
32. Shiri Artstein-Avidan and Yaron Ostrover, *Bounds for Minkowski Billiard Trajectories in Convex Bodies*, Int. Math. Res. Not. IMRN 2014, no. 1, 165-193.
33. Shiri Artstein-Avidan and Vitali D. Milman, *Stability results for some classical convexity operations*, Adv. Geom. 13 (2013), no. 1, 51-70.
34. Shiri Artstein-Avidan, Dan Florentin and Yaron Ostrover, *Remarks about Mixed Discriminants and Volumes*, Commun. Contemp. Math. 16 (2014), no. 2, 14 pp.
35. Shiri Artstein-Avidan, Roman Karasev and Yaron Ostrover, *From Symplectic Measurements to the Mahler Conjecture* Duke Math. J. 163 (2014), no. 11, 2003-2022.
36. Shiri Artstein-Avidan and Boaz A. Slomka, *A note on Santaló inequality for the polarity transform and its reverse* Proc. Amer. Math. Soc. 143 (2015), no. 4, 1693-1704.
37. Shiri Artstein-Avidan and Boaz A. Slomka, *On weighted covering numbers and the Levi-Hadwiger conjecture*, Israel J. Math. 209 (2015), no. 1, 125-155.

38. Shiri Artstein-Avidan, Keshet Einhorn, Dan I. Florentin and Yaron Ostrover, *On Godbersen's conjecture*, *Geom. Dedicata* 178 (2015), 337-350
39. Shiri Artstein-Avidan and Yanir Rubinstein, *Differential analysis of polarity: polar Monge Ampère, Hamilton–Jacobi and conservation laws*, *J. Anal. Math.* 132 (2017), 133-156.
40. Shiri Artstein-Avidan and Boaz A. Slomka, *The fundamental theorems of affine and projective geometry revisited*, *Commun. Contemp. Math.* 19 (2017), no. 5, 39 pp.
41. Shiri Artstein-Avidan, Dan I. Florentin, Yaron Ostrover and Daniel Rosen, *Duality of Caustics in Minkowski Billiards*, *Nonlinearity*, (2018), Volume 31, Number 4.
42. Shiri Artstein-Avidan and David Katzin, *Isotropic measures and maximizing ellipsoids: Between John and Loewner*, to appear in *Proceedings of the American Mathematical Society*.
43. David Alonso-Gutiérrez, Shiri Artstein-Avidan, Bernardo González Merino, C. Hugo Jiménez, Rafael Villa, *Rogers-Shephard and local Loomis-Whitney type inequalities*, *Mathematische Annalen*, 2019. <https://doi.org/10.1007/s00208-019-01834-3>
44. Shiri Artstein-Avidan and Boaz A. Slomka, *Functional covering numbers*, To appear in the *Journal of Geometric Analysis*.

Books

1. Shiri Artstein-Avidan, Apostolos Giannopoulos and Vitali Milman, *Asymptotic Geometric Analysis Part I*. *Mathematical Surveys and Monographs*, 202. American Mathematical Society, Providence, RI, 2015. xx+451 pp. ISBN: 978-1-4704-2193-9

Publications in Proceedings of Conferences

1. Shiri Artstein, *The change in the diameter of a convex body under a random sign-projection*, *Geometric Aspects of Functional Analysis*, 31–39, *Lect. Notes in Math*, 1850, Springer, Berlin, 2004.
2. Shiri Artstein-Avidan, Omer Friedland and Vitali D. Milman, *Geometric Applications of Chernoff-type Estimates*, *Geometric Aspects of Functional Analysis*, 45–75, *Lect. Notes in Math*, 1910, Springer, Berlin, 2007.
3. Shiri Artstein-Avidan, Dmitry Faifman, and Vitali D. Milman *On Multiplicative Maps of Continuous and Smooth Functions*, *Geometric Aspects of Functional Analysis*, 35–59, *Lect. Notes in Math*, 2050, Springer, Berlin, 2012.

4. Shiri Artstein-Avidan, Dan Y. Florentin, and Vitali D. Milman, *Order Isomorphisms on Convex Functions in Windows*, Geometric Aspects of Functional Analysis, 61–122, Lect. Notes in Math, 2050, Springer, Berlin, 2012.

Submitted or in preparation

1. Shiri Artstein-Avidan, Haim Kaplan and Micha Sharir
On Radial Isotropic Position: Theory, Algorithms, and Applications,
(submitted).
2. Shiri Artstein-Avidan,
A short note on Godbersen's Conjecture,
preprint: <https://arxiv.org/abs/1703.06403> (submitted).
3. Shiri Artstein-Avidan, Dan Florentin and Alexander Segal,
Polar Prékopa Leindler Inequalities,
preprint: <https://arxiv.org/abs/1707.08732> (submitted).
4. Shiri Artstein-Avidan, Shay Sadovsky and Raman Sanyal,
Mahler, Godbersen and Anti Blocking bodies, in preparation.
5. Shiri Artstein-Avidan, Hila Barel and Yanir Rubinstein,
Polar transportation and related problems, in preparation.
6. Shiri Artstein-Avidan, Apostolos Giannopoulos and Vitali Milman
Asymptotic Geometric Analysis Part II, in preparation.

May 2019