

Curriculum Vitae *

Kateryna Tatarko

PERSONAL INFORMATION

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RESEARCH INTERESTS

Geometric Functional Analysis, Convex Geometry and Probability, Random Matrix Theory, Geometry of Submanifolds.

EDUCATION

- September 2015 - June 2020: **PhD in Pure Mathematics**,
University of Alberta, Edmonton, Canada.
Supervisors: Prof. A. Litvak and Prof. N. Tomczak-Jaegermann.
- September 2014 - July 2015: **MSc in Mathematics** (*Diploma with honors*),
V.N. Karazin Kharkiv National University, Kharkiv, Ukraine.
Supervisor: Prof. A. L. Yampolsky.
- September 2010 - July 2014: **BSc in Mathematics** (*Diploma with honors*),
V.N. Karazin Kharkiv National University, Kharkiv, Ukraine.
Supervisor: Prof. A. A. Borisenko.

ACADEMIC APPOINTMENTS

- July 2021 - to date: Assistant Professor,
University of Waterloo, Waterloo, ON, Canada.
- September 2020 - June 2021: Postdoctoral Fellow,
University of Alberta, Edmonton, AB, Canada.

*updated July 13, 2021

SCHOLARSHIPS\AWARDS

September 2020	Anton Alexander Cseuz Gold Medal in Mathematics, University of Alberta.
June 2020	Doctoral Dissertation Award, University of Alberta.
March 2020	Dr. Josephine M. Mitchell Research Prize, University of Alberta.
January 2020	Alberta Graduate Excellence Scholarship, University of Alberta.
October 2019	University of Alberta Graduate Fellowship, University of Alberta.
March 2019	Graduate Student Teaching Award (Lab Instructor), University of Alberta.
November 2018	Josephine Mitchell Scholarship, University of Alberta.
April 2018	Student's Choice Teaching Award (Primary Instructor), University of Alberta.
October 2017	MSS Travel Award, University of Alberta.
May 2016	Eoin L Whitney Scholarship, University of Alberta.
September 2015	University of Alberta Doctoral Recruitment Scholarship, University of Alberta.

PUBLICATIONS

- S. Myroshnychenko, K. Tatarko and V. Yaskin: Unique determination of ellipsoids by their dual volumes, IMRN, to appear.
- K. Tatarko and E. Werner: A Steiner formula in the L_p Brunn Minkowski theory, Adv. Math. **355** (2019), 106772.
- O. Guédon, A. E. Litvak and K. Tatarko: Random polytopes obtained by matrices with heavy tailed entries, Commun. Contemp. Math. **22** (4) (2020).
- R. Chernov, K. Drach and K. Tatarko: A sausage body is a unique solution for a reverse isoperimetric problem, Adv. Math. **353** (2019), pp. 431–445.
- K. Tatarko: An upper bound on the smallest singular value of a square random matrix, J. Complexity **48** (2018), pp. 119–128.

TEACHING EXPERIENCE

- Fall 2020:
Primary Instructor for MATH 144 (Calculus for the Physical Sciences I),
University of Alberta, Canada.
- Spring 2018:
Primary Instructor for MATH 215 (Intermediate Calculus II),
University of Alberta, Canada.

- Winter 2020, Fall 2019, Winter 2019, Fall 2018, Winter 2018, Winter 2017:
Lab TA for MATH 201 (Differential Equations),
University of Alberta, Canada.
- Spring 2017:
Primary Instructor for MATH 115 (Elementary Calculus II),
University of Alberta, Canada.
- Fall 2016:
Lab TA for MATH 100 (Calculus I),
University of Alberta, Canada.
- September 2015 - May 2020:
TA at the Decima Robinson Support Centre,
University of Alberta, Canada.

FUTURE CONFERENCES (where I was invited and plan to come)

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| June 2022 | High Dimensional Phenomena,
Institut Henri Poincaré, Paris, France. |
| October 2021 | Interaction Between Partial Differential Equations and Convex Geometry,
BIRS-IAS, Hangzhou, China. |

TALKS AT CONFERENCES AND OTHER PRESENTATIONS

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| June 2021 | New Perspectives on the Brunn-Minkowski Theory,
CMS summer meeting, (online), Canada. |
| March 2021 | High dimensional measures: geometric and probabilistic aspects,
HIM, (online), Germany. |
| March 2021 | Measure Theory Seminar,
Kent State University, (online), USA. |
| October 2020 | Convexity and Probability in High Dimensions,
AMS sectional meeting, (online), USA. |
| September 2020 | Asymptotic Geometric Analysis Seminar,
(online). |

- December 2019 Workshop in Convexity and geometric aspects of Harmonic Analysis,
Georgia Institute of Technology, Atlanta, USA.
- November 2019 Colloquium talk,
University of Waterloo, Waterloo, Canada.
- July 2019 Asymptotic Geometric Analysis IV,
Euler International Mathematical Institute, Saint-Petersburg, Russia.
- June 2019 Geometry, Differential Equations and Analysis in memory of A. V. Pogorelov,
V. N. Karazin Kharkiv National University, Kharkiv, Ukraine.
- June 2019 Probabilistic Methods in Geometric Functional Analysis and Convexity,
CMS Summer Meeting, Regina, Canada.
- May 2019 Workshop: Symmetry and convexity in geometric inequalities,
American Institute of Mathematics, San Jose, USA.
- March 2019 Analytic and Probabilistic Methods in Convex Geometry,
AMS sectional meeting, Honolulu, USA.
- December 2018 Workshop: Convex Geometry and its Applications,
Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany.
- May 2018 Recent Advances in Convex Geometry and Geometric Functional Analysis,
TSIMF, Sanya, China.
- April 2018 Invited talk at the Analysis seminar,
Georgia Institute of Technology, Atlanta, USA.
- March 2018 Workshop: Emerging Trends in Geometric Functional Analysis,
BIRS, Banff, Canada.
- March 2018 Probability in Convexity and Convexity in Probability,
AMS sectional meeting, Columbus, USA.
- February 2018 Invited talk at the Analysis and Probability seminar,
Case Western Reserve University, Cleveland, USA.
- June 2016 Scientific Session on Convex and Discrete Geometry and Geometric Analysis,
CMS Summer Meeting, Edmonton, Canada.
- May 2016 Conference on Geometric Functional Analysis in honour of N. Tomczak-Jaegermann,
University of Alberta, Edmonton, Canada. (*poster session*)

April 2015	X International Conference of Young Scientists, V. N. Karazin Kharkiv National University, Kharkiv, Ukraine.
August 2014	Mini-conference: Fields Undergraduate Summer Research Program, Fields Institute, Toronto, Canada.
April 2014	IX International Conference of Young Scientists, V. N. Karazin Kharkiv National University, Kharkiv, Ukraine.
September 2013- July 2015	Scientific Geometrical Seminar, V. N. Karazin Kharkiv National University, Kharkiv, Ukraine. (<i>3 talks of 50 minutes each</i>)
September 2015- to date	Working Seminar in Asymptotic Geometric Analysis, University of Alberta, Edmonton, Canada. (<i>15 talks of 60 minutes each</i>)

PARTICIPATION IN SCIENTIFIC PROGRAMS

August 2017- November 2017	Geometric Functional Analysis and Applications program, MSRI, Berkeley, USA. (<i>Program Associate</i>)
July 2014- August 2014	Fields Undergraduate Summer Research Program, Fields Institute, Toronto, Canada.

OTHER CONFERENCES AND WORKSHOPS PARTICIPATED

January 2021	Winter School: The Interplay between High-Dimensional Geometry and Probability, HIM, Bonn, (online).
February 2020	Workshop: Geometric Tomography, BIRS, Banff, Canada.
November 2019	Informal Analysis Seminar, Kent State University, Kent, USA.
July 2019	Asymptotic Geometric Analysis 2019 (in honor of Vitali Milman), Tel Aviv University, Tel Aviv, Israel.
February 2018	Informal Analysis Seminar, Kent State University, Kent, USA.
November 2017	Geometric functional analysis and applications workshop, MSRI, Berkeley, USA.

August 2017 Dyson-Schwinger equations, topological expansions, and random matrices,
Columbia University, New York, USA.

August 2017 Introductory Workshop: phenomena in high dimensions,
MSRI, Berkeley, USA.

July 2016 Workshop in Analysis and Probability, Concentration Week on Geometric Functional
Analysis,
Texas A&M University, College Station, USA.

VOLUNTEER

- April 2017 - April 2019: President, SIGMAS (Society in Graduate Mathematics and Statistics), University of Alberta, Edmonton, Canada.
- April 2016 - March 2017: Treasurer and Secretary, SIGMAS (Society in Graduate Mathematics and Statistics), University of Alberta, Edmonton, Canada.