TAMARA KUCHERENKO

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POSITIONS

TT Assistant Professor	The City College of New York	2013 - Present
Lecturer	The City College of New York	2010 - 2013
Assistant Adjunct Professor	University of California - Los Angeles	2007 - 2010
Lecturer and Assistant Researcher	University of California - Los Angeles	2005 - 2007

DEGREES

Ph. D.	University of Missouri - Columbia, Missouri	2005
	Advisor: Nigel Kalton	
Diploma	Kharkov National University - Ukraine	2001

PUBLICATIONS

- Measures of maximal entropy for suspension flows over the full shift, joint with D. Thompson, Mathematische Zeitschrift, doi: 10.1007/s00209-019-02287-9. (Published online: 10 April 2019).

- *Ground states and zero temperature measures at the boundary of rotation sets,* joint with C. Wolf, Ergodic Theory and Dynamical Systems, 39 (1) (2019), 201-224*.*

- *A suspension flow over the full shift with two distinct measures of maximal entropy,* joint with D. Thompson, Topology Proceedings 52 (2018), 321-328*.*

- *Entropy and rotation sets: A toymodel approach,* joint with C. Wolf, Communications in Contemporary Mathematics 18 (2016)*.*

- *Localized pressure and equilibrium states,* joint with C. Wolf, Journal of Statistical Physics 160 (2015), 1529-1544.

- *Localized variational principle for non-Besicovitch metric spaces*, Topology and its Applications 190 (2015), 22-30.

- *Comments on the paper: Operators with an absolute functional calculus,* Nigel J. Kalton Selecta, Vol. 1, (F. Gesztesy, G. Godefroy, L. Grafakos, and I. Verbitsky, editors), Contemporary Mathematicians, Birkhäuser-Springer, (2015)

- *Geometry and entropy of generalized rotation sets*, joint with C. Wolf, Israel Journal of Mathematics 199 (2014), 791-829.

- *Operators with an absolute functional calculus*, joint with N. Kalton, Mathematische Annalen 346 (2010), 259-306.

- *Rademacher bounded families of operators on L_1,* joint with N. Kalton, Proceedings of the American Mathematical Society 136 (2008), 263-272.

- *Sectorial operators and interpolation theory*, joint with N. Kalton, Contemporary Mathematics 445 (2007), 111-119.

- *Real interpolation of domains of sectorial operators on L_p-spaces*, joint with L. Weis, J. Mathematical Analysis and Applications 310 (2005), 278-285.

- *R-bounded approximating sequences and applications to semigroups*, joint with M. Hoffmann and N. Kalton, J. Mathematical Analysis and Applications 294 (2004), 373-386.

- *Weak topologies and properties fulfilled almost everywhere*, joint with V. Kadets, Math. Fiz. Anal. Geom. 8 (2001), 261-271.

PREPRINTS

- *Phase transitions in suspension flows*, joint with Daniel J. Thompson, preprint

- *Quantization dimensions for generalized inhomogeneous self-similar measures,* joint with Mrinal Kanti Roychowdhury, preprint.

WORK IN PROGRESS

- *Connections between different notions of topological pressure,* joint with Johannes Jaerisch, in preparation.*

- *Asymptotic quantization for condensation systems of infinite self-similar mappings,* joint with Mrinal Kanti Roychowdhury, in preparation.

AWARDS AND FELLOWSHIPS

- Simons Foundation: Collaboration Grants for Mathematicians # 430032, (PI) 2016 – 2021
  Project: *Localized topological pressure and the geometry of rotation sets.* *$35,000*

- PSC-CUNY Research Grant, (PI) 2019 – 2020
  Project: *Measures of maximal entropy for suspension flows over the full shift* *$3,500*

- PSC-CUNY Research Grant, (PI) 2018 – 2019
  Project: *Quantization dimensions for condensation systems* *$3,500*

- PSC-CUNY Research Grant, (PI) 2017 – 2018
  Project: *Geometric properties of generalized rotation sets* *$3,500*

- PSC-CUNY Research Grant, (PI) 2016 – 2017
  Project: *Irrational polygons as rotation sets for torus homeomorphisms* *$3,500*

- Faculty Travel Award 2016

- PSC-CUNY Research Grant, (PI) 2015 – 2016
  Project: *Zero Temperature Measures on the Boundary of Rotation Sets.* *$3,500*

- William Stewart Travel Award 2015

- PSC-CUNY Research Grant, (PI) 2014 – 2015
  Project: *Localized Variational Principle and Equilibrium States* *$3,500*

- PSC-CUNY Research Grant, (PI) 2013 – 2014
  Project: *Geometry of Rotation Sets and the Associated Entropies* *$3,500*

- Department of Education Title V Grant 2011 – 2014
  Director: Provost D. Lemons *$3.2 million*
  STEM Math Coordinators: S. Oken and T. Kucherenko

- Pre-Calculus Course Redesign (co-PI) 2013 – 2014
  $33,731

- CETL - Technology Grant for Transforming Teaching, CCNY (co-PI) 2012 – 2013
  Project: *Bridge to STEM Success* *$45,000*

- Departmental Research Graduate Assistantship, University of Missouri   2001 – 2005

- DAAD German Academic Exchange Fellowship   2003 – 2004

- University Research Fellowship, University of Karlsruhe, Germany   2004

- Departmental Fellowship, University of Missouri   2001 – 2002

SELECTED TALKS AND CONFERENCES

- *Dynamics, Measures and Dimensions,* Stefan Banach International Mathematical Center, Bedlewo, Poland   2019
- *Complex Analysis and Dynamics Seminar*, University of Connecticut, Storrs, Connecticut   2018
- *Special session on Statistical and Geometrical Properties of Dynamical Systems*, AMS Sectional Meeting, San Francisco, California   2018
- *Special session on Quantization for Probability Distributions and Dynamical Systems,* AMS Sectional Meeting, Nashville, Tennessee   2018
- *Dynamics and Analysis Seminar,* Wesleyan University, Middletown, Connecticut   2017
- *Complex Analysis and Dynamics Seminar,* Graduate Center of CUNY, New York   2017
- *Special session on Fractal Geometry and Ergodic Theory,* AMS Sectional Meeting, Denton, Texas   2017
- *Current Trends in Dynamical Systems and the Mathematical Legacy of Rufus Bowen,* PIMS, Vancouver, Canada   2017
- *School on Contemporary Dynamical Systems*, CRM, Montreal, Canada   2017
- *Dynamics Beyond Uniform Hyperbolicity,* Provo, Utah   2017
- *51th Spring Topology and Dynamics Conference*, New Jersey City University, Jersey City, New Jersey   2017
- *Complex Analysis and Dynamics Seminar*, Graduate Center of CUNY, New York   2017
- *Special Session on Ergodic Theory and Dynamical Systems,* AMS National Meeting, Atlanta, Georgia   2017
- *The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Orlando, Florida   2016
- *50th Spring Topology and Dynamics Conference*, Balor University, Waco, Texas   2016
- *Dynamical Systems Seminar*, Stony Brook University, Stony Brook, New York   2016
- *Special session on Fractal Geometry and Dynamical Systems,* AMS Sectional Meeting, Memphis, Tennessee   2015
- *Ergodic Theory, Fractals and Groups,* Israeli Institute for Advanced Studies, Jerusalem, Israel   2015
- *49th Spring Topology and Dynamics Conference*, Bowling Green State University, Bowling Green, Ohio   2015
- *Ergodic Optimization and Related Fields*, Institute of Mathematics and Statistics of the University of São Paulo, São Paulo, Brazil   2013
- *Young mathematicians in dynamical systems*, CIRM, Marseille, France   2013
- *Thermodynamic Formalism and Applications*, Pontificia Universidad Católica de Chile, Santiago, Chile   2013
- *Special Session on Dynamical Systems: Thermodynamic Formalism and Connections with Geometry,* Spring Western Sectional Meeting of the AMS, Boulder, Colorado   2013
- *Ergodic Theory Seminar*, Ohio State University, Columbus, Ohio   2013
- *The 9th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Orlando, Florida   2012
- *Southern California Functional Analysis Seminar*, Pomona College, Claremont, California   2009
- *AMS National Meeting*, San Diego, California   2008
- *Von Neumann Symposium*, UCLA, Los Algeles, California   2007
- *UCLA Summer School on Analysis and Ergodic Theory*, Lake Arrowhead, California   2006
- *New Mexico Analysis Seminar,* New Mexico State University, Las Cruces, New Mexico   2005

- *Dispersive Wave Equations,* MSRI Berkeley, California   2005

- *TULKA Seminar on Functional Calculus*, Casalmaggiore, Italy 2005
- *Harmonic Analysis and Spectral Theory*, Oberwolfach Research Institute for Mathematics, *Germany* 2004
- *TULKA Seminar on Evolution Semigroups*, Blaubeuren, Germany 2004
- *AMS Special Session on Banach Space Theory and Convex Geometry, AMS National Meeting*, Baltimore, Maryland 2003
- *Geometry of Banach spaces and Ramsey Theory,* Fields Institute, Toronto, ON, Canada 2002
- *Thematic Program on Asymptotic Geometric Analysis*, PIMS at the University of British Columbia, Vancouver, BC, Canada 2002

SYNERGISTIC ACTIVITIES

- Co-organizer of the Special Session on Ergodic Theory and Dynamical Systems (Special Session #126) at the 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan   July 5-9, 2018

- Member of Recruiting, Mentoring and Prize Committee   2016 - Present
  (in charge of the Travel Award: *http://math.sci.ccny.cuny.edu/pages?name=Travel+Award*)

- Member of the Calculus Committee   2011 - Present

- Member of the Pure Math Committee   2015 - Present

- Supervisor for Math 32300   2015 – Present

- Member of the CLAS Faculty Council   2015 - 2018

- Faculty advisor for the CCNY Sky Watch Astronomy Club   2015 - 2017

- Co-organizer of the Special Session on Ergodic Theory and Dynamical Systems (Special Session #23) at the National Meeting of the AMS in Atlanta, GA   Jan 4-7, 2017

- Supervisor of the online homework system used by all sections of Math 20100   2011 - 2018

- Supervisor for Math 20200   2011 - 2015

- Developed a full set of video lectures for Math 20100   Spring 2014
  (available at *http://tamara.ccny.cuny.edu/teaching.html*).

- Supervised the following students

    1. Matt Getz:
        - Rich Mathematics Summer Internship in Summer 2015
        - Independent Study MATH B9802 in Fall 2015
    2. Chen Shi
        - Honors III Math 30300 in Fall 2015
        - Independent Study Math 31001 in Spring 2016
        - Summer research project in Summer 2016
        - Independent Study Math 31002 in Fall 2016
    3. Isroel Kogan
        - Summer research project in Summer 2015

- During the academic years 2015-2018 I provided guidance with the application process for graduate schools and scholarships to the following students:

    Matt Getz
    Cong Jiang
    Chen Shi
    Ariella Himelstein
    Anastasia Chorna
    Margorita Kochurova
    Isroel Kogan

TEACHING EXPERIENCE

- Spring 2019
    - Math 32300: Advanced Calculus I
    - Math 32400: Advanced Calculus II

- Fall 2018
    - Math 39100: Methods of Differential Equations

- Spring 2018 (no teaching assignment due to maternity leave)

- Fall 2017
    - Math 20200: Calculus II

- Fall 2016
    - Math 32300: Advanced Calculus I
    - Math 31002: Independent Study

- Spring 2016
    - Math 20100: Calculus I Hybrid
    - Math 31001: Independent Study
    - Math 31003: Independent Study

- Fall 2015
    - Math 32300: Advanced Calculus I
    - Math 20100: Calculus I Hybrid
    - Math B9802: Independent Study
    - Math 30300: Honors III

- Spring 2015
    - Math A4500: Dynamical Systems

- Fall 2014 (no teaching assignment due to maternity leave)

- Spring 2014
    - Math 20100: Calculus I Hybrid

- Fall 2013
    - Math 20100: Calculus I Hybrid
    - Math 20200: Calculus II

- Spring 2013
    - Math 39100: Methods of Differential Equations
    - Math 20100: Calculus I Hybrid

- Fall 2012
    - Math 20100: Calculus I Hybrid (2 sections)

- Spring 2012
    - Math 39100: Methods of Differential Equations (2 sections)
    - Math 20100: Calculus I (2 sections)

- Fall 2011
    - Math 20200: Calculus II (2 sections)
    - Math 36500: Elements of Combinatorics

- Spring 2011
    - Math 39100: Methods of Differential Equations
    - Math 20200: Calculus II
    - Math 20100: Calculus I (2 sections)

- Fall 2010
  - Math 20200: Calculus II (2 sections)
  - Math 20100: Calculus I