

Anastasiia Tsvietkova

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Appointments

Continuing

Associate Professor, tenured, Rutgers University, Newark, NJ, USA 05/2023 – present

Assistant Professor, tenure-track, Rutgers University, Newark, NJ, USA 09/2016 – 05/2023

Temporary or Past

Member, Institute of Advanced Study, Princeton Fall 2023

Visiting Researcher, Sydney Mathematical Research Institute, Australia 07/2023-09/2023

Von Neumann Fellow and member, Institute of Advanced Study, Princeton 09/2020 – 08/2021

Assistant Professor and Head of Geometry and Topology of Manifolds Unit, OIST (research institute), Japan 09/2017 – 08/2020

Krener Assistant Professor (non t.-track), University of California, Davis 01/2014 – 08/2016

Postdoctoral Fellow, ICERM, Brown University (Semester program in Low-dimensional Topology, Geometry, and Dynamics) Fall 2013

NSF VIGRE Postdoctoral Researcher, Louisiana State University 08/2012 – 08/2013

Education

PhD in Mathematics, University of Tennessee, 05/2012, distinguished by Grad. Academic Achievement Award
Thesis: *Hyperbolic structures from link diagrams*. Advisor: Morwen Thistlethwaite.

Master's degree with Honors in Applied Mathematics, Kiev National University, Ukraine, 07/2007
Thesis: *Decomposition of cellular balleans into direct products*. Advisor: Ihor Protasov.

Bachelor's degree with Honors in Applied Mathematics, Kiev National University, Ukraine, 05/2005
Thesis: *Asymptotic Rays*. Advisor: Ihor Protasov. GPA 5.0/5.0

Research Interests: low-dimensional topology and geometry, computational topology, knot theory, hyperbolic geometry

Academic Honors, Grants and Other Funding

- Rutgers Board of Trustees Research Fellowship for Scholarly Excellence, 2023
- NSF CAREER grant "*CAREER: 3-manifolds with finite volume, their geometry, representations, and complexity*", DMS-2142487, \$467,237, 2022-present
- NSF grant (sole PI), *Geometry, Topology and Complexity of 3-manifolds*, DMS-2005496, \$213,906, 2020-present
- NSF grant (sole PI), *Hyperbolic Structures from Link Diagrams*, DMS-1406588, \$113,000, 2014-2019
- Okinawa Institute of Science and Technology research unit funding (sole PI), *Geometry and Topology of Manifolds unit*, ~\$660,000, 2016-2019
- NSF conference grant (co-PI with Joel Hass), DMS-1758107, \$17,000, 2017-2018
- Conference grants (x 2) from Okinawa Institute of Science and Technology (sole PI), ~\$127 000, for a workshop and a mini-symposium, 2018
- NSF-AWM Mathematics Mentoring Travel Grant recipient (the grant funded research visits to the University of Oxford), \$5,000, 2013
- Geometric Structures and Representation Varieties (GEAR) member. GEAR was funded by the NSF grant DMS-1107452, to bring together researchers from US, Canada, Europe and Asia. Individual subawards: 12/2012, research visit to Columbia University; 10/2015, research stay at Institute of Advanced Study, Princeton.
- USTARS Distinguished Graduate Student Award, 04/2012
- American Math. Society Travel Grants recipient, 10/2011 and 01/2012
- AWM Travel Grant recipient, 01/2012
- University of Tennessee Travel Awards, 01/2011 and 05/2011
- University of Tennessee Science Alliance Fellowship, 2006-2008, 2009-2011
- A winner of the Microsoft Imagine Cup competition, Software design category, Ukraine, 2006
- Presidential Fellowship for exceptional undergraduate students (full scholarship covering tuition, fees, housing and stipend; 100 per year are awarded throughout Ukraine), Ukraine, 2001-2005
- Placed 1st, 2nd and 3rd in Math Olympiads and Junior Academy of Sciences competitions in Ukraine in different years, 1998-2001

Papers and Preprints (all published ones are peer-reviewed; authors are listed in alphabetical order)

1. *Polynomial bounds for surfaces in cusped 3-manifolds*, with J. Purcell, preprint, <https://arxiv.org/abs/2311.08567>
2. *Standard position for surfaces in link complements in arbitrary 3-manifolds*, with J. Purcell, pending revisions in *Algebraic & Geometric Topology*, 27 pp., <https://arxiv.org/abs/2205.06368>
3. *Random meander model for links*, with N. Owad, *Discrete & Computational Geometry*, published online June 2024, 20 p.
4. *NP-hard problems naturally arising in knot theory*, with D. Koenig, *Trans. Amer. Math. Soc. Ser. B* 8 (2021), 420-441
5. *Tangle decompositions of alternating link complements*, with J. Hass and A. Thompson, *Illinois J. Math.* 65 (2021), no. 3, 533–545
6. *Unlinking, splitting, and some other NP-hard problems in knot theory*, with D. Koenig, *Proceedings of the 2021 ACM-SIAM Symposium on Discrete Algorithms (SODA)*, SIAM (2021), 1496--1507
7. *Alternating links have at most polynomially many Seifert surfaces of fixed genus*, with J. Hass and A. Thompson, *Indiana Univ. Math. J.* 70 (2021), no. 2, 525-534
8. *Simplicial volume of links from link diagrams*, with O. Dasbach, *Mathematical Proceedings Cambridge Philosophical Society* 166 (2019), no. 1, 75–81
9. *Determining isotopy classes of crossing arcs in alternating links*, *Asian Journal of Mathematics*, Vol. 22, No. 6 (2018), 1005-1024
10. *The number of surfaces of fixed genus in an alternating link complement*, with J. Hass and A. Thompson, *International Mathematics Research Notices* 6 (2017), 1611-1622
11. *Intercusp geodesics and the invariant trace field of hyperbolic 3-manifolds*, with W. Neumann, *Proceedings of the American Mathematical Society* 14 (2016), No. 2, 887-896
12. *A refined upper bound for the hyperbolic volume of alternating links and the colored Jones polynomial*, with O. Dasbach, *Mathematical Research Letters* 22 (2015), No. 4, 1047-1060
13. *Exact volume of hyperbolic 2-bridge links*, *Communications in Analysis and Geometry* 22 (2014), No. 5, 881-896
14. *An alternative approach to hyperbolic structures on link complements*, with M. Thistlethwaite, *Algebraic & Geometric Topology* 14 (2014), 1307-1337
15. PhD thesis: *Hyperbolic Structures from Link Diagrams*, University of Tennessee (2012), 77 pp.
16. *Decomposition of Cellular Balleans*, with I. Protasov, *Topology Proceedings* 36 (2010), 77-83
17. *Asymptotic Rays*, with O. Kuchaiev, *International J. of Pure and Applied Math.* 56, No. 3 (2009), 353-358

In Preparation (available upon request)

19. *PSL(2,C)-representations of knot groups from knot diagrams*, with K. Petersen, preprint
20. *On bit-computability and its extensions of DISCRETE-FREE SUBGROUP of PSL(2, R) problem*, with J. Gilman, preprint
21. *Polynomially many surfaces in terms of hyperbolic volume in a 3-manifold*, with M. Lackenby, preprint
22. *Unknotting number problem is NP-hard*, with J. Bae, preprint

Selected Software

23. *Hyperbolic structures from link diagrams*, with D. Koenig and A. Lowen. A more general version of the above, for links with any region size, including non-alternating links. Written in Python, can be integrated with SnapPy, <https://sites.rutgers.edu/anastasiia-tsvietkova/research/>
24. *Hyperbolic structures from alternating link diagrams*. Implementation of an alternative method for computing hyperbolic structures of alternating links with small regions. Written in C++. <https://sites.rutgers.edu/anastasiia-tsvietkova/research/>
25. *Computing invariant trace field from a link diagram, with no approximation involved*. Worksheet that gives the polynomial for the invariant trace field of a hyperbolic 2-bridge link. Written in Mathematica. <https://sites.rutgers.edu/anastasiia-tsvietkova/research/>
26. *Footstep*, with O. Kuchaiev, P. Protsyk, P. Shelyazhenko. Software system written as part of Microsoft Imagine Cup competition, placed first in Ukraine in 2006.

Research Talks*Invited Conference Talks*

- BIRS workshop “Knots informed by random models and experimental data”, Banff, Canada, 04/2024
- Foundations of Computational Mathematics FoCM'23, Sorbonne Université, Paris, France, 06/2023
- Low-dimensional Topology workshop, MFO Oberwolfach, Germany, 01/2023
- Sage Days Duluth, University of Minnesota Duluth (I had to cancel the talk), 06/2022
- "Computational Aspects of Discrete Subgroups of Lie Groups" workshop (virtual), ICERM, Brown, 06/2021
- ACM-SIAM Symposium on Discrete Algorithms SODA (virtual), 01/2021

- Foundations of Computational Mathematics conference FoCM'20 (cancelled due to pandemic), Simon Fraser University, Canada, 06/2020
- Redbud Topology conference (an invited talk and a lecture for students), University of Arkansas, 3/2020
- Low-dimensional Topology workshop (a short talk), MFO, Oberwolfach, Germany, 2/2020
- Computational Problems in Low-dimensional Topology II, OIST, Japan, 4/2019
- Low dimensional topology and number theory XI, Osaka University, Japan, 3/2019
- Classical and Quantum 3-Manifold Topology workshop, Monash University, Australia, 12/2018
- ThompScharby Fest, UC Berkeley, USA, 7/2018
- Redbud Topology Conference (cancelled by me due to sickness), Oklahoma State University, 4/2018
- Ryukyu Knot Theory workshop, Naha, Okinawa, Japan, 1/2018
- "New developments in Teichmuller space theory" mini-symposium, OIST, Japan, 11/2017
- 51st Spring Topology and Dynamic Conference, NJ, Session on Geometric Topology, 3/2017
- Redbud Triangulations conference, Oklahoma State University, OK, 11/2016
- Knots in Hellas, Ancient Olympia, Greece, 7/2016
- Chico Topology Conference, California State University, Chico, 5/2016
- Workshop on Geometric Structures on 3-Manifolds, IAS, Princeton, 10/2015
- The Thin Manifold conference, University of Iowa, 8/2014
- International Meeting RSME-SCM-SEMA-SIMAI-UMI, Bilbao, Spain, Session on Geometric Topology, 7/2014
- Low dimensional topology, knots, and orderable groups, CIRM, Luminy-Marseille, France, 7/2013
- Low-dimensional Topology and Geometry in Toulouse, Toulouse Mathematics Institute, 6/2013
- Knots in Washington XXXIV, session on Geometric Aspects of Knot Theory, GWU, 12/2012
- GEAR Network Retreat, University of Illinois, Urbana-Champaign, 8/2012
- Moab Topology Conference, Utah State University, Moab, 5/2012
- USTARS, University of Iowa, Distinguished Graduate Student talk, 4/2012
- 46th Spring Topology and Dynamics, Low-dimensional Topology Session, Universidad Nacional Autónoma de México, Mexico, 3/2012
- Knots in Washington XXXIII, George Washington University, 12/2011
- Geometric Topology of Knots Workshop, Centro di Ricerca Matematica, Pisa, Italy, 5/2011
- 12th Chico Topology Conference, California State University, Chico, 6/2010

Invited Talks at American Math. Soc. (AMS) or Joint Math. Meetings (JMM) (SS is Special Session)

- AMS meeting, the University of Albany, NY, SS Invariants of Knots, Links, and Low-dimensional Manifolds, 09/2024
- AMS meeting, University at Buffalo, SS From Classical to Quantum Low-Dimensional Topology (I had to cancel the talk), 09/2023
- JMM, Boston, SS on Unknotting Operations (I had to cancel the talk), 01/2023
- AMS Meeting (virtual), Purdue University, SS on Optimization, Complexity, and Real Algebraic Geometry, 03/2022
- AMS Meeting, University of Virginia, SS on Knots and Links in Low-Dimensional Topology, 03/2022 (meeting cancelled due to the pandemic)
- JMM (virtual), SS on Geometry and Topology in Dimensions 3 and 4, 01/2021
- AMS meeting (virtual), Penn State University, SS on Geometry of Groups and 3-manifolds, 10/2020
- AMS meeting (cancelled due to the pandemic), CSU Fresno, SS on Algorithms in the Study of Hyperbolic 3-manifolds, 05/2020
- AMS meeting (cancelled due to the pandemic), CSU Fresno, SS on Complexity in Low dimensional topology, 05/2020
- JMM, Denver, Colorado, SS Women in Topology, 1/2020
- AMS Meeting, Bowdoin College, Maine, SS on Decomposing 3-manifolds, 9/2016
- AMS Meeting, CSU Fullerton, SS on Algebraic and Combinatorial Structures in Knot Theory, 10/2015
- AMS Meeting, University of Nevada, Las Vegas, SS on Knots and 3-manifolds, 4/2015
- AMS Meeting, University of Tennessee, SS on Number Theory and Topology, 3/2014
- AMS Meeting, Washington University, St. Louis, SS on Geometric Aspects of 3-Manifold Invariants, 10/2013
- AMS Meeting, Temple University, PA, SS on Geometric topology of knots and 3-manifolds, 10/2013
- AMS Meeting, Tulane University, New Orleans, SS on Combinatorial Methods in Knot Theory, 10/2012

Invited Colloquia Talks

- University of Queensland (through Zoom), 2/2023

- University of South Florida, 1/2023
- University of Miami, 2/2021
- Math Conversations, Institute of Advanced Study, Princeton, 2/2021
- University of Melbourne, Australia, 2/2018
- University of Auckland, New Zealand, 11/2017
- Monash University, Melbourne, Australia, 4/2016
- University of Sydney, Australia, 3/2016
- University of Queensland, Brisbane, Australia, 2/2016
- Dartmouth College, New Hampshire, 2/2016
- Rutgers University, Newark, New Jersey, 2/2016
- Oklahoma State University, Oklahoma, 2/2016
- California State University, Chico, 2/2016
- Okinawa Institute and Science and Technology, Japan, 1/2016
- New College of Florida, Florida, 11/2015
- Brigham Young University, Utah, 10/2014
- Women Advancing Arizona Mathematics Colloquium, University of Arizona, 3/2014
- University of Louisiana, Lafayette, 1/2013

Invited Seminar Talks

IAS, "What is ...?" seminar, 12/2023	University of Queensland, Australia 07/2023
University of Sydney, Australia 08/2023	Princeton University 04/2023
Michigan State University 11/2021 and 11/2015	University of Oklahoma 10/2021
IAS Member seminar, Princeton, 12/2020	Australian Geometric Topology Webinar 10/2020
CUNY Graduate Center 4/2020, 12/2016, and 12/2012	Rutgers New Brunswick 2/2020 and 10/2016
University of Tokyo, Japan, 2/2019	AIMR, Tohoku University, Japan, 4/2018
Monash University, Australia, 2/2018	University of Osaka, Japan, 12/2017
PATCH (Bryn Mawr, Haverford, Penn, and Temple) 03/2017	GEAR seminar at Rutgers, Newark, 1/2017
California Institute of Technology 12/2015	University at Buffalo (SUNY) 11/2015
University of California, Los Angeles, 10/2015	University of South California 10/2015
University of California, Davis, 10/2015, 6/2015, and 2/2014	Columbia University 10/2015 and 9/2011
Temple University topology seminar, 09/2015	Stanford University 10/2014
Brigham Young University 10/2014 and 11/2011	University of Texas, Austin 09/2014 and 10/2011
University of California, Santa Barbara 02/2014	Brown University topology seminar, 12/2013
ICERM 11/2013	LSU /U Iowa/UPenn /U Memphis/U Ark 09/2012
University of Virginia 01/2012	University of Tennessee 02/2011

Supervising postdocs

A postdoctoral mentor (sponsoring scientist) for an NSF Postdoctoral Fellowship application with Rutgers-Newark as a host institution for one postdoc, in 2023, and again in 2024

A faculty mentor and contact for seven postdocs from different research areas working at IAS and Princeton Mathematics Department, 2020-2021:

- Lisa Sauermann, IAS member (PhD from Stanford)
- Vijay Bhattiprolu, Founders' Circle Member at IAS (PhD from Carnegie Mellon)
- Tony Feng, Friends of the IAS Member (PhD from Stanford)
- Francois Grier, IAS member (PhD from Stanford)
- Linyuan Liu, Minerva Research Foundation Member at IAS (PhD from Sorbonne)
- Salim Tayou, Giorgio and Elena Petronio Fellow (PhD from Université Paris-Sud)
- Clark Butler, Veblen Research Instructor at IAS and Princeton Math. Dept. (PhD from University of Chicago)

Supervised five postdocs working in topology and geometry at OIST in my role as a Head of Geometry and Topology of Manifolds group, 2017-2019:

- Dale Koenig, postdoctoral researcher (PhD from UC Davis 2017)
- Nicholas Owad, postdoctoral researcher (PhD from University of Nebraska 2016)
- Robert Tang, postdoctoral researcher (PhD from University of Warwick 2013)
- Tirasan Khandawit, postdoctoral researcher (PhD from MIT 2013)
- Linling Ru, postdoctoral visitor (PhD from University of Warwick 2014)

Supervising graduate students

- PhD thesis adviser for Touseef Haider and Jaeyun Bao at Rutgers-Newark, both expected to graduate in 2024-2025
- Alex Lowen, research associate for a semester project, tuition and salary paid from my NSF grant, Rutgers-Newark

- PhD thesis committee member for Alex Lowen, Rutgers-Newark, 2023
- Co-supervised Thomas Burns (neuroscience student) through lab rotation system, OIST, Japan, Spring 2018
- A faculty mentor for graduate student Lorinda Leshock from University of Delaware through AWM mentor network, Fall 2016-Spring 2017
- Joint research/mentoring through NSF Vertical Integration of Research and Education: Kimberly S. D'Souza, Daniel Guillot, Ying Hu, Jun Peng, Chris Penn at Louisiana State University, Fall 2012 and Spring 2013.

Supervising undergraduate students

- Mason Moran from Michigan Technological University, through Summer Undergraduate Research Institute at Rutgers-Newark, summer 2024
- Xiao Chen, Rutgers University Newark, summer 2022
- Silvia Jaramillo-Regalado at Rutgers-Newark, summer 2020, through NSF-funded Garden State LS Alliance for Minority Participation, 2021
- Felipe Castellano-Macias, Northeastern University, internship at OIST, Japan, in Spring and Summer 2019
- Robert Hanson, University College London, internship at OIST, Japan, Summer and Fall 2018
- Ruying Bao, University of California, Davis, Winter, Spring and Fall 2014
Currently a graduate student in Applied Mathematics, Princeton University.
- Sarah Seger at Louisiana State University, Fall 2012 and Spring 2013. Later completed PhD in Math at Rice.

Other Selected Professional Activities and Services

Conference co-organization

- BIRS workshop “Knot theory informed by random models and experimental data”, Canada, 4/2024
- Two international workshops at Rutgers, Newark, NJ, sponsored by NSF CAREER grant:
 - (1) Computational Problems in Low-Dimensional Topology III, 4/2023
 - (2) Interactions between low-dimensional topology and computer science, tentatively 2025
- Computational Problems in Low-dim. Topology I and II mini-symposiums, 3/2018 and 4/2019, OIST, Japan
- Geometry and Topology of 3-manifolds workshop, 05/2018, OIST, Japan
- Invariants in Low-dimensional Topology Special Session at the AMS Meeting, New York, 05/2017
- Geometry, Topology and Complexity of Manifolds, and Applications to Biology (Joelfest), UC Berkeley 05/2016
- Knots and 3-manifolds Special Session at the AMS Meeting, Las Vegas, NV, 04/2015

Colloquia/seminar co-organization

- Distinguished Lectures in Topology and Geometry at Rutgers, Newark, sponsored by NSF CAREER grant, 2023-2027
- Geometry, Topology and Dynamics seminar at OIST, Japan, Fall 2017 – Spring 2019. (The seminar had many international as well as Japan-based speakers.)
- Faculty lunch seminar at OIST, Japan, 2018
- Mathematics Colloquium, Rutgers University, Newark, Fall 2016-Spring 2017
- GEAR seminar in Teichmuller theory at Rutgers University, Newark, Fall 2016-Spring 2017
- Low-dimensional topology and geometry reading seminar for graduate students, UC Davis, 2014

Reviewer/Referee/Panelist

- Served on NSF grant panels in different years, reviewer for NSF proposals
- Reviewer for UKRI proposals
- Referee for journals: *Advances in Mathematics*, *Journal of the London Mathematical Society*, *Proceedings of American Mathematical Society*, *Algebraic and Geometric Topology* (x7), *Communications in Analysis and Geometry* (x2), *Geometriae Dedicata* (x2), *Journal of Knot Theory and Ramifications*, *Experimental Mathematics*, *Michigan Math. Journal*, *Journal of Differential Geometry*, *New York J. of Mathematics*
- Referee for Computer Science conferences: WG 2020 (International Workshop on Graph-Theoretic Concepts in Computer Science), STOC 2021 (ACM Symposium on Theory of Computing)
- Reviewer for MathSciNet

Selected University Committees/Initiatives

At Rutgers, Newark (2016-2022): university library committee; library liaison for the department; participated in the search for the Vice President of University Libraries and University Librarian; participated in faculty hiring in mathematics; co-developed course curriculum for a new undergraduate course at the department (History of Mathematics), now regularly offered; developed course curricula for some of the undergrad. and grad. courses I taught.

At OIST, Japan (2017-2019): developed a proposal for international visiting faculty program; participated in mathematics hiring initiative aimed to create international faculty group in mathematics; library committee; conference and workshop committee (reviewing conference proposals and making funding recommendations); computer science

hiring committee; mathematics hiring committee; developed new graduate courses curricula; oversaw teaching by postdocs of mathematics graduate courses.

Work with high school students

- Helped to organize California State Summer School for Math and Science for talented high school students, Summer 2015 (included teaching a course)
- Helped to organize the UT Pro2Serve Math Contest for talented high school students, annually 2006-2011
- Helped to organize and conduct Math Olympiads for high school students in Ukraine, annually 2001-2006

Broadening participation of underrepresented groups

- Panelist/lunch discussion organizer for Women and Mathematics event for students and junior mathematicians at IAS, Princeton, 2021.
- A faculty mentor for students and junior mathematicians through Association for Women in Mathematics network and through Garden State Alliance for Minority Participation program at Rutgers.
- A third of students and postdocs I supervised (listed above) were from groups underrepresented in mathematics.
- Gave invited talks for broad mathematics audience at Association of Women in Mathematics events, Women Advancing Arizona Mathematics Colloquium, Underrepresented Students in Topology and Algebra Research symposium.
- One of the goals of Distinguished Lectures at Rutgers mentioned above (that I will organize) is to showcase the work of mathematicians from underrepresented groups

Teaching-related

- Mentor for a new graduate teaching assistant, University of Tennessee, Fall 2011
- Completed "The Best Practices in Teaching" program, The University of Tennessee, Fall 2006

Teaching Experience

Rutgers University, Newark

- *Geometry*, undergraduate course (math seminar), scheduled Fall 2024
- *Topology*, undergraduate course, scheduled Fall 2024
- *Probability and Statistics for Engineers and Scientists*, undergraduate course, Spring 2023
- *The Shape of Space*, undergraduate course, Fall 2022
- *Hyperbolic Knot Theory*, graduate course, Fall 2022
- *Advanced Calculus II* (12 students), Spring 2022
- *Applied Calculus*, large (150 students) and small (30 students) lectures, Fall 2021
- *Geometry, Topology and Complexity of 3-manifolds* graduate course, Spring 2020
- *Foundations of Modern Mathematics* (25 students), Fall 2019
- *Knot Theory* (25 students), undergraduate course (math seminar), Spring 2017
- *Calculus II* (30 students), Fall 2016

OIST, Japan. Co-instructor (with postdocs) on graduate special topics courses:

- *Hyperbolic Geometry*, Spring 2018
- *Algebraic Topology II*, Spring 2018
- *Geometry and Topology Seminar II*, Spring 2018
- *Intro to Topology and Algebraic Topology*, Fall 2017
- *Geometry and Topology Seminar I*, Fall 2017

Additionally, co-instructor on 3 individual study courses for graduate students.

University of California, Davis

- *Geometric Topology (graduate course)*, Spring 2016
- *Topology*, Spring 2016
- *Euclidean and non-Euclidean geometry*, about 60 third and fourth-year students, Winter 2016
- *History of Mathematics*, about 65 third and fourth-year students, Winter 2016
- *Hyperbolic 3-manifolds*, graduate course, Spring 2015
- *Mini-course on hyperbolic geometry*, California State Summer School for Math and Science, 07/2015
- *Calculus III*, instructor (a large lecture, about 100 second and third-year students), Spring 2014
- *Calculus II*, instructor (a large lecture, about 100 first and second-year students), Spring 2014
- *Real Analysis III*, instructor, about 45 fourth-year students, Winter 2014

Louisiana State University

- *VIGRE Research Seminar: Algorithms in Knot Theory II*, co-instructor, Spring 2013
- *VIGRE Research Seminar: Algorithms in Knot Theory I*, co-instructor, Fall 2012
- *History of Mathematics*, Spring 2013
- *Calculus I and Analytic Geometry*, Fall 2012

University of Tennessee

- *Statistical Reasoning*, Spring 2012
- *Calculus II*, Fall 2011, Spring 2011 and Fall 2010
- *Matrix Algebra*, teaching assistant, Fall 2011
- *Calculus I*, Spring 2010 and Fall 2009
- *Finite Mathematics*, Spring 2009
- *Precalculus*, Fall 2008
- *Basic Calculus*, instructor in Spring 2008; teaching assistant in Spring and Fall 2007
- *College Algebra*, teaching assistant, Fall 2006

Personal Information: US citizen; previously a citizen/resident of Ukraine, Lithuania, Japan

Leaves: parental leaves in 2015 and 2020

References (in alphabetical order):

Oliver Dasbach, Louisiana State University, Professor and Department Chair, kasten@math.lsu.edu

David Futer, Temple University, Professor, dfuter@temple.edu

David Gabai, Princeton University, Hughes-Rogers Professor of Mathematics, gabai@math.princeton.edu

Cameron Gordon, UT Austin, Professor and Sid W. Richardson Foundation Regents Chair, gordon@math.utexas.edu

Joel Hass, UC Davis, Distinguished Professor, hass@math.ucdavis.edu

Efstratia Kalfagianni, Michigan State University, Professor, kalfagia@math.msu.edu

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Alan Reid, Rice University, Edgar Odell Lovett Professor and Department Chair, alan.reid@rice.edu

Jennifer Schultens, UC Davis, Professor (teaching reference), jcs@math.ucdavis.edu

Abigail Thompson, UC Davis, Distinguished Professor, thompson@math.ucdavis.edu