

Curriculum vitae
Eugene Gorsky

Address

University of California at Davis
Department of Mathematics
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Personal information

Russian citizen, US Permanent Resident
Languages: English, Russian.
Note: officially my name is spelled as Evgeny Gorskiy

Education

2001–2006: M. Sc. in Mathematics – Department of Higher Geometry and Topology,
Faculty of Mathematics and Mechanics, Moscow State University
2001–2006: M. Sc. in Mathematics – Independent University of Moscow
2006–2009: PhD in Mathematics – Department of Higher Geometry and Topology,
Faculty of Mathematics and Mechanics, Moscow State University
Thesis title: “Motivic integration and invariants of algebraic knots”.
Thesis advisor: Professor Sabir M. Gusein-Zade.

Employment

2020–present: Professor, Department of Mathematics.
University of California at Davis, USA.
2018–2020: Associate Professor, Department of Mathematics.
University of California at Davis, USA.
2015–2018: Assistant Professor, Department of Mathematics.
University of California at Davis, USA.
2013–2015: Ritt Assistant Professor, Department of Mathematics.
Columbia University, USA.
2010–2013: James H. Simons Instructor, Department of Mathematics.
Stony Brook University, USA.

Grants

NSF grants DMS-1700814 (2017-20) DMS-1559338 (2015-17), DMS-1403560 (2014-2015),
sole PI.
NSF Focused Research Group “Algebra and Geometry Behind Link Homology”, DMS-
1760329 (2018-23).

Awards

2022: Graduate Program Advising and Mentoring Award, UC Davis Graduate Studies
2022: UC Davis Chancellor's Fellowship
2021: Award for Distinguished Teaching, UC Davis College of Letters and Science
2016: Hellman fellowship
2013: Prize of the Moscow Mathematical Society
2009: Dynasty Foundation contest fellowship
2008: Honor diploma of the Euler contest in the "PhD students" nomination
2008: Fellowship of the Government of the Russian Federation
2007: 2nd prize of the Moebius contest in the "PhD students" nomination
2006: 1st prize of the Moebius contest in the "Students" nomination .
2006: Summa Cum Laude – Moscow State University
2005: I. G. Petrovskii fellowship – Moscow State University
1999-2001: participated in Russian National Mathematical Olympiads

Teaching

At UC Davis:

Spring 2022: MAT 261 (Lie groups and Lie algebras) .
Fall 2021: MAT 21A (Calculus), MAT 150A (Modern Algebra).
Spring 2021: MAT 150C (Modern Algebra), MAT 215C (Algebraic Topology).
Fall 2020: MAT 17B (Calculus)
Spring 2020: MAT 145 (Combinatorics)
Fall 2019: MAT 150A (Modern Algebra)
Spring 2019: MAT 21B (Calculus) and MAT 146 (Algebraic Combinatorics)
Fall 2018: MAT 150A (Modern Algebra)
Spring 2018: MAT 280 (Khovanov homology)
Fall 2017: MAT 17C (Calculus) and MAT 150A (Modern Algebra)
Spring 2017: MAT 21A (Calculus), MAT 150C (Modern Algebra)
Fall 2016: MAT 21B (Calculus)
Winter 2016: MAT 148 (Discrete Mathematics)
Fall 2015: MAT 21A (Calculus), MAT 150A (Modern Algebra)

At Columbia University:

Spring 2015: MATH 2030 (Ordinary Differential Equations)
Fall 2014: MATH 1101 (Calculus 1)
Spring 2014: MATH 1101 (Calculus 1)
Fall 2013: MATH 1101 (Calculus 1)

At Stony Brook University:

Spring 2013: MAT 127 (Calculus C),
MAT 621 (Topics in Algebraic Topology : Khovanov Homology)
Fall 2012: MAT 127 (Calculus C)
Summer 2012: MAT 127 (Calculus C)
Spring 2012: MAT 127 (Calculus C), MAT 211 (Introduction to Linear Algebra)
Fall 2011: MAT 127 (Calculus C)
Summer 2011: MAT 312/AMS 351 (Applied Algebra)

Spring 2011: MAT 127 (Calculus C), MAT 312/AMS 351 (Applied Algebra)
Fall 2010: MAT 127 (Calculus C)

Mentoring

- Undergraduate research mentor:
 - Christian Smith (2015-16)
 - Yu Wang (2016-17)
 - Yuzhe Bai (2017-18).
 - Shirley Wang (2019-20).
 - Alexandra Vizcarra (2021-22).
- PhD advisor:
 - Oscar Kivinen (PhD 2019)
 - Beibei Liu (PhD 2019, co-advised with Michael Kapovich)
 - Yuze Luan (current)
 - Wenjun Niu (current, co-advised with Tudor Dimofte)
 - Tonie Scroggin (current)
 - Joshua Turner (current)
- Postdoctoral mentor:
 - Jose Simental Rodriguez (2017-20).
 - Alex Chandler (2021-24).

Conference and seminar organization

- Initiated and co-organized UC Davis Algebraic Geometry seminar
- Co-organizing (with Anne Schilling and Monica Vazirani) an informal graduate student seminar on combinatorics and representation theory since 2015
- Co-organized several other reading groups and informal graduate student seminars on Khovanov homology, algebraic geometry and other topics at UC Davis
- Organized an online seminar on link homology
<https://www.math.ucdavis.edu/~egorskiy/TorusKnots/>
well attended both by graduate students and early career researchers, and by leading experts from all over the world.
- Co-organized (with Nicolle Gonzalez, Matthew Hogancamp, Oscar Kivinen, and Alexei Oblomkov) an online research community on link homology:
<https://aimath.org/programs/researchcommunities/linkhom/>
- Co-organized (with Anne Schilling, Ben Elias, Andrei Neguț, Alexei Oblomkov, Lev Rozansky) an FRG workshop “QUAntum groups, Categorification, Knot invariants, and Soergel bimodules II” at University of Oregon (August 2022)
- Co-organized (with Anne Schilling, Ben Elias, Andrei Neguț, Alexei Oblomkov, Lev Rozansky) a virtual FRG workshop “Categorical braid group actions and categorical representation theory” at University of Massachusetts (June 2021)

- Co-organized (with Anne Schilling, Ben Elias, Andrei Neguț, Alexei Oblomkov, Lev Rozansky) a virtual FRG workshop “QUAntum groups, Categorification, Knot invariants, and Soergel bimodules” at University of Oregon (August 2020)
- Co-organized (with Ben Elias and Andrei Neguț) an ICERM workshop “Soergel Bimodules and Categorification of the Braid Group” (February 2020)
- Co-organized (with Anne Schilling, Ben Elias, Andrei Neguț, Alexei Oblomkov, Lev Rozansky) FRG workshop “Hilbert schemes, categorification and combinatorics” at UC Davis (June 2019)
- Co-organized (with Andrei Neguț and Alexei Oblomkov) an AIM workshop “Categorified Hecke algebras, link homology, and Hilbert schemes” (October 2018)
- Co-organized (with Sergei Gukov, Mikhail Khovanov, Andrei Neguț, and Piotr Sułkowski) a workshop “Categorification in Mathematical Physics” at Simons Center for Geometry and Physics (April 2018)
- Co-organized (with Michel Raibaut) a mini-conference “Singularities and motivic integration” (November 2016)
- Co-organized (with Sergei Gukov, Mikhail Khovanov, Vivek Shende and Piotr Sułkowski) a workshop “Physics and Mathematics of Knot Homologies” at Simons Center for Geometry and Physics (June 2015)

Service

- Facilitator, Aggie Success Seminar for first year and junior transfer students
- Member, undergraduate awards committee, graduate awards committee (UC Davis-wide), Math Department awards committee, Distinguished Lectures and Colloquium Committee, KAP search committee.
- Member (* =chair) of the qualifying exam committee for Alex Black, Milo Bechtloff Weising*, Nicholas Cazet, Greg DePaul*, Shanon Rubin*, Neetal Neel, James Hughes*, Yu Hin Chan, Raymond Chou*, , Haihan Wu, Joseph Pappé*, Wenjun Niu*, Jianping Pan, Jennifer Brown, Wencin Poh, Gicheol Shin, Graham Hawkes, Oscar Kivinen, Beibei Liu, Subhadip Dey, Yue Zhao (all graduate students in Mathematics) and Mohamed Mahmoud (graduate student in Electrical Engineering).
- Member of Dissertation committee for Wenjun Niu, Milo Bechtloff Weising, Shanon Rubin, James Hughes, Raymond Chou, Yu Hin Chan, Haihan Wu, Joseph Pappé, Jennifer Brown, Yue Zhao, Wencin Poh, Gicheol Shin, Oscar Kivinen, Beibei Liu and Subhadip Dey.

Editorial boards

Editor, Quantum Topology.

Refereeing

Duke Mathematical Journal, Selecta Mathematica, Journal of Combinatorial Theory A, Journal of London Mathematical Society, Algebraic and Geometric Topology, Quantum Topology, Compositio Math., Journal of Pure and Applied Algebra, Journal für die reine und angewandte Mathematik (Crelle), International Mathematics Research Notices, Communications in Mathematical Physics, Moscow Mathematical Journal, Annals of Combinatorics.

Recent seminar talks

- Colloque des Sciences Mathématiques du Québec (online), March 2022.
- MIT Infinite Dimensional Algebra Seminar, October 2021.
- Stanford Topology seminar (online), April 2021
- Combinatorics Seminar (online), University of Michigan, April 2021
- Representation Theory Seminar (online), UC Riverside, March 2021
- Colloquium (online), University of Virginia, February 2021
- Combinatorics Seminar (online), UC Berkeley, January 2021
- Representation Theory Oberseminar (online), University of Bonn, January 2021
- Hodge Seminar (online), University of Edinburgh, UK, December 2020
- Geometry, Symmetry and Physics Seminar (online), Yale University, New Haven, USA, October 2020
- Algebraic Geometry Seminar (online), Ohio State University, Columbus, USA, September 2020
- Algebra Seminar (online), University of Georgia, Athens, USA, September 2020
- Representation theory seminar (online), University of Massachusetts, Amherst, USA, August 2020.
- Singularity seminar, Moscow, Russia (online), May 2020.
- GRT at home seminar, Vienna, Austria (online), April 2020.
- Algebra Seminar, University of Oregon, Eugene, USA, March 2020
- Algebra and Geometry Seminar, California Institute of Technology, Pasadena, USA, February 2020
- Algebraic Geometry Seminar, Stanford, February 2019.
- String Math seminar, UC Berkeley, January 2019.
- Lecture Series on Carlsson-Mellit algebra, Higher School of Economics, Moscow, Russia, December 2018.
- Colloquium, UC Berkeley, October 2018.

- Representation Theory and Mathematical Physics seminar, UC Berkeley, September 2018.
- MSRI seminar "Enumerative geometry beyond numbers", April 2018
- MSRI seminar "Moduli and representation theory", February 2018
- Combinatorics seminar, Cornell University, April 2018

Participation in international schools and conferences

- QUAntum groups, Categorification, Knot invariants, and Soergel bimodules II.
University of Oregon, August 2022.
- Open Problems in Algebraic Combinatorics.
University of Minneapolis, May 2022.
- Georgia Topology Conference.
University of Georgia (online), May 2022
- Recent Developments in Link Homology.
SwissMAP Research Station (online), January 2022.
- Summer School "Enumerative Geometry, Physics and Representation Theory" (online).
IHES, June 2021.
- Richmond Geometry Festival (online).
Virginia Commonwealth University, June 2021
- Workshop "Perspectives on Knot Homology" (online).
Banff Research Station, May 2021.
- Workshop (online) QUAntum groups, Categorification, Knot invariants, and Soergel bimodules (online).
University of Oregon, August 2020.
- Geometric Representation Theory Conference (online).
Max Planck Institute (Bonn, Germany) and Perimeter Institute (Waterloo, Canada), June 2020
- Soergel Bimodules and Categorification of the Braid Group (organizer and speaker).
Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, USA, February 2020
- Quantum structures in algebra and geometry.
MIT/Northeastern University, August 2019
- Hilbert schemes, categorification and combinatorics.
UC Davis, June 2019
- Hidden algebraic structures in topology.
Caltech, March 2019
- Categorification in quantum topology and beyond.
Vienna, Austria, January 2019

- Workshop on Representation Theory, Combinatorics and Geometry.
University of Virginia, October 2018
- Western Algebraic Geometry Symposium.
University of Oregon, October 2018
- Categorified Hecke algebras, link homology, and Hilbert schemes.
American Institute for Mathematics, San Jose. October 2018
- Categorification of quantum 3-manifold invariants summer school and workshop.
USC, Los Angeles, July 2018
- Workshop "Categorification in mathematical physics" (co-organizer).
Simons Center for Geometry and Physics, Stony Brook, April 2018
- Enumerative geometry beyond numbers.
MSRI program, January-May 2018
- Arnold memorial conference "Contemporary Mathematics".
Moscow, Russia, December 2017
- Winter School "Categorification, representation theory and symplectic geometry".
Hausdorff Mathematical Institute, Bonn, Germany, November 2017
- Mathematical Congress of the Americas.
Montreal, Canada. July 2017.
- FPSAC (Formal Power Series and Algebraic Combinatorics).
Queen Mary University, London, UK, July 2017
- Equivariant Combinatorics.
Centre de Recherches Mathematiques, Montreal, Canada, June 2017.
- Georgia International Topology Conference.
University of Georgia, May 2017.
- 58th Cascade Topology Seminar.
UBC, Vancouver, Canada. May 2017.
- Gauge Theory and Categorification.
UCLA, March 2017.
- 3-manifold workshop,
Isaac Newton Institute, Cambridge, UK. February 2017.
- Mini-conference on singularities and motivic integration.
UC Davis, November 2016.
- Workshop on Hall Algebras, Enumerative Invariants and Gauge Theories.
Fields Institute, Toronto, Canada. November 2016.
- William Rowan Hamilton Geometry and Topology Workshop.
Trinity College, Dublin, Ireland. August 2016.
- Knot homologies, Hilbert schemes, and Cherednik algebras.
University of Oregon, July 2016.

- New Perspectives in Representation Theory.
Leeds, UK, July 2016.
- Quantum Topology III.
Steklov Institute, Moscow, Russia. June 2016.
- Knots in the Triangle.
North Carolina State University, April 2016.
- Victor Goryunov 60.
University of Liverpool, UK, March 2016.
- Singularities in the Midwest III.
University of Wisconsin-Madison, March 2016.
- Topological methods in singularity theory.
International Center for Mathematical Sciences, Edinburgh, UK, July 2015
- Physics and Mathematics of Knot Homologies.
Simons Center for Geometry and Physics, Stony Brook, June 2015
- Representation Theory and Geometry of Symplectic Resolutions.
Northeastern University, May 2015
- Knots in Washington, Georgetown University.
Washington DC, March 2015
- AMS Spring Eastern Sectional Meeting.
Georgetown University, Washington DC, March 2015
- Congress of Spanish Royal Mathematical Society.
Granada, Spain, February 2015
- DAHA, Hall Algebras, Torus Knots and Combinatorics.
Orsay, France, November 2014
- Workshop on Moduli Spaces, Derived Geometry, and Geometric Representation Theory.
University of North Carolina, October 2014
- AMS Fall Eastern Sectional Meeting.
Dalhousie University, Halifax, Canada, October 2014
- Instanton Counting: Moduli Spaces, Representation Theory and Integrable Systems.
Leiden, Netherlands, June 2014
- Categorification and Geometric Representation theory.
CRM, Montreal, Canada, June 2014
- Workshop "Knots and Physics".
University of Amsterdam, Netherlands, May 2014
- Algebraic Geometry Northeastern Series.
Simons Center for Geometry and Physics, Stony Brook, April 2014
- Knots in Washington XXXVII.
George Washington University, Washington DC, January 2014
- Graduate workshop on geometry of Hilbert schemes.

Simons Center for Geometry and Physics, Stony Brook, November 2013

- Conference on Algebra, Geometry and Topology of Singularities.
Miraflores de la Sierra, Madrid, Spain, September 2013
- Motivic Invariants and Singularities.
Notre Dame University, Notre Dame, June 2013
- Low Dimensional Topology.
Simons Center for Geometry and Physics, Stony Brook, May 2013
- AMS Spring Eastern Sectional Meeting.
Boston College, Boston, April 2013
- Rational Catalan combinatorics.
American Institute of Mathematics, Palo Alto, December 2012
- Knots in Washington XXXV.
George Washington University, Washington DC, December 2012
- Workshop on Singularities.
Oberwolfach Mathematical Institute (Germany), September 2012
- Simons Summer Workshop in Mathematics and Physics.
Simons Center for Geometry and Physics, Stony Brook (USA), August 2012
- Perspectives in Representation Theory.
Yale University, New Haven (USA), May 2012
- Simons Postdoctoral Fellows Meeting.
Simons Center for Geometry and Physics, Stony Brook (USA), April 2012
- Algebraic Geometry Northeastern Series.
University of Massachusetts, Amherst (USA), March 2012
- International Workshop on Tropical and Quantum Geometries.
Research Institute for Mathematical Sciences, Kyoto (Japan), February 2012
- Algebraic Geometry Northeastern Series.
Simons Center for Geometry and Physics, Stony Brook (USA), October 2011
- Simons Summer Workshop in Mathematics and Physics.
Simons Center for Geometry and Physics, Stony Brook (USA), August 2011
- Faces of geometry: 3-manifolds, groups and singularities.
Columbia University, New York (USA), June 2011
- Homological Invariants in Low-Dimensional Topology Workshop.
Simons Center for Geometry and Physics, Stony Brook (USA), June 2011
- Moduli Spaces and Moduli Stacks.
Columbia University, New York (USA), May 2011
- Conference on Singularities and Geometry-Topology.
El Escorial (Spain), October 2010
- Second International Workshop on Zeta Functions in Algebra and Geometry.

Palma de Mallorca (Spain), May 2010

- Seminar on motivic integration.

Kumamoto University (Japan), December 2009.

- Dynamical systems, Singularity theory and Perverse Sheaves.

CIMPA school, Samarkand (Uzbekistan), October 2009.

- Summer School on Link Homology.

Institut de Mathématiques de Jussieu, Paris, June 2009

- Combinatorics of moduli spaces, Hurwitz numbers and cluster algebras.

Steklov Mathematical Institute, Moscow, June 2008.

- International Conference on Commutative, Combinatorial and Computational Algebra in memory of Pilar Pisón Casares.

University of Seville (Spain), February 2008.

- Arc spaces, integration and combinatorial algebra (YMIS'08).

University of Valladolid, Sedano (Spain), February 2008.

- Swiss-Russian seminar on the geometry of moduli spaces and related topics.

University of Zürich, Switzerland, December 2007

- Fundamental mathematics in young scientists' works.

Independent University of Moscow, November 2007.

- International conference "V. Arnold - 70".

Steklov Mathematical Institute, Moscow, August 2007.

- International Workshop on Zeta Functions in Algebra and Geometry.

University of Segovia (Spain), June 2007.

- Moduli spaces of Riemann surfaces and related topics.

Centre de Recherches Mathématiques, Montréal (Canada), June 2007.

- New Trends in Singularity Theory.

CIMPA school, Madrid (Spain), August 2006.

- Aleksandrov Memorial Conference.

Moscow State University, May 2006.

- Geometry and Integrability in Mathematical Physics.

Laboratoire J.-V.Poncellet (Independent University of Moscow), May 2006.

- Exchange program between the Independent University of Moscow and École Normale Supérieure.

Paris, January-February 2006.

- String Dualities.

IHÉS school, Paris, January 2006.

- Numerical invariants in algebraic geometry and string theory.

Cetraro(Italy). C.I.M.E. school, June 2005.