Artem Kotelskiy
Curriculum Vitae

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EMPLOYMENT

- **Stony Brook University**, Stony Brook, USA.   2021 – present
  Simons Instructor.

- **Indiana University**, Bloomington, USA.   2018 – 2021
  Zorn postdoctoral fellow.

EDUCATION

- **Princeton University**, Princeton, USA.   2013 – 2018
  Ph.D. in Mathematics. Advisor: Zoltán Szabó.

- **Lomonosov Moscow State University**, Moscow, Russia.   2008 – 2013
  B.S. and M.S. in Mathematics. Advisor: Taras Panov.

AWARDS AND HONORS

- **AMS-Simons travel grant.**   2019-2022
- **Graduate student teaching award**, Princeton University.   2017
- **32nd Russian national mathematical Olympiad**, 3rd prize.   2008
- **Moscow Mathematical Olympiad**, 1st and 2nd prizes.   2006, 2008
- **President prize from the government of Russia.**   2006, 2008

PUBLICATIONS

- **Bordered theory for pillowcase homology.**   2019
  Mathematical Research Letters **26**(5). arXiv:1707.07481 (35 pages)

- **Comparing homological invariants for mapping classes of surfaces.**   2017
  Michigan Mathematical Journal **30**(3). arXiv:1702.04071 (52 pages)

- **Minimal and Hamiltonian-minimal submanifolds in toric geometry.**   2013
  Journal of Symplectic Geometry **14**(2). arXiv:1307.8140 (13 pages)

PAPERS ACCEPTED FOR PUBLICATION

- **Khovanov homology and strong inversions.**   2021
  Joint with L. Watson and C. Zibrowius. arXiv:2010.04320 (15 pages)
  To appear in *The Open Book Series*.

Preprints

- **Thin links and Conway spheres.** 2021
  Joint with L. Watson and C. Zibrowius. arXiv:2105.06308 (82 pages)

- **The correspondence induced on the pillowcase by the earring tangle.** 2020
  Joint with G. Cazassus, C. Herald and P. Kirk. arXiv:2010.04320 (57 pages)

- **A mnemonic for the Lipshitz-Ozsváth-Thurston correspondence.** 2020
  Joint with L. Watson and C. Zibrowius. arXiv:2005.02792 (13 pages)

- **Khovanov invariants via Fukaya categories: the tangle invariants agree.** 2020
  Joint with L. Watson and C. Zibrowius. arXiv:2004.01619 (14 pages)

- **Immersed curves in Khovanov homology.** 2019
  Joint with L. Watson and C. Zibrowius. arXiv:1910.14584 (95 pages)

Conference and Workshop talks

- **Perspectives on quantum link homology theories.** August 2021
  University of Regensburg, Germany, virtual.

- **Gauge Theory, Geometry, and Low-Dimensional Topology.** March 2021
  AMS special session, virtual.

- **Topology and Geometry of 3- and 4-manifolds.** March 2021
  AMS special session, virtual.

- **Topology and geometry of group actions.** November 2020
  HSE, Moscow, Russia, virtual.

- **Interactions of gauge theory with contact** June 2020
  and symplectic topology in dimensions 3 and 4.
  BIRS workshop, virtual.

- **CRM's 50th anniversary workshop "Low-dimensional topology".** September 2019
  CIRGET, Montréal, Canada.

- **Tehran Topology 2018.** June 2018
  School of Mathematics, IPM, Tehran, Iran.

- **International Seminar on Toric Topology and Homotopy Theory.** June 2018
  Steklov Mathematical Institute, Moscow, Russia.

- **Perspectives on bordered Heegaard Floer theory.** May 2018
  CIRGET, Montréal, Canada.

Service

- **Co-organizer of "Low-dimensional topology,** 2021
  Symplectic topology & Gauge Theory"seminar,
  Stony Brook University.

- **Co-organizer of Topology Seminar**, Indiana University. 2018-2020

- **Co-organizer of the math department Colloquium**, Indiana University. 2019-2020

- **Co-organizer of graduate student Seminar in Symplectic Geometry**, 2018-2019
  Indiana University.

- **Referee for mathematical journals.**   2018-present
  Journal of Topology, Algebraic and Geometric Topology,
  Proceedings of the London Mathematical Society,
  Proceedings of the Royal Society of Edinburgh,
  Indiana University Mathematics Journal,
  The Open Book Series.

Seminar talks

- **Stony Brook University**, Stony Brook, USA.   September 2021
  Low-dimensional Topology, Symplectic Geometry & Gauge Theory Seminar.

- **Caltech**, Pasadena, USA.   May 2021
  Geometry and Topology Seminar, virtual.

- **UC San Diego**, San Diego, USA.   April 2021
  Topology Seminar, virtual.

- **UC Berkeley**, Berkeley, USA.   April 2021
  Topology Seminar, virtual.

- **Virtual Seminar on Gauge Theory**   March 2021

- **Princeton University**, Princeton, USA.   November 2020
  Topology Seminar, virtual.

- **Indiana University**, Bloomington, USA.   November 2020
  Colloquium, virtual.

- **Western Hemisphere Virtual Symplectic Seminar**   October 2020

- **Trends in Low-Dimensional Topology**, virtual.   May 2020

- **University of British Columbia**, Vancouver, Canada.   May 2020
  Topology Seminar, virtual.

- **Caltech**, Pasadena, USA.   April 2020
  Joint LA Topology Seminar, virtual.

- **Columbia University**, New York, USA.   December 2019
  Topology Seminar.

- **Princeton University**, Princeton, USA.   December 2019
  Topology Seminar.

- **Dartmouth College**, Hanover, USA.   March 2019
  Topology Seminar.

- **Michigan State University**, Lansing, USA.   October 2018
  Topology Seminar.

- **University of British Columbia**, Vancouver, Canada.   September 2018
  Topology Seminar.

- **University of Georgia**, Athens, USA.   August 2018
  Topology Seminar.

- **Indiana University**, Bloomington, USA.   January 2018
  Topology Seminar.

- **Caltech**, Pasadena, USA.   November 2017
  Geometry and Topology Seminar.

- **Rutgers University**, New Brunswick, USA.   November 2017
  Geometry and Topology Seminar.

- **Columbia University**, New York, USA.   November 2017
  Symplectic Geometry, Gauge Theory, and Categorification Seminar.

- **MIT**, Cambridge, USA.   October 2017
  Geometry and Topology Seminar.

- **Stony Brook University**, Stony Brook, USA.   September 2017
  Topology and Symplectic Geometry / Math of Gauge Fields seminar.

Teaching and Work experience

- **Logic, Language and Proof**, Stony Brook University.   Fall 2021
  One 15 students section.

- **Modern techniques in knot theory**, Indiana University.   Spring 2021
  Graduate course, fully online.

- **Calculus I**, Indiana University.   Fall 2020
  Two 60 students sections, fully online.

- **Linear Algebra and Applications**, Indiana University.   Spring 2020
  One 50 students section.

- **Calculus I**, Indiana University.   Fall 2019
  Two 60 students sections.

- **Brief Survey of Calculus**, Indiana University.   Spring 2019
  One 75 students section.

- **Brief Survey of Calculus**, Indiana University.   Fall 2018
  Two 75 students sections.

- **Linear Algebra with Applications**, Princeton University.   Fall 2015
  One 25 students section.

- **Review sessions for Linear Algebra and Calculus**, Princeton University.   2016 – 2017

- **Online math-education platform Evarist,** side project.   2015 – present
  www.evarist.org/course/mathan/
  We teach there analysis with proofs exclusively through problem solving.

Miscellaneous

- **Languages:** English, Russian, Armenian.

- **Programming skills:** web and python.
  - Built an online platform for learning math; source code.
  - Implemented a python package to work with type DA bimodules.

- **Interests:** blockchain, Ethereum, game go (2dan), chess, volleyball, table tennis.