

Kostiantyn Tolmachov

Biographical

Born: November 5, 1991, Kyiv, Ukraine.

Citizenship: Ukraine.

Address

Perimeter Institute for Theoretical Physics.

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Research interests

Geometric methods in representation theory.

Publications

2018 Towards a functor between affine and finite Hecke categories in type A, Ph.D. thesis.

2011 Variance of Linear Statistic for Plancherel Young Diagrams, arXiv:1202.1806, 2011.

Education

2018 Massachusetts Institute of Technology, Ph.D.. Thesis advisor: Roman Bezrukavnikov.

2013 National Research University Higher School of Economics, Department of Mathematics, B.Sc.

Employment

2018 - present Coxeter Postdoctoral Fellow, Perimeter Institute and University of Toronto.

Teaching

Spring 2017 18.703, Modern Algebra, MIT, TA.

Spring 2017 18.702, Algebra II, MIT, TA.

Fall 2016 18.022, Calculus, MIT, Recitation instructor.

Spring 2016 18.100B/1002, Real Analysis, MIT, TA.

Fall 2015 18.705, Commutative Algebra, MIT, TA.

Spring 2015 18.901, Introduction to Topology, MIT, TA.
Fall 2014 18.715, Introduction to Representation Theory, MIT, TA.
Fall 2013 Course "Introduction to dynamical systems", HSE, lecturer.

Student mentoring

Summer 2016 UROP+, student: Yuzhou Gu, project: "Nilpotent Orbits: Geometry And Combinatorics".
Fall 2015 undergraduate project, student: Jack Gurev, project: "Representation theory of symmetric groups, after Okounkov and Vershik".
Summer 2015 UROP+, student: Arkadiy Frasinich, project: "The Image of Weyl Group Translations in Hecke Algebras".
Summer 2015 UROP+, student: Semon Rezhnikov, project: "Singularity theory".

Research talks at conferences and seminars

Summer 2018 Derived Categories and Matrix Problems Seminar, NASU Institute of Mathematics, Kyiv, Ukraine
Summer 2018 Mathematical Advances of The Last Decade, Anniversary Conference, HSE, Moscow
Spring 2018 Group Representation Theory and Applications Seminar, MSRI
Spring 2018 Algebra and Discrete Mathematics Seminar, UC Davis
Spring 2018 Geometry, Physics, and Representation Theory Seminar, Northeastern University
Fall 2017 Representation Theory Seminar, University of Massachusetts, Amherst.
Spring 2013 Arnold's scholarship recipient's lecture, HSE, Moscow.
Summer 2012 ICTP-ESF School and Conference in Dynamical Systems, ICTP, Trieste.
Spring 2011 Texas Ergodic Theory Workshop, University of Houston.

Organized activities

2012-2015 Student seminar in various mathematical topics, HSE.
Fall 2015 Graduate student Geometric Representation Theory seminar, MIT.

Grants and awards

2013 Arnold's scholarship, National Research University Higher School of Economics.
2011 1st place, 15th All-Russian Möbius Contest, nomination "Undergraduates".
2008 Second diploma, All-Ukrainian Mathematical Olympiad.

Language knowledge

Ukrainian (native), Russian (native), English (fluent), Attic/Medieval Greek (reading)