Curriculum Vitae
Ivan Horozov

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Research Interests:

Number Theory, Algebraic Geometry

Education:

1998-2004	Ph.D. in Mathematics, Brown University, USA
	Advisor: Prof. Alexander Goncharov
1994-1998	B.A. in Mathematics, Massachusetts Institute of Technology, USA
1989-1994	National High School of Mathematics and Natural Sciences, Bulgaria

Professional Experience:

2011-present	Washington University in St. Louis, USA
	William Chauvenet Lecturer
2009-2011	Mathematical Institute, University of Tuebingen, Germany
	Research position
2006-2009	Brandeis University, USA
	Lecturer
2005-2006	University of Durham, UK,
	Research Associate,
	Marie Curie Research Training Network,
	Arithmetic Algebraic Geometry Network
	Research Position
2004-2005	Max Planck Institute for Mathematics, Bonn, Germany
	Research Position

Publications:

[1] 2014, *Non-commutative Hilbert modular symbol*, 50 pages, to appear in **Algebra and Number Theory**.

[2] 2014, *Multiple Dedekind Zeta Functions*, **Journal fr die reine und angewandte Mathematik (Crelles Journal)** DOI: 10.1515/crelle-2014-0055, July 2014.

[3] 2014, *Reciprocity Laws on Algebraic Surfaces via Iterated Integrals*, **Journal of K-theory**, Volume 14/ Issue 02 / October 2014, pp 273 - 312 DOI:http://dx.doi.org/10.1017/is014006014jkt271

[4] 2014, *Cohomology of $GL_4(\mathbb{Z})$ with non-trivial coefficients*, **Mathematical Research Letters**, to appear.

[5] 2013, (with Anton Deitmar), *Iterated integrals and higher order invariants*, **Canad. J. Math.** 65, 544-552, http://dx.doi.org/10.4153/CJM-2012-020-8.

[6] 2011, *Non-abelian reciprocity laws on a Riemann surface*, **Int. Math. Res. Notices**, 2011, no 11, 2469-2495.

[7] 2005, *Euler characteristics of arithmetic groups*, **Math. Res. Lett.**, Vol. 12, issue 3, 275-291.

[8] 1993, (in high-school) *Cubes in an integer lattice*, **Mathematics and Informatics**, vol. 3 no 3, 85-89.

Submitted:

[1] 2013, *Multiple Zeta Values and Ideles*, arXiv:math/0611849 [math.NT], 10 pages.

[2] 2014, *Double Shuffle Relations for Multiple Dedekind Zeta Values*, arXiv:1311.4019 [math.NT], 30 pages.

Preprints:

[1] 2013, (with Zhenbin Luo), *On the Contou-Carrére Symbol for Surfaces*, arXiv:1310.7065 [math.AG], 26 pages.

[2] 2012, *Parallel Transport on Higher Loop Spaces* arXiv:1206.5784 [math.AT], 17 pages.

In Preparation:

[1] Multiple Dedekind zeta values via ideles.

[2] A book on Iterated integrals in Arithmetic Algebraic Geometry.

Teaching Experience: (Brown University, Brandeis University, Washington University in St. Louis):

Doctoral Thesis Directed:
Zhenbin Luo, Ph.D. in Mathematics, Brandeis University (2011),
"Contou-Carrére Symbol and Its Reciprocity Laws via Iterated Integrals".

Undergraduate Courses

- Calculus I
- Calculus II (2 times)
- Calculus of Several Variables (2 times)
- Matrix Algebra (2 times)
- Linear Algebra (2 times)
- Introduction to Groups
- Differential Equations
- Introduction to Probability and Statistics
- Introduction to Number Theory

Graduate Courses

- Commutative Algebra
- Algebra I (2 times)
- Algebra II
- Algebraic Topology II
- Topics in Number Theory
- Algebraic Geometry I (2 times)
- Algebraic Geometry II

Readings Courses with Graduate and Undergraduate Students:

- Elliptic Curves
- Quadratic, Cubic and Biquadratic Reciprocity Laws
- Class Field Theory
- Arithmetic Groups
- Cohomology of Discrete Groups
- Double Shuffle Relations for Analogues of Multiple Zeta Values (in the form of a seminar)

Professional Service:
- (Upcoming) Organizer of a Special Session on Iterated Integrals and Applications,
AMS Spring Northeastern Section Meeting, March 7-8, 2015, Georgetown, Washington, DC
- Conference "Modular forms, p-adic L-functions and Selmer groups",
July 7-13, 2013 - NIO (Oriahovitza), Bulgaria,
co-organizer (with Mladen Dimitrov, Jacques Tilouine and Eric Urban)
- Organizer of Number Theory Seminar, Washington University in St. Louis,
(current semester)
- Conducting research with an undergraduate student and a high school student
(current semester)
- Organizer of Everytopic Seminar, Brandeis University,
(Fall 2007, Spring 2008, Fall 2008)
- Reviewer for Zentralblatt MATH
- Member of two Ph.D. Committees (at Brandeis University)

Invited Talks:
- (Upcoming) AMS Sectional meeting at Michigan State University, East Lansing, MI,
March 14-15, 2015
Special session on Interactions between Geometry, Group Theory, and Number Theory
- AMS Sectional Meeting at the University of North Carolina, Greensboro, NC,
November 8-9, 2014
Special Session on Automorphic Forms and Related Topics
- AMS Sectional Meeting at San Francisco State University, October 25-26, 2014
Special Session on Polyhedral Number Theory
- AMS Sectional Meeting at the University of Wisconsin-Eau Claire, September 20-21, 2014
Special Session on New Trends in Toric Varieties
- AMS Sectional Meeting, Texas Tech University, April 11-13, 2014
Special Session on Linear Operators in Representation Theory and its Applications
- AMS Sectional Meeting, University of New Mexico, Albuquerque, April 5-6, 2014

Special Session on Arithmetic and Differential Algebraic Geometry
• AMS Sectional Meeting at Univ. of Tennessee, March 21-23, 2014
Special Session on Geometric Topology and Number Theory
• Isaac Newton Institute for Mathematical Sciences, Cambridge, UK
workshop: Grothendieck-Techmueller Theory and Multiple Zeta Values
title: Multiple Dedekind Zeta Functions, 2013
• University of Oregon, Eugene, USA,
title: Reciprocity Laws on Algebraic Surfaces via Iterated Integrals, 2013
• Yale University, USA:
title: Multiple Dedekind Zeta Functions, 2012
• University of Pensilvania, USA
title: Application of parallel transport on loop spaces to gravity, 2012
• Steklov Mathematical Institute, Russia
title: Non-commutative reciprocity laws on algebraic surfaces, 2011
• University of Massachusetts, Amherst, USA
title: Multiple Dedekind Zeta Function, 2011
• IRMA, University of Strasbourg, France
title: Multiple Dedekind Zeta Functions, 2011
• Boston University, USA
title: Multiple Dedekind Zeta Functions at the negative integers, 2010
• Brandeis University, USA
title: Non-commutative reciprocity laws on algebraic surfaces, 2010
• Sofia University
title: Refinement of the Parshin symbol for surfaces, 2010
• Albert-Ludwigs-Universitaet Freiburg, Germany
title: Refinement of the Parshin symbol for surfaces, 2010
• Université Paris VI, Paris, 2009
title: Non-commutative modular symbol on a Hilbert modular surface
• Acad. Ivan Todorov's Seminar, Nuclear Institute, Sofia, Bulgaria, 2009
title: Quantum gravity, iterated integrals and cohomology of $GL_n(\mathbb{C})$
• University of Massachusetts at Amherst, USA, 2008
title: Non-abelian reciprocity law on curves and deformation of differential operators
• University of Tubingen, Germany, 2008
title: Non-abelian reciprocity laws on a Riemann surface
• Boston University, Mathematical Physics Seminar, USA, 2007
title: Properties of n-dimensional iterated integrals
• Boston University, Algebra Seminar, USA, 2007
title: Non-commutative two dimensional modular symbol
• University of Illinois at Urbana-Champaign, Number Theory Seminar, USA, 2007
title: Non-commutative two dimensional modular symbols
• Acad. Ivan Todorov's Seminar, Nuclear Institute, Sofia, Bulgaria, 2007
title, talk 1: Artin L-functions
title, talk 2: Reciprocity Laws
• International Conference "60 years of the Institute of Mathematics and Informatics",
Sofia, 2007
title: Non-commutative two dimensional modular symbols

- Northeastern University, USA, 2006

title: Multiple zeta function, modular forms and adeles

- Acad. Ivan Todorov's Seminar, Nuclear Institute, Sofia, Bulgaria, 2006

title: Multiple zeta function, modular forms and adeles

- Sofia University, Bulgaria, 2006

title: Multiple zeta function, modular forms and adeles

- Université Paris 6, 2006

title: Euler characteristics of arithmetic groups

- London Number Theory Seminar at King's College, UK, 2006

title: Euler characteristics of arithmetic groups

- Conference on Quadratic forms, Algebraic Groups and Related Topics,
University of Nottingham, UK, 2005

title: Cohomology of GL(4,Z) with non-trivial coefficients

- Sofia University, Bulgaria 2005

title: Euler characteristics, zeta functions and regular primes