

Dorin Cheptea

December 2010

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Education:

- 2000 - 2005 PHD IN MATHEMATICS, State University of New York at Buffalo, USA
"A TQFT for the Le-Murakami-Ohtsuki invariant of three-dimensional manifolds"
Advisor: Thang T. Q. Le, *Defence:* 29 April 2005, *Formal conferral:* 1 June 2005
- 1997 - 1999 MASTER IN MATHEMATICS, University of Bucharest, Romania
"Finite-type invariants of knots and links", *Advisor:* Barbu Berceanu
- 1993 - 1997 LICENSE IN MATHEMATICS, University of Bucharest, Romania
"Geometry of Yang-Mills fields", *Advisor:* Kostake Teleman
- 1990 - 1993 (while in high school) Long-Distance Mathematical School affiliated to the Moscow State University

Positions:

- 08/2008-present CS III (researcher 3rd degree), Institute of Mathematics of the Romanian Academy (IMAR), Bucharest, Romania
- 09/2007-07/2008 CS (researcher), IMAR, Bucharest, Romania
- 09/2006-08/2007 Post-Doc, Center for the Topology and Quantization of Moduli Spaces, University of Århus, Denmark (worked under J. E. Andersen and N. Reshetikhin)
- 10/2005-08/2006 ATER, UFR de Mathématique et d'Informatique, Université Louis Pasteur, Strasbourg, France (worked under C. Kassel)
- 08/1997 – 08/2000 } junior researcher, IMAR, Bucharest, Romania (under Ș. Papadima)
07 – 09/2005 }

Research interests:

Low dimensional topology: knots, 3-dimensional manifolds, cobordisms, homology cylinders, quantum topology (finite type and quantum invariants), representations and structure of the Mapping Class Group and its subgroups, topological interpretation of invariants, TQFTs, moduli spaces, Teichmüller theory, quantization.

Participation in Grants:

- 05/2009-11/2011 *Geometric and Quantum Invariants of 3-Dimensional Manifolds, and Applications*, CNCSIS grant awarded by the Romanian Ministry of Education, Research, and Youth, ref. no. PNII-IDEI 1188, main researcher: Sergiu Moroianu

Awards, Fellowships, Qualifications:

- 12/2007 Research paper award within CNCSIS program PN-II-RU-PREC-2007-1, Romanian Ministry of Education, Research, and Youth
- 02/2006 CNU Qualification for MCF positions in French universities
- 09/2005 UUP Individual Development Award, State University of New York at Buffalo, USA
- 05/2002 Doctoral Dissertation Fellowship, University at Buffalo, USA
- 03-05/1998 EU Tempus Scholarship at the Technische Universität München, Germany (under K. Buchner)
- 1996 - present numerous grants for participation in conferences and summer schools
- 1991 - 1993 (in high school) various Mathematics Olympiads

Membership

- 2000-2005, 2008-present American Mathematical Society
 2006-2007 Société Mathématique de France

Talks:

- 04/2010 Uppsala University, Sweden (invited)
The universal finite-type invariant of three-dimensional manifolds and of cobordisms, and applications
- 05/2008 University of Luxembourg, Luxembourg (invited)
Lagrangian cobordisms and finite type invariants
- 03-04/2008 CTQM Workshop "Finite Type Invariants, Fat Graphs and Torelli-Johnson-Morita Theory", Aarhus University, Denmark
A functorial extension of the LMO invariant and some applications
- 08/2007 AMS/PTM First Joint International Meeting, Warsaw, Poland
A functorial LMO invariant for Lagrangian cobordisms
- 12/2006 CTQM Nielsen retreat "Algebraic, Geometric, Topological, and Quantum aspects of moduli spaces", Sandbjerg Gods, Denmark
Lagrangian cobordisms and LMO invariant
- 08/2006 CTQM workshop "Quantum Moduli Spaces and TQFT", Aarhus, Denmark
Finite-type invariants of 3-dimensional manifolds, TQFT, and beyond
- 05/2006 "Knots, Groups and 3-Manifolds", conference in Marseille, France
Finite-type invariants, framed graphs, tangles, and a class of cobordisms
- 09/2005 7th Intn'l Workshop on Differential Geometry and Its Applications, Deva, Romania
Representations of the Torelli group from invariants of homology 3-spheres
- 01/2005 Annual Joint AMS/MAA/SIAM Conference, Atlanta, Georgia, USA
Torelli group, finite-type invariants, and TQFT for the Casson invariant
- 11/2004 AMS Sectional Meeting # 1002, Pittsburgh, Pennsylvania, USA
A TQFT for the LMO and the universal quantum invariant of 3-manifolds
- 06/2004 Lehigh University Geometry/Topology Conference, Bethlehem, Pennsylvania, USA
A TQFT for the LMO invariant of three-dimensional manifolds
- 04/2004 30th Annual New York State Regional Graduate Mathematics Conference, Syracuse University, USA
Finite-type invariants of 3-manifolds and Topological Quantum Field Theory
- 12/2003 "Borders in 3-dimensional manifolds", conference at the Ohio State University, USA
A TQFT for the LMO invariant of three-dimensional manifolds
- 11/1998 G.Tzitzeica honorific session, University of Bucharest, Romania
Some remarks on Floer homology invariants
- 08/1998 7th Intn'l Conf. on Differential Geometry and Applications, satellite conf. of ICM98, 10 - 14 August, Brno, Czech Republic,
Some remarks on Floer homology invariants
- 07/1997 "Convex Geometry", German-Romanian summer school, Bucharest, Romania
Weak ε -nets

Regular seminar talks:

- 2007-present *Topology seminar*, IMAR, Bucharest, Romania
- 2006-2007 *Topology seminar*, CTQM, University of Aarhus, Denmark
- 2005-2006 *Seminaire Quantique and GdT Ombres et 3-varietes*, IRMA, Université Louis Pasteur, Strasbourg, France
- 2000-2005 *Topology seminar* at the State University of New York at Buffalo, USA
- 1997-2000 *Topology seminar* at the IMAR, Bucharest, Romania

Teaching experience:

2008-2009	SNSB, Bucharest, Romania Master Course in Introduction to Quantum Topology, 48h
2007	University of Aarhus, Denmark assistant for a graduate course in Algebraic Topology, 14h
2005-2006	Université Louis Pasteur, Strasbourg, France ATER, Analyse L2 for Physics majors, 28h ATER, Analyse L1 for Life Sciences majors, 72h
2000-2005	State University of New York at Buffalo, USA
2004-2005	Basic Calculus 1 - Math 131 First year courses, 168h
05-06/2005	Introduction to Differential Equations - Math 306 Third year course, 42h
05-06/2004	Calculus 2 - Math 142 First year course, 42h
05-06/2003	Calculus 1 - Math 131 First year course, 42h
05-06/2002	Calculus 2 - Math 122 First year course, 42h
2000-2004	TA and floater (112h each year) for Calculus (different levels), Mathematical Analysis (different levels), Complex Analysis (grad. level), Linear Algebra, Abstract Algebra, Geometry (adv. level), Discrete Math - First to Forth year courses
1997-1998	University of Bucharest, Romania TA for Analytic Geometry and Linear Algebra - First year course, 42h

Personal data:

Date and place of birth:	14 September 1976, Bălți, Republic of Moldova
Nationality:	Romania and Republic of Moldova (two citizenships)
Languages:	Romanian (native), English, Russian, French
Computer skills:	standard Linux and Windows applications, \LaTeX , some Java programming