Dorian Croitoru

Curriculum Vitae

Department of Mathematics, Room 2-233, MIT,
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Date of Birth: June 4, 1983

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Appointments

2010-	**Lecturer in Mathematics**
	Massachusetts Institute of Technology, Cambridge MA

Education

2005-2010   **Ph.D. in Mathematics, Massachusetts Institute of Technology**, Cambridge, MA
Thesis: *Mixed Volumes of Hypersimplices, Root Systems and Shifted Young Tableaux*
Adviser: Alexander Postnikov
Research Interests: Algebraic and geometric combinatorics, connections to representation theory and algebraic geometry.

Cumulative Graduate GPA: 4.9/5.0.

Selected Coursework: Algebraic/Differential Geometry, Lie Groups and Algebras, Algebraic/Geometric Combinatorics, Probability Theory, Stochastic Processes.

2001-2005   **M.A. in Mathematics, University of Pittsburgh**, Pittsburgh, PA
Cumulative GPA: 3.96/4.0. Concentration GPA: 3.97/4.0.

Selected Coursework: Real/Functional/Complex/Harmonic Analysis, Sobolev Spaces, Ordinary Differential Equations, Topology, Set Theory, Linear and Abstract Algebra, Representation Theory, Number Theory and Elliptic Curves, Combinatorics, Network Theory, reading courses in p-adic numbers, BN-pairs, Hecke Algebras.

1997-2001   **Moldovan-Turkish High School**, Chisinau, Moldova
Baccalaureate

Papers and Preprints

1. A. Andoni, D. Croitoru, M. Pătraşcu. *Hardness of Nearest-Neighbor Search under ℓ_∞*. Proc. 49th IEEE Symposium on Foundations of Computer Science (FOCS'08).

2. D. Croitoru. *Diagonal vectors of shifted Young Tableaux.* arXiv: math.CO/0803.2253v2

3. D. Croitoru. *Mixed Volumes of Hypersimplices, Root Systems and Shifted Young Tableaux*, Ph.D. Thesis.

Conferences/Talks

Fall	2010	MIT Combinatorics Seminar: *Mixed Eulerian Numbers and Their Generalizations*
Summer	2008	20th Conference on Formal Power Series and Algebraic Combinatorics, Valparaiso, Chile
Spring	2008	MIT SPAMS Student Seminar: *Rubic's Cube and Group Theory*
Winter	2008	Workshop on Combinatorial Representation Theory, MSRI, Berkeley, CA
Fall	2007	MIT SPAMS Student Seminar: *On Some Applications of the Probabilistic Method*

Teaching Experience

2007-2009	18.06 Linear Algebra (summer session), MIT
Summer 2006	Calculus (Project Interphase 2006), MIT
Summer 2005	Calculus (Math 0230), University of Pittsburgh
Spring 2005	Recitations in Calculus (Math 0220), University of Pittsburgh
Fall 2004	Recitations in Calculus (Math 0220), University of Pittsburgh

Selected Awards and Honors

2001-2004   **William Lowell Putnam Mathematical Competition**
Second Prize (Ranked 11) - 2004
Honorable Mention - 2001, 2003
Chancellor's Scholarship
Full Scholarship at the Univeristy of Pittsburgh

1996-2001   **International Mathematical Olympiad**
Silver Medal - 2000
International Mathematics Project Competition
Silver Medal - 2000
Balkan Mathematical Olympiad
Gold Medal, 2001
Moldovan National Olympiad in Mathematics
First place, 1996-2001
Romanian National Olympiad in Mathematics
First place, 1999, 2001

Programming Skills

C/C++, Pascal, Maple, HTML.

Language Skills

Fluent: English, Romanian, Russian
Familiar: Turkish