

LIVIU ILINCA

Department of Mathematics
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Education: **Ph.D. in Mathematics**

Rutgers University, May 2010
Thesis: *Asymptotic Enumeration of 2- and 3-SAT Functions*
Advisor: Jeffrey Kahn

B.S. in Mathematics

University of Bucharest, Romania, June 2003
Senior thesis: *An Introduction to Operator Spaces*

**Research
Interests:**

Discrete mathematics, in particular extremal combinatorics and graph theory,
and probabilistic methods.

**Academic
Honors:**

Weill Fellowship	2004
SNSB (Normal Superior School in Bucharest) Fellowship	2001-2003
Merit Scholarship, University of Bucharest	1999-2003
First Prize, Romanian National Mathematics Olympiad	1999
Member of the Romanian Mathematics Olympic Squad	1997-1999

Publications:

The Number of 3-SAT Functions (with J. Kahn), submitted.

The Number of Matchings of a Given Size (with J. Kahn), preprint available.

On the Number of 2-SAT Functions (with J. Kahn), in *Combinatorics, Probability and Computing*, 18(2009), no. 5, 749–764.

**Teaching
Experience:**

Instructor

Full course responsibility. Designed syllabus; prepared and held lectures; designed and graded homework assignments, Maple labs, quizzes and exams; assigned final grades.

- Numerical Analysis I Summer 2010
- Differential Equations Summer 2009
- Probability Theory Summer 2008
- Graph Theory Summer 2007
- Precalculus Summer 2005

Teaching Assistant

Led Maple labs, workshop sections and/or recitation sections; graded homework assignments, workshop writeups; designed and graded quizzes; assisted with exam grading.

- Precalculus I Spring 2010
- Calculus II Fall 2006, Spring 2009
- Differential Equations Fall 2007
- Calculus I Fall 2004, Spring 2007
- Multivariable Calculus Spring, Fall 2005, Spring 2006

(All classes were taught at Rutgers University.)

Mentor

- Directed Reading Program (Rutgers University) Summer 2007
Worked with an undergraduate student on an independent study project.
- National Mathematics Olympiad (Romania) 1999-2001
Trained two high-school students; both received first prizes at the National Olympiad; one was a member of the National Olympic Squad.

Research Presentations:

- “The Number of Matchings of a Given Size”
 - Combinatorics&Probability Seminar, U. of Pennsylvania February 2010
- “The Number of 3-SAT Functions”
 - Discrete Math Seminar, Columbia University December 2009
 - Discrete Math Seminar, Rutgers University October 2009
- “Asymptotic Enumeration”
 - Introduction to Mathematics at Rutgers (mini-conference for entering graduate students) August 2008

Expository Presentations:

- Graduate Student Combinatorics Seminar, Rutgers University
 - “Talagrand’s Inequality and Applications” March 2007
 - “Dedekind’s Problem” October 2006
 - “Combinatorial Nullstellensatz” February 2005
- Graduate Student Seminar, Rutgers University
 - “The k-SAT Problem” April 2008
 - “The Strange Logic of Infinite Random Graphs” April 2007
 - “Some Counterexamples in Probability” March 2006
 - “A Short Proof of the Harris-Kesten Theorem” November 2005

Computer Skills:

C/C++, HTML, L^AT_EX, Maple

Citizenship:

Romania

References:

Jeffry Kahn, Rutgers University (jkahn@math.rutgers.edu)
 Michael Saks, Rutgers University (saks@math.rutgers.edu)
 József Beck, Rutgers University (beck@math.rutgers.edu)
 Chris Woodward, Rutgers University (teaching) (ctw@math.rutgers.edu)