Tvrtko Tadić

General info

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Education

2010 – 2015 ***University of Washington, Seattle***
Degree: *Doctor of Philosophy*
Major: *Mathematics (Probability)*

2004 – 2008 ***Department of Mathematics, University of Zagreb, Croatia***
Degree: *Graduate Engineer of Mathematics*
Major: *Mathematical Statistics and Computer Science*
GPA: 5.00 (out of 5.00)

Scholarships/Awards

- McKibben & Merner Fellowship (2013-2014)
- UW Department of Mathematics Academic Merit Award (2010-2014)
- Tomo Horvatinčić Foundation Fellowship (2009)
- The City of Zagreb Merit Scholarship (2006-2008)
- National Institute of Education Honor (2004/2005)
- National Scholarship (2004-2006, declined 2006-2008)
- Honourable Mention, International Mathematical Olympiad (2004, 2003)
- 2^{nd} Prize, Mediterranean Mathematical Competition (2004, 2003)
- Croatian Power Company Award for High School Students (2004, 2002)

Experience

2016 – Microsoft AI & Research (Bing), Bellevue
Software Engineer 2

2016 – Department of Mathematics, University of Washington, Seattle
Visiting Scholar

2015 – 2016 Microsoft Corporation (Bing), Bellevue
Software Engineer

2008 – 2016 Department of Mathematics, University of Zagreb, Zagreb, Croatia
Teaching/Research Assistant/Postdoc at the *Division for Probability Theory and Mathematical Statistics*

2010 – 2015 Department of Mathematics, University of Washington, Seattle
Teaching Assistant/Research Assistant/Instructor/Grader

6/2014 – 9/2014 Fair Isaac Corporation - FICO, San Diego
Analytic Science Intern

2004 – 2008 Croatian Mathematical Society, Zagreb
Editor-in-Chief of the student math journal, and *Junior Editor* in the student book publishing program.

Publications

[1] Tadić T., *Time-like graphical models*, monograph, to appear in *Memoirs of the American Mathematical Society*, 148 pages

[2] Burdzy K., Tadić T., *Can one make a laser out of cardboard?*, to appear in *Annals of Applied Probability*, 35 pages

[3] Burdzy K., Tadić T., *Random reflections in a high dimensional tube*, to appear in the *Journal of Theoretical Probability*, 28 pages

Other publications

I am the author of the book:

[B1] Tadić T., *Preparation for Mathematical Competitions : for 12th Grade Students* (in Croatian *Pripreme za matematička natjecanja : za 4. razred gimnazije*), Element, Zagreb, first edition 2006 (282 pages), second edition 2008 (316 pages), third edition 2010 (316 pages)

Talks:

1. *Markov properties of processes on time-like graphs and asymptotics of the Brownian motion on a square net*, Probability Seminar, University of Zagreb, September 2012
2. *Properties of processes indexed by time-like graphs*, Probability Seminar, University of Washington, November 2012
3. *Processes indexed by time-like graphs*, SSP 2013, Duke University, March 2013
4. *Geometry of time-like graphs: from planarity to the stingy algorithm*, Graduate Discrete Mathematics Student Seminar, University of Washington, April 2013
5. *Stochastic heat equation as a limit of Brownian motion indexed by a rhombus graph*, Probability Seminar, University of Washington, October 2013
6. *Processes indexed by time-like graphs*, University of Warwick, January 2014
7. *Analysis of time-like graphical models*, Renaissance Technologies, March 2014
8. *Time and graphical properties of processes indexed by time-like graphs* , SSP 2014, University of California, San Diego, March 2014
9. *Wiener-Hopf Equation*, Graduate Student Analysis Seminar, University of Washington, March 2015
10. *Random walk and random reflections*, Probability Seminar, University of Washington, March 2015
11. *Random walk and random reflections*, SSP 2015, University of Delaware, Newark, March 2015
12. *Can one make a laser out of cardboard?*, Probability Seminar, University of Zagreb, December 2015
13. *Can one make a laser out of cardboard?*, Joint Mathematics Meetings, Seattle, January 2016
14. *Random reflections in a high dimensional tube*, Probability Seminar, University of Washington, February 2016

15. *Landmark and Offline Maps Entity Selection*, Microsoft Research, Redmond, March 2016

16. *Can one make a laser out of cardboard?*, 6th Croatian Mathematical Congress, June 2016

17. *Renewing Fleming-Viot-type particle system*, Probability Seminar, University of Zagreb, December 2016

Software

Finite Probability Space (package for SAGE, under review)
This package was written based on the previous package Discrete Probability Space. Many features were simplified and new options were added. This package supports probabilities having symbolic values, and operations among random variables, as well as other new additional features. (It is useful for doing exact and symbolic calculations in models were the underlying probability space is relatively small.)

Conferences/workshops attended:

Northwest Probability Seminar 2016, Microsoft Research, October 2016 • *6th Croatian Mathematical Congress*, June 2016 • *Northwest Probability Seminar 2015*, University of Washington, October 2015 • *Seminar on Stochastic Processes 2015*, University of Delaware, March 2015 • *Northwest Probability Seminar 2014*, Microsoft Research, October 2014 • *West Coast Optimization Meeting Spring 2014*, University of Washington, May 2014 • *Northwest Probability Seminar 2013*, University of Washington/Microsoft Research, October 2013 • *Seminar on Stochastic Processes 2013*, Duke University, March 2013 • *Northwest Probability Seminar 2012*, Microsoft Research, October 2012 • *Cornell Probability Summer School 2012*, Cornell University, July 2012 • *Northwest Probability Seminar 2011*, University of Washington, October 2011 • *Memphis-Budapest Summer School in Combinatorics*, Alfred Renyi Institute of Mathematics, Budapest, August 2011 • *Northwest Probability Seminar 2010*, Microsoft Research, October 2010 • *Croatian Quants Day 2010*, Mathematics Department – University of Zagreb, May 2010 • *Croatian Quants Day 2009*, Mathematics Department – University of Zagreb, May 2009

Teaching experience

2010 – 2015	Department of Mathematics, University of Washington, Seattle TA & Summer Instructor for Math 124/126: *Calculus I/III* Instructor for Math 307: *Introduction to Differential Equations* Grader for Math 555/556: *Linear Analysis*
2008 – 2010	Department of Mathematics, University of Zagreb TA for the courses: *Statistics, Data Bases, Measure and Integral, Introduction to Probability and Statistics, Theory of Probability 1&2, Statistics Lab 2, Financial Lab*
2004 – 2005	5^{th} High School, Zagreb Math club tutor for mathematical competitions (for 12^{th} grade students).

Activities

Membership in professional societies:

- Croatian Mathematical Society (Hrvatsko matematičko društvo) – HMD
- American Statistical Association – ASA

Service in the Croatian Mathematical Society:

- Executive Board *member* (2005-2007)
- Assembly *member* (2006-2008, 2013-2016)

- Election Committee *member* (2005)

Computer skills

- Windows & Linux OS
- Maple, SAGE, Matlab/Octave, R
- C, C#, Java, MySQL, Python
- LaTeX, HTML/CSS, PHP