

Chris Beck

CONTACT INFORMATION	Theory Group Computer Science Department Princeton University, Princeton, New Jersey, USA	office: +1 (609) 258 1641 mobile: +1 (203) 984 8289 e-mail: cbeck@princeton.edu
RESEARCH INTERESTS	Computational Complexity, Algorithms, Combinatorics	
EDUCATION	Princeton University , Princeton, New Jersey, USA <i>Doctor of Philosophy: Computer Science</i> Sept 2009 – present <ul style="list-style-type: none">• Expected graduation date: May 2014• Advisors: Professor Sanjeev Arora and Professor Russell Impagliazzo California Institute of Technology , Pasadena, California, USA <i>Bachelors of Science with Honor: Mathematics</i> Sept 2005 – June 2009 <i>Bachelors of Science with Honor: Computer Science</i> Sept 2005 – June 2009 <ul style="list-style-type: none">• GPA: 3.7/4.0	
SELECTED PUBLICATIONS	<p>P. Beame, C. Beck, R. Impagliazzo. Time-Space Tradeoffs in Resolution: Superpolynomial Lower Bounds for Superlinear Space. <i>Proceedings of the 44th Annual ACM Symposium on Theory of Computation</i> (STOC 2012), to appear. Technical Report TR 11-149, Electronic Colloquium on Computational Complexity, 2011.</p> <p>C. Beck, R. Impagliazzo, S. Lovett. Large Deviation Bounds for Decision Trees and Sampling Lower Bounds for AC⁰-circuits. Submitted to FOCS 2012. Technical Report TR 12-042, Electronic Colloquium on Computational Complexity, 2012.</p> <p>C. Beck, J. Nordström, B. Tang. Some Tradeoffs in Polynomial Calculus. Submitted to FOCS 2012. Preprint available upon request.</p>	
INVITED TALKS	<i>Time-Space Tradeoffs in Resolution: Superpolynomial Lower Bounds for Superlinear Space.</i> <ul style="list-style-type: none">• John Templeton Foundation Workshop: “Limits of Theorem Proving”. Rome, Sept 2012.• University of Toronto Theory Group Seminar. May 2012.• KTH Royal Institute of Technology Theory Group Seminar. January 2012.• Institute for Advanced Study Computer Science Discrete Math Seminar. December 2011.• University of Chicago Theory Group Seminar. November 2011.• BIRS Workshop: “Proof Complexity”. Banff, October 2011.	
HONORS AND AWARDS	NSF GRFP Honorable Mention, 2009 The G. Wallace Ruckert '30 Fellowship, 2009 SURF Fellow, 2006 and 2008 Junior Engineering and Technical Society (JETS) Team National Champions, 2005 Mathematics Department Award for Excellent in Mathematics and Computer Science, 2004 and 2005 US Physics Olympiad Semifinalist, 2004 Bausch & Lomb Award for Outstanding Achievement in Science, 2004 USA Mathematical Talent Search Silver Medalist, 2003 and 2004 MathCounts National Finalist Rank 81st, 2002	
PROFESSIONAL EXPERIENCE	Princeton University , Princeton, New Jersey, USA <i>Teaching Assistant</i> Sept 2011 – May 2012 Teaching assistant for undergraduate courses in theory of computation, computational geometry. California Institute of Technology , Pasadena, California, USA <i>Teaching Assistant</i> Mar 2009 – June 2009 Teaching assistant for undergraduate course in approximation algorithms.	

SURF Research Fellow

June 2008 – September 2008

Investigated Polynomial Calculus proofs of Graph Nonisomorphism, and related issues in algebraic graph theory. Mentored by Professor Richard Wilson.

SURF Research Fellow

June 2006 – September 2006

Investigated a conjecture concerning the Σ_2^P hardness of the Graph Ramsey Numbering problem. Mentored by Professor Christopher Umans.

Fairfield University, Fairfield, Connecticut, USA

Research Assistant

June 2004 – August 2006

Assisted Professor Adam King in developing data analysis and cleanup tools in Matlab for psychophysical data. The data was obtained in part by a laser which would continuously measure the position of mice within a tunnel, with the goal of understanding the nature of errors made by mice trying to remember distances. This is relevant to modeling animal memory and such data has been used to rule out certain models of memory formation in animals.

PROGRAMMING C, C++, Java, Matlab, Mathematica, GAP, Unix shell scripting, Latex, Lisp, Haskell.

REFERENCES *Contact information available upon request.*

Professor Sanjeev Arora

Professor of Computer Science
Princeton University
Princeton, New Jersey, USA

Professor Russell Impagliazzo

Professor of Computer Science
University of California, San Diego
San Diego, California, USA

Professor Jakob Nordström

Asst. Professor of Computer Science
KTH Royal Institute of Technology
Stockholm, Sweden

Professor Paul Beame

Professor of Computer Science
University of Washington
Seattle, Washington, USA