

Nicholas R. Beaton

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EMPLOYMENT	The University of Saskatchewan , Saskatoon, Saskatchewan, Canada Department of Mathematics and Statistics <i>PIMS Postdoctoral Fellow</i>	December 2014 – present
	The University of Melbourne , Parkville, VIC, Australia ARC Centre of Excellence for Mathematics and Statistics of Complex Systems (MASCOS) Department of Mathematics and Statistics <i>Research Assistant</i>	January – December 2014
	Laboratoire d'Informatique de Paris Nord (LIPN) Institut Galilée Université Paris-Nord Villetaneuse, France <i>Postdoctoral Researcher (ANR Project MAGNUM)</i>	November 2012 – October 2013
EDUCATION	The University of Melbourne , Parkville, VIC, Australia <i>Doctor of Philosophy</i> <ul style="list-style-type: none">• Thesis topic: Combinatorics of Lattice Paths and Polygons• Advisor: Prof. Anthony J. Guttmann The University of Queensland , St. Lucia, QLD, Australia <i>BSc (Hons) – Mathematics</i>	2009 – 2012 2005 - 2008
TEACHING	The University of Saskatchewan , Saskatoon, Saskatchewan, Canada <i>Lecturer – STAT 241 Probability Theory</i> <i>Lecturer – MATH 328 Combinatorics and Enumeration</i> <i>Lecturer – STAT 241 Probability Theory</i>	Term 1, 2015-2016 Term 2, 2014-2015 Term 2, 2014-2015
	The University of Melbourne , Parkville, VIC, Australia <i>Lecturer – MAST30028 Numerical and Symbolic Mathematics</i> <i>Lecturer – MAST10005 Calculus I</i> <i>Casual Tutor</i>	Semester 2, 2014 Semester 1, 2014 2009 - 2012
	The University of Queensland , St. Lucia, QLD, Australia <i>Casual Tutor</i>	2007 - 2008

PREPRINTS

N. R. Beaton and G. K. Iliev

Two-sided prudent walks: A solvable non-directed model of polymer adsorption

To appear in Journal of Statistical Mechanics: Theory and Experiment.

N. R. Beaton, A. J. Guttmann, I. Jensen and G. F. Lawler

Compressed self-avoiding walks, bridges and polygons

Submitted.

PUBLICATIONS

N. R. Beaton

The critical pulling force for self-avoiding walks

Journal of Physics A: Mathematical and Theoretical **48** (2015), 16FT03.

A. Bacher and N. R. Beaton

Weakly prudent self-avoiding bridges

Proceedings of the 26th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2014 - Chicago, USA), 827-838.

N. R. Beaton, M. Bousquet-Mélou, J. de Gier, H. Duminil-Copin and A. J. Guttmann

The critical fugacity for surface adsorption of self-avoiding walks on the honeycomb lattice is $1 + \sqrt{2}$

Communications in Mathematical Physics **326** (2014), 727–754.

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The critical surface fugacity of self-avoiding walks on a rotated honeycomb lattice

Journal of Physics A: Mathematical and Theoretical **47** (2014), 075003.

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The critical surface fugacity of self-avoiding walks on a rotated honeycomb lattice

Proceedings of the 25th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2013 - Paris, France), 665-676.

N. R. Beaton, A. J. Guttmann and I. Jensen

Two-dimensional self-avoiding walks and polymer adsorption: Critical fugacity estimates

Journal of Physics A: Mathematical and Theoretical **45** (2012), 055208.

N. R. Beaton, A. J. Guttmann and I. Jensen

A numerical adaptation of SAW identities from the honeycomb to other 2D lattices

Journal of Physics A: Mathematical and Theoretical **45** (2012), 035201.

N. R. Beaton, P. Flajolet, T. Garoni and A. J. Guttmann

Some new self-avoiding walk and polygon models

Fundamenta Informaticae **117** (2012), 19–33.

N. R. Beaton, P. Flajolet and A. J. Guttmann

The enumeration of prudent polygons by area and its unusual asymptotics

Journal of Combinatorial Theory, Series A **118** (2011), 2261–2290.

N. R. Beaton, F. Disanto, A. J. Guttmann and S. Rinaldi

On the enumeration of column-convex permutominoes

Proceedings of the 23rd International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2011 - Reykjavik, Iceland), 111-122.

N. R. Beaton, P. Flajolet and A. J. Guttmann

The unusual asymptotics of 3-sided prudent polygons

Journal of Physics A: Mathematical and Theoretical **43** (2010), 342001.

CONFERENCE ORGANISATION	<p>Co-organiser (with Andrew Rechnitzer of the University of British Columbia)</p> <p>Three Contributed Minisymposia on <i>Combinatorics, topology and statistical mechanics of polymer models</i></p> <p>11th Biennial Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM)</p> <p>June 1–4, 2015</p> <p>University of Saskatchewan, Saskatoon, Canada.</p>
SELECTED INVITED PRESENTATIONS	<p><i>Compressed random and self-avoiding walks</i></p> <p>11th Prairie Discrete Mathematics Workshop</p> <p>August 7–9, 2015</p> <p>Banff International Research Station</p> <p>Banff, Canada</p> <p><i>Solvable self-avoiding walk and polygon models with large growth rates</i></p> <p>May 12, 2015</p> <p>Simon Fraser University</p> <p>Vancouver, Canada</p> <p><i>Models of pulled and compressed polymers</i></p> <p>Workshop on Combinatorial Applications to Biology, Chemistry and Physics</p> <p>June 21–22, 2014</p> <p>University of Saskatchewan</p> <p>Saskatoon, Canada</p> <p><i>Solvable models of self-avoiding walks</i></p> <p>September 30, 2013</p> <p>Université de Genève</p> <p>Geneva, Switzerland</p> <p><i>Polymer adsorption on the honeycomb lattice</i></p> <p>36th Conference on Stochastic Processes and their Applications</p> <p>July 29 – August 2, 2013</p> <p>University of Colorado</p> <p>Boulder, Colorado, USA</p> <p><i>Non-directed solvable models of polymer adsorption</i></p> <p>May 16, 2013</p> <p>LIAFA, Université Paris Diderot</p> <p>Paris, France</p>