Nicholas R. Beaton

CONTACT

School of Mathematics and Statistics
Office 205, Peter Hall Building
The University of Melbourne
VIC 3010
Australia

Mobile: +61-4-55108549
Office: +61-3-83449479
nrbeaton@unimelb.edu.au
www.nicholasbeaton.com

EMPLOYMENT

The University of Melbourne, Parkville, Victoria, Australia

School of Mathematics and Statistics

Research Fellow	**May 2020 – present**
ARC DECRA Research Fellow	**January 2017 – April 2020**

The University of Saskatchewan, Saskatoon, Saskatchewan, Canada

Department of Mathematics and Statistics

PIMS Postdoctoral Fellow	**December 2014 – December 2016**

The University of Melbourne, Parkville, VIC, Australia

ARC Centre of Excellence for Mathematics and Statistics of Complex Systems (MASCOS)
Department of Mathematics and Statistics

Research Assistant and Casual Lecturer	**January – December 2014**

Laboratoire d'Informatique de Paris Nord (LIPN)

Université Paris-Nord (Paris 13)
Villetaneuse, France

Postdoctoral Researcher (ANR Project MAGNUM)	**November 2012 – October 2013**

EDUCATION

The University of Melbourne, Parkville, VIC, Australia

Doctor of Philosophy	**2009 – 2012**

- Thesis topic: Combinatorics of Lattice Paths and Polygons
- Advisor: Prof. Anthony J. Guttmann

The University of Queensland, St. Lucia, QLD, Australia

BSc (Hons) – Mathematics	**2005 - 2008**

- University Medal and Graduate of the Year (2008)

TEACHING

The University of Melbourne

MAST90031 Enumerative Combinatorics	**Semester 1, 2021**
MAST10007 Linear Algebra	**Semester 1, 2018**
MAST30028 Numerical and Symbolic Mathematics	**Semester 2, 2014**
MAST10005 Calculus I	**Semester 1, 2014**

The University of Saskatchewan

MATH 327 Graph Theory	**Term 2, 2015-2016**
STAT 241 Probability Theory	**Term 1, 2015-2016**
MATH 328 Combinatorics and Enumeration	**Term 2, 2014-2015**
STAT 241 Probability Theory	**Term 2, 2014-2015**

STUDENT SUPERVISION	**Present**
	William Briggs (MSc, co-supervising with Prof. Aleks Owczarek)
	Tim Banova & Xin Huang (PhD, co-supervising with Prof. Mark Holmes)
	Completed
	Ruijie Xu (PhD, co-supervised with Prof. Aleks Owczarek and Dr. Richard Brak, completed in 2021)
	Leo Li & Jonathon Liu (AMSI summer vacation 2018/2019)
	William Mead (summer vacation 2017/2018)

RESEARCH INTERESTS	My research interests are in statistical mechanics, particularly lattice models of walks, polygons, animals and trees, and their applications to modelling interacting polymer systems. Problems in these fields are also frequently connected with complex analysis, stochastic processes and algorithms for counting and simulating discrete structures.

GRANTS & AWARDS	Discovery Early Career Researcher Award (DECRA)	**2017–2020**
	from the Australian Research Council (ARC)	
	Gavin Brown Prize from the Australian Mathematical Society	**2018**
	for best paper published in 2008–2016 (see [P7] in the attached Publication List)	

PUBLICATIONS & SELECTED PRESENTATIONS	See the attached Publication List.

CONFERENCE ORGANISATION	Co-organiser (Proceedings Editor) of the 31st International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2019)
	July 1–5, 2019
	University of Ljubljana, Ljubljana, Slovenia
	Co-organiser (Proceedings Editor) of the 29th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2017)
	July 9–13, 2017
	Queen Mary University of London, London, UK
	Co-organiser of three Contributed Minisymposia on *Combinatorics, topology and statistical mechanics of polymer models*
	11th Biennial Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM)
	June 1–4, 2015
	University of Saskatchewan, Saskatoon, Canada

OUTREACH, ENGAGEMENT & LEADERSHIP	Past member of the Research and Industry Committee in the School of Mathematics and Statistics at the University of Melbourne.
	Member of the Advisory Board for *Journal of Physics A: Mathematical and Theoretical*.
	Academic Advisor for several groups of BSc students at the University of Melbourne.
	Mentor for several students at Elizabeth Blackburn Sciences (University High School) doing Extended Investigation research projects in 2019 and 2020.
	Presented multiple talks for high school students at Enrichment Seminar Series organised by the School of Mathematics and Statistics.
	Volunteer for *MathsCraft* events, which connect mathematicians with high school students and teachers at events focused on open-ended mathematical problems and thinking like a researcher.
	Co-organiser of the Australian *National Science Quiz* 2017.
	Multiple-time performer at *The Laboratory*, a monthly science-based storytelling event held in Melbourne.