VICTOR VEITCH

PERSONAL INFORMATION

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STATEMENT OF INTEREST

I am interested in the theory and application of mathematics, particularly applied statistics, statistical methodology, machine learning and information theory.

EDUCATION

2013-present — **The University of Toronto**

Doctor of Philosophy, Statistical Sciences

Statistical Theory and Applications
My research primarily focuses on Bayesian nonparametrics and the development of techniques for the statistical analysis of networks.
Advisor: Prof. Daniel Roy

2011-2013 — **The University of Waterloo**

Masters of Mathematics

Applied Mathematics Specialization
Thesis: *Negative Quasi-Probability in the Context of Quantum Computation*
My research was focused on quantum information science and the foundations of quantum mechanics. My thesis was recognized as the best Masters thesis in the Mathematics faculty in 2013.
Advisor: Prof. Joseph Emerson

2006-2011 — **The University of Waterloo**

Bachelor of Science

Honours Mathematical Physics, Pure Mathematics Minor · Dean's Honours List

WORK EXPERIENCE

2013–Present — **Teaching Assistant, Statistical Sciences**

University of Toronto

Duties included planning and running tutorial sessions for between 15 and 200 students, preparing assignment and test questions and solutions, providing individual instruction during office hours and grading. Courses TA'd have spanned introductory statistical theory, application and mathematical probability. I have consistently received extremely positive feedback from students, and won the departmental TA award in 2015. I also worked on the development of an online statistics course as part of Ontario Online program.

2011–2013 — **Teaching Assistant, Applied Mathematics**

University of Waterloo

This work includes a number of introductory applied mathematics courses. Duties were similar to those at the University of Toronto, described above.

2010-2011 — **Research Assistant**

Institute for Quantum Computing

This work primarily focused on designing and evaluating techniques for the evaluation of quality of quantum devices; particularly using simulation and optimization with Matlab and C++.

PUBLICATIONS

2014   CONTEXTUALITY SUPPLIES THE MAGIC FOR QUANTUM COMPUTATION.
M. Howard, J. Wallman, *V. Veitch*, J. Emerson. **Nature** 510, 351355.
doi:10.1038/nature13460

2013   THE RESOURCE THEORY OF STABILIZER QUANTUM COMPUTATION.
V. Veitch et al. **New J. Phys.** 16 013009 doi:10.1088/1367-2630/16/1/013009

2013   EFFICIENT SIMULATION SCHEME FOR A CLASS OF QUANTUM OPTICS EXPERIMENTS
WITH NON-NEGATIVE WIGNER REPRESENTATION.
V. Veitch et al. **New J. Phys.** 15 013037 doi:10.1088/1367-2630/15/1/013037

2013   NEGATIVE QUASI-PROBABILITY AS A RESOURCE FOR QUANTUM COMPUTATION.
V. Veitch et al. **New J. Phys.** 14 113011 doi:10.1088/1367-2630/14/11/113011

PREPRINTS

2015   THE CLASS OF RANDOM GRAPHS ARISING FROM EXCHANGEABLE RANDOM
MEASURES.
V. Veitch, D.M. Roy. arxiv.org/abs/1512.03099

2013   THE WHOLE IS GREATER THAN THE SUM OF THE PARTS: ON THE POSSIBILITY OF
PURELY STATISTICAL INTERPRETATIONS OF QUANTUM THEORY.
J. Emerson, D. Serbin, C. Sutherland, *V. Veitch*. arxiv.org/abs/1312.1345

COMPUTER SKILLS

Basic   JAVA, HASKELL, Inkscape

Intermediate   C++, C#, FORTRAN 95, MAPLE, LaTeX, LyX, Linux, Microsoft Windows

Advanced   MATLAB, R

OTHER INFORMATION

Selected Talks   2013 · The Resource Theory of Stabilizer Computation
Invited talk at June meeting of the CIFAR Quantum Information Processing
meeting. Edmonton, Canada.

2013 · Negative Quasi-Probability as a Resource for Quantum Computation.
Contributed talk at Quantum Information Processing 2013. Beijing, China.

Awards and
Honours   2015 · Best Theory Poster at 10th Conference on Bayesian Nonparameterics

2015 · University of Toronto Statistical Sciences Teaching Assistant Award

2013 · University of Waterloo Outstanding Achievement in Graduate Studies

2013-2016 · NSERC PGS-D

2013-2014 · Ontario Graduate Scholarship (Declined)

2012-2013 · Ontario Graduate Scholarship

2012-2013 · University of Waterloo President's Graduate Scholarship

2011-2012 · Ontario Graduate Scholarship

2011-2012 · University of Waterloo President's Graduate Scholarship

2011 · NSERC USRA

Web	GitHub	·	github.com/vveitch
	Wikipedia	·	en.wikipedia.org/wiki/User:Victor_veitch
	Google Scholar	·	scholar.google.ca/citations?user=xkn_XZgAAAAJ&hl=en
	Website	·	utstat.utoronto.ca/~victor