

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

<i>Doctor of Philosophy, Statistical Sciences</i>	<i>2013-present</i> The University of Toronto GPA: 3.95 · <i>Statistical Theory and Applications</i> My course work covered modern applied statistics, theoretical statistics and probability. My research interests are statistical application and methodology, machine learning and information theory.
<i>Masters of Mathematics</i>	<i>2011-2013</i> The University of Waterloo GPA: 4.0 · <i>Applied Mathematics Specialization</i> Thesis: <i>Negative Quasi-Probability in the Context of Quantum Computation</i> My research during this degree was focused on the development of mathematical techniques to address problems in quantum information science and the foundations of quantum mechanics. I published several papers and gave a number of talks based on this work. My thesis was recognized as the best in the Mathematics faculty in 2013. Advisor: Prof. Joseph EMERSON
<i>Bachelor of Science</i>	<i>2006-2011</i> The University of Waterloo <i>Honours Mathematical Physics, Pure Mathematics Minor</i> · <i>Dean's Honours List</i> This degree focused on modern theoretical physics and the associated mathematical and computational techniques.

WORK EXPERIENCE

<i>University of Toronto</i>	<i>2013-Present</i> Teaching Assistant, Statistical Sciences 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 recieved extremely positive feedback from students.
<i>University of Waterloo</i>	<i>2011-2013</i> Teaching Assistant, Applied Mathematics This work includes a number of introductory applied mathematics courses. Duties were similar to those at the University of Toronto, described above.
<i>Institute for Quantum Computing</i>	<i>2010-2011</i> Research Assistant 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

- 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. <http://arxiv.org/abs/1312.1345>

COMPUTER SKILLS

<i>Basic</i>	JAVA, HASKELL, Inkscape
<i>Intermediate</i>	C++, C#, FORTRAN 95, MAPLE, L ^A T _E X, L ^A X, Linux, Microsoft Windows
<i>Advanced</i>	MATLAB, R

OTHER INFORMATION

<i>Selected Talks</i>	2013 · The Resource Theory of Stabilizer Computation <i>Invited talk</i> 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.
<i>Awards and Honours</i>	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
<i>Web</i>	GITHUB · github.com/vveitch WIKIPEDIA · en.wikipedia.org/wiki/User:Victor_veitch GOOGLE SCHOLAR · scholar.google.ca/citations?user=xkn_XZgAAAAJ&hl=en

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