

# Sean William Jewell

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CONTACT INFORMATION Department of Statistics m: (206) 407-5255  
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Seattle, WA, 98195

EDUCATION **University of Washington**, Seattle, Washington

Statistics Ph.D. Student, September 2015–present

- Research interests: Statistical machine learning
- Research advisor: Daniela Witten

**University of British Columbia**, Vancouver, British Columbia

M.Sc. Statistics, September 2015

- Research interests: Statistical machine learning, Monte Carlo methods, Bayesian nonparametrics
- Research advisor: Alexandre Bouchard-Côté

**McMaster University**, Hamilton, Ontario

B.Sc. Honours Applied Mathematics (summa cum laude), June 2012

- Focus: Mathematical statistics, probability, differential equations, mathematical finance

RESEARCH EXPERIENCE **University of British Columbia**, Vancouver, British Columbia

Research Assistant, September 2013–August 2015

- Research in probabilistic programming, Monte Carlo methods, Bayesian nonparametrics, and spatial statistics
- Supervisor: Alexandre Bouchard-Côté

**BC Cancer Agency**, Vancouver, British Columbia

Research Assistant, May 2013–August 2015

- Research in single cell phylogenetic inference and genome wide mutation classification
- Supervisors: Sohrab Shah and Alexandre Bouchard-Côté

**McMaster University**, Hamilton, Ontario

- Curated a high-frequency trading literature review for a graduate course in mathematical finance
- Implemented a stochastic pairs trading strategy
- Developed a method to price options in a report, “A Study of Option Pricing: Boundary Conditions extracted from Binomial Trees to create a modified Monte Carlo Approach”
- Supervisor: David Lozinski

**London Regional Cancer Program**, London, Ontario

Student Researcher, June–August 2007

- Examined relationships between gene regulation and cell growth in cancer development
- Supervisor: Joe Mymryk

Partner in Experimental Learning in Oncology, January–June 2007

- Examined gene expression via immunohistochemistry methods

- Supervisor: Eva Turley

PROFESSIONAL  
EXPERIENCE

**Zillow**, Seattle, Washington

*Economic Research Group*

Intern, June 2016–September 2016

**University of Washington**, Seattle, Washington

Teaching Assistant, September 2015–June 2016, Summer 2017

- Statistics 390: Statistical Methods in Engineering and Science
- Statistics 435: Introduction to Statistical Machine Learning
- Summer Institute in Statistics: Big Data Wrangling in R
- Summer Institute in Statistics: Supervised Methods for Statistical Machine Learning

**University of British Columbia**, Vancouver, British Columbia

Teaching Assistant, September 2014–December 2014

- Statistics 302: Introduction to Probability

**J.P. Morgan**, New York, New York

*Investment Banking, Equity-Linked Capital and Derivative Markets*

Analyst, June 2012–August 2013

Summer Analyst, June 2011–August 2011

**Highstreet Asset Management**, London, Ontario

*Investment Management & Sub-Advisory*

Quantitative Analyst, September–December 2011

**GMP Investment Management**, Toronto, Ontario

*Multi-strategy hedge fund*

Quantitative Analyst, May–August 2009 & January–August 2010

PREPRINTS

Sean Jewell and Daniela Witten. (2017) **Exact Spike Train Inference Via  $\ell_0$  Optimization**. arXiv:1703.08644

PUBLICATIONS

Sean Jewell, Neil Spencer, Alexandre Bouchard-Côté. (2015) **Atomic Spatial Processes**. International Conference on Machine Learning (ICML).

Jewell, S.W., Li, Y. and Pirvu, T.A. **Non-linear equity portfolio variance reduction under a mean-variance framework—A delta-gamma approach**. Operations Research Letters, Volume 41, Issue 6, November 2013, Pages 694-700

CONFERENCE  
TALKS

*Phylogenetic Inference by Divide and Conquer Sequential Monte Carlo (DCSMC)*, Statistical Society of Canada Annual Meeting, Dalhousie University (June 2015)

*Bayesian Non-Parametric Model for a class of Spatial Point Processes*, Statistical Society of Canada Annual Meeting, University of Toronto (May 2014)

*Stochastic pairs trading through cointegration*, The First 3-C Risk Forum & 2011 International Conference on Engineering and Risk Management (ERM), Fields Institute (October 2011)

HONOURS AND AWARDS	2015	Department of Statistics Top Scholar Award
	2015	NSERC PGS D
	2015	NSERC CGS D (declined)
	2015	ICML Travel Award
	2014	SSC Travel Award
	2014, 2013	Faculty of Science Graduate Award
	2013	NSERC CSG M
	2011	J.L.W Gill Prize in Mathematics
	2008–2011	Golden Key International Honour Society
	2008–2011	The University Senate Scholarship
	2007	McMaster Honour Award
	2007	Canadian Millennium Award of Excellence
	2007	Governor General’s Academic Medal
	2007	Thorndale Optimist Club Citizenship Award
	2007	Academic Excellence Gold Award
	2007	Queen Elizabeth II Aiming for the Top Scholarship
	RELEVANT ACTIVITIES	<ul style="list-style-type: none"> <li>• Allen Institute Summer Workshop on the Dynamic Brain Participant (Summer 2017)</li> <li>• UW Statistical Learning Applied to Biostatistics Reading Group Organizer (2017-present)</li> <li>• UW Statistical Learning Applied to Biostatistics Lab Member (2016-present)</li> <li>• UW MODE Lab Member (2016)</li> <li>• UW Space-Time Reading Group Co-Organizer (Winter 2016)</li> <li>• UW Working Group on Applied, Bayesian and Computational Statistics Member (2016)</li> <li>• UBC Machine Learning Reading Group Member (2013-2015)</li> <li>• Constance Van Eeden Seminar Organizer (March 2015)</li> <li>• Reviewer for NIPS 2014</li> <li>• Reviewer for AISTATS 2014, 2015</li> </ul>
LANGUAGES	<ul style="list-style-type: none"> <li>• R, MATLAB, Java, Python, Mathematica, L<sup>A</sup>T<sub>E</sub>X, Bash, HTML</li> </ul>	
INTERESTS	<ul style="list-style-type: none"> <li>• Backcountry skiing, climbing, and volleyball</li> </ul>	