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CONTACT INFORMATION

Department of Statistics
University of British Columbia
3182 Earth Sciences Building
2207 Main Mall
Vancouver, BC, Canada, V6T 1Z4

EDUCATION

University of British Columbia
– *PhD in Statistics*, 2013 - Aug 2017 (Expected)
– *MSc in Statistics*, 2011 - 2013
– Thesis: Scalable sequential Monte Carlo methods and probabilistic approach to for combinatorial problems

University of Waterloo
– *Bachelor of Mathematics*, Honours, Co-op, 2004 - 2009
– Major: Computer Science

RESEARCH INTERESTS

- Sequential Monte Carlo methods
- Bayesian nonparametric
- Distributed algorithms for large scale inference problems
- Latent variable models
- Probabilistic programming
- Combinatorial problems
- Sports analytics

MANUSCRIPT IN PREPARATION

- **S-H. Jun**, A. Bouchard-Côté, S. Wong, and J. Zidek. Sequential Graph Matching with Sequential Monte Carlo. International Conference on Artificial Intelligence and Statistics (AISTATS). Under Review.

- **S-H. Jun**, A. Bouchard-Côté, S. Wong, J. Zidek, and Z. Pirouz. Local Multinomial Model for Non-Regular Hypergraph Matching, with Application to Computational Forestry. In Preparation.

REFEREED PUBLICATION

- **S-H. Jun** and A. Bouchard-Côté. (2014). Memory (and Time) Efficient Sequential Monte Carlo. International Conference in Machine Learning (ICML). 31: 514-522.
  Acceptance rate: 310/1238.
- **S-H. Jun**, L. Wang and A. Bouchard-Côté. (2012). Entangled Monte Carlo. Advances in Neural Information Processing Systems (NIPS). 25: 2735-2743.
  Acceptance rate: 370/1467. Spotlight talk: 72/1467.

PRESENTATIONS

- Y. Liu, D. Dinsdale, **S-H. Jun**, C. Briercliffe, and J. Bone. (2016). Statistical Learning of Basketball Strategy: The Potential Field Approach. *The Cascadia Symposium on Statistics and Sports.*
- Exploring Spatial and Temporal Heterogeneity of Environmental Noise in Toronto. (2013). *Winner of case study competition at 41st annual meeting of the Statistical Society of Canada.* Joint work with C. Casquilho, N. Fishbane, Y. Nie.
- **S-H. Jun** and A. Bouchard-Côté. (2013) Using a Stochastic Map View of Sequential Monte Carlo for Memory and Network Efficiency. *Randomized Algorithm Workshop* at Advances in Neural Information Processing Systems 26. Poster presentation.

COMPUTER SKILLS

Programming Languages: Java and R (expert), Python (intermediate), C/C++ and MATLAB (working knowledge)
Software: ImageJ, OpenCV-Python, LaTeX, RStudio, Jupyter Notebook, Eclipse
Computing Platforms: Mac OS X, Ubuntu, Amazon Web Services

ACADEMIC EXPERIENCES

Research Assistant Jan 2017 - Current
Project: Conditional streaming sequential Monte Carlo.
Supervisor: Prof. Alexandre Bouchard-Côté

Research Assistant May 2014 - Dec 2016
Project: Autonomous strength grade system for lumber
Supervisors: Prof. Jim Zidek and Prof. Alexandre Bouchard-Côté

Research Assistant Sep 2013 - Apr 2014
Project: Memory (and time) efficient SMC
Supervisor: Prof. Alexandre Bouchard-Côté

Research Assistant May 2011 - Aug 2011; May 2012 - Aug 2012
Project: Entangled Monte Carlo
Supervisor: Prof. Alexandre Bouchard-Côté

TEACHING EXPERIENCES

UBC Master of Data Science Academic Assistant Aug 2016 - Dec 2016
Developed course contents:

- Web and cloud computing: Analyzing Google N-grams using Map-Reduce on Amazon Web Services (AWS)
- Supervised learning II: Training Tensorflow using GPU instances on AWS
- Experimentation and causal inference: Designing an A/B testing using R Shiny

Teaching Assistant Jul 2012 - Dec 2012
STAT 447/547B: Methods for Statistical Learning, UBC

- Assisted in developing course contents
- Topics: boosting, generalized additive models, splines, regression trees and random forest, LASSO, K-NN classifier
- TA evaluation available upon request

Teaching Assistant Jan 2012 - Apr 2012
STAT 441: Multivariate Statistics, UBC

- Led weekly lab discussions
- TA evaluation available upon request

INDUSTRY EXPERIENCES

Software Developer and Co-founder Jan 2009 - May 2011
Leadconstructor Inc, Toronto, ON

- Web software development with ASP .NET and C#
- Stand-alone software development with Java

Software Engineering Intern Jan 2008 - Apr 2008
Qualcomm, San Diego, CA

- Software development and debugging with C

Software Development Intern Apr 2007 - Aug 2007
Endeca Technologies, Cambridge, MA

- Web application design – UX and HCI
- Web application development using Java web technologies

Software Developer Co-op Jan 2006 - Jun 2006
Cedara Software, Mississauga, ON

- Wrote regression testing scripts in Java

Software Tester Co-op Sep 2004 - Dec 2004; May 2005 - Aug 2005
Ontario Ministry of Health, Toronto, ON

- Manual testing of stand-alone application for health professionals
- Wrote automated test suites

SERVICES

Manager of UBC Short Term Consulting Services Jul 2016 - Oct 2016
Statistics Department, UBC, Vancouver, BC

- Served in the committee to help reconstruct the student run consulting services
- Developed operating guidelines for the consulting services
- Recruited student consultants and managers

Graduate student seminar organizer Aug 2014 - Apr 2016
Statistics Department, UBC, Vancouver, BC

- Invited speakers for the weekly graduate student seminar.
- Organized student run lecture series on various topics: parallel computing in R, statistical analysis of network data, and sports analytics.

AWARDS

2014	ICML Travel Award
2013-17	Faculty of Science Graduate Award (Ph.D)
2013	SSC Case Study Competition Winner
2012	NIPS Travel Award
2011-13	Faculty of Science Graduate Award (MSc.)
2011	NSERC Undergraduate Student Research Award