

J. McLean Sloughter

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Education:

University of Washington (2002 - present)

Ph.D., Statistics, expected December 2008
Qualifying examinations and general examination completed

Thesis topic: Probabilistic weather forecasting

Advisor: Tilmann Gneiting

Committee: Adrian Raftery, Cliff Mass

Gonzaga University (1998 - 2002)

Bachelor of Science, Honors, in Mathematics (Summa Cum Laude)

Bachelor of Arts, Honors, in Psychology (Summa Cum Laude)

Research Experience:

University of Washington

Research Assistant, Joint Ensemble Forecasting System project (2007 - present)

Advisors: Tilmann Gneiting, Cliff Mass, Adrian Raftery, Susan Joslyn

Develop methods for producing, displaying, and assessing probabilistic weather forecasts.

Research Assistant, MURI project (2003 - 2005)

Advisors: Adrian Raftery and Tilmann Gneiting

Develop methods for producing, displaying, and assessing probabilistic weather forecasts.

Pacific Northwest National Laboratory

Student Research Fellowship (2002, 2003)

Advisor: Paul Whitney

Develop data-signature approaches for the fast and efficient analysis of large data sets

Student Research Fellowship (2001)

Advisor: Lynn Franklin

Investigate the feasibility of computer modeling of human behavior and belief formation

Student Research Fellowship (2000)

Advisor: Irene Schwarting

Implement and test gesture-based methods of human/computer interaction for collaborative computing environments

Student Research Fellowship (1998, 1999)

Develop neural network-based image analysis tools for automated security screenings using millimeter wave cameras

Talks / Presentations:

Talk "Probabilistic Wind Forecasting Using Bayesian Model Averaging" presented at the Joint Statistical Meetings, Denver, CO, August 4, 2008.

Talk "Probcast: Visualizing and Understanding Uncertainty in Weather Worecasts" presented at the UW Undergraduate Mathematical Sciences Seminar, University of Washington, March 13, 2008.

Talk "Probabilistic Wind Forecasting Using Bayesian Model Averaging" presented at Pacific Northwest Weather Workshop, Seattle, WA, February 29, 2008.

Talk "Probabilistic Weather Forecasting Using Bayesian Model Averaging" presented at the University of Washington School of Aquatic and Fishery Sciences Quantitative Seminar, February 1, 2008.

Talk "Probabilistic Quantitative Precipitation Forecasting Using Bayesian Model Averaging" presented at The International Environmetrics Society North American Regional Meeting, Seattle, WA, June 20, 2007.

Talk "Probabilistic Quantitative Precipitation Forecasting Using Bayesian Model Averaging" presented at Pacific Northwest Weather Workshop, Seattle, WA, March 2-3, 2007.

Talk "What I Did On My Summer Vacation: Undergraduate Research Internships, Neural Networks, & Airport Security" presented at the UW Undergraduate Mathematical Sciences Seminar, University of Washington, October 11, 2006.

Talk "Probabilistic Weather Forecasting" presented at the UW Undergraduate Mathematical Sciences Seminar, University of Washington, May 26, 2005.

Talk "Probabilistic Forecasting of Mixed Discrete-Continuous Weather Quantities Using Bayesian Model Averaging" presented at Pacific Northwest Weather Workshop, Seattle, WA, March 4 - 5, 2005.

Poster "Probabilistic Quantitative Precipitation Forecasting Using Bayesian Model Averaging" presented at Workshop on Ensemble Methods, Exeter, UK, October 18 - 21, 2004.

Publications:

Sloughter, J.M., Raftery, A.E, Gneiting, T., & Fraley, C., 2007: Probabilistic quantitative precipitation forecasting using Bayesian model averaging. *Monthly Weather Review*, 135, 3209 - 3220.

Whitney, P., Sloughter, J.M., Chin Jr., G., Kuchar, O.A., Wolf, K.E., & Powers, M. 2007. Scenario representation manipulation methods, scenario analysis devices, articles of manufacture, and data signals. U.S. Patent 20070005526, filed June 21, 2005, and issued January 4, 2007.

Whitney, P., Chin, G., Kuchar, O., Powers, M., Johnson, K.E., and Sloughter, J.M., 2004: A data signature approach for analyzing, manipulating and understanding collections of graphical summaries of scenarios. *Proceedings of the International Conference on Artificial Intelligence, IC-AI '04, Volume 2*, 1001 - 1006.

Whitney, P., Cox, D., Daly, D., and Sloughter, J.M., 2003: Toward the routine analysis of diverse data types. *Journal of Computational and Graphical Statistics*, 12, 915 - 926.

Awards / Honors:

National Science Foundation Vertical Integration of Research and Education in the Mathematical Sciences (VIGRE) Graduate Fellow (2005 - 2006)

UW Statistics Dorothy M. Gilford Prize for Excellence in Teaching by a Graduate Student (2003 - 2004)

Professional Service:

Reviewer, Weather and Forecasting

Teaching Experience:

University of Washington

Department of Statistics Lead TA (2007 - 2008)

Provide support / assistance for all levels of teaching assistants within the Statistics Department

Summer Transition Program Statistics TA (2007)

The Summer Transition Program is a month-long program where a group of incoming undergraduates are taught study and research skills

Duties: leading section tutorials, holding office hours, grading, and assisting in conducting and presenting research

Student Director of the UW Statistics Tutor and Study Center (2004 - present)

Tutor at the UW Statistics Tutor and Study Center (2003 - present)

This Center provides free walk-in tutoring for all introductory-level statistics courses

Duties: tutoring, coordinating scheduling of tutors, advertising the center, recruiting tutors, managing payroll for tutors

StatsEd Learning Initiative (2007)

A project involving graduate students, post-docs, and faculty members, evaluating the Statistics Department's undergraduate program

UW Undergraduate Mathematical Sciences Seminar

Coordinator, Autumn (2006)

Committee Member, Webmaster (2005 - 2006)

This seminar showcases the variety of career options available with a degree in a mathematical field

Duties included: finding speakers, coordinating scheduling, grading student papers, maintaining a seminar website and email list

Statistics 220

This is an introductory statistics course aimed at students in non-quantitative fields

Position: Substitute TA (2006)

Duties: leading section tutorials, holding office hours

Position: Substitute Distance Learning Instructor (summer 2004, summer 2006)

Duties: grading assignments and exams, responding to student emails

Statistics 311

This is an introductory statistics course aimed to serve students with a broad range of interests and backgrounds

Position: Instructor (summer 2005)

Duties: lecturing, assigning homeworks, office hours, maintaining course website, writing and grading exams, overseeing TA

Position: TA (2002 - 2003)

Duties: leading section tutorials, holding office hours, assisting with writing and grading of exams

Position: Substitute Distance Learning Instructor (summer 2004, summer 2006)

Duties: grading assignments and exams, responding to student emails

Statistics 390

This is an introductory statistics course for engineering students

Position: Substitute Instructor (2006)

Duties: lecturing, holding office hours

Statistics 423

This is an undergraduate course in regression and analysis of variance

Position: Substitute Instructor (2007)

Duties: lecturing, holding office hours

Statistics 502

This is a graduate-level course in design and analysis of experiments

Position: TA (2005)

Duties: leading computer lab lectures, holding office hours, grading homeworks, assisting in grading of exams

Washington Institute

Tutor for the statistics course in the Technical Fire Management program (2006)

Gonzaga University

Math Tutor at Gonzaga University Math Lab (2001 – 2002)