William Michael Landau

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http://www.will-landau.com/
http://github.com/wlandau/

Objective

- Develop computational Bayesian methods and applications to next-generation gene sequencing technologies.
- Instruct students using cutting edge pedagogical methods.
- Make an impact through outreach and service.

Education

PhD, Statistics — Expected May 2016

- Iowa State University, Ames, IA
- Cumulative GPA: 3.87/4.00

MS, Statistics — May 2013

- Iowa State University, Ames, IA
- Cumulative GPA: 3.90/4.00
- Creative component: **W. M. Landau** and P. Liu. Dispersion Estimation and its Effect on Test Performance in RNA-seq Data Analysis: A Simulation-Based Comparison of Methods. *PLOS One*, 8(12). December 2013.

BS, Statistics — June 2011

- University of Chicago, Chicago, IL
- Cumulative GPA: 3.69/4.00

Research

Research Assistant — June 2013 – present

- Jointly formulated a hierarchical model to data from gene experiments studying hybrid vigor.
- Fit the model with a Markov Chain Monte Carlo procedure, accelerated with parallel computing and graphics processing units (GPUs).

Masters Degree Student — June 2011 – Jun 2013

- Wrote a creative component entitled "Dispersion Estimation and its Effect on Test Performance in RNA-seq Data Analysis: A Simulation-Based Comparison of Methods", published in volume 8 issue 12 of PLOS One.
- Created and presented a poster of the same work at the 2013 Joint Statistical Meetings in Montreal, Canada.

Teaching

Lecturer — August 2013 – December 2013
GPU Computing Seminar Series
August 2012 – December 2012

- Created and delivered weekly talks on statistical computing with graphics processing units (GPUs) to graduate students and faculty at Iowa State University.
- Compiled all notes, example code, and lecture videos into a publicly available resource, http://will-landau.com/gpu/.

Course Instructor — January 2013 – May 2013
STAT 305: Engineering Statistics — January 2012 – May 2012

- Planned and delivered biweekly lectures to classes of sixty students
- Designed homework, tests, and solutions to each.
- Proctored and graded exams.
- Held two office hours per week.

Teaching Assistant — August 2011 – December 2011
STAT 231: Engineering Probability
STAT 105: Introduction to Engineering Statistics

- Wrote homework solutions.
- Graded homework.
- Held two office hours per week.

Leadership

Preparing Future Faculty Program — August 2013 – present

- Completed supplemental training courses in teaching, research writing, and applying for academic positions.

Assistant Coach — August 2012 – December 2013
Iowa State University Boxing Club

- Led and jointly planned beginner boxing classes of roughly seventy participants.
- Individually coached beginner and competitive college boxers.
- Cornerman in local fights in Davenport and Cedar Rapids, IA, in 2013.
- Created improved membership and financial bookkeeping systems.

Guest Lecturer — March 13, 2014
Investigation Series
Office of Precollegiate Programs for Talented and Gifted (OPPTAG)

- Created and led an educational game simulating the Monty Hall problem.
- Students learned to identify the source of randomness in a chance situation.
- Two classes of roughly thirty students from the surrounding community.

Publications

- **W. M. Landau** and P. Liu. Dispersion Estimation and its Effect on Test Performance in RNA-seq Data Analysis: A Simulation-Based Comparison of Methods. *PLOS One*, 8(12). December 2013.
- B. J. Ratliff, Womack. C. C., X. N. Tang, **W. M. Landau**, L. J. Butler, and D. E. Szpunar. Modeling the Rovibrationally Excited C_2H_4OH Radicals from the Photodissociation of 2-Bromoethanol at 193nm. *Journal of Physical Chemistry*, 114(14): 493445, April 2010.

Posters

- **W. M. Landau** and P. Liu. Dispersion Estimation and its Effect on Test Performance in RNA-seq Data Analysis. Joint Statistical Meetings, 2013. Montreal, QC, Canada.

Computer Languages

Programming

- Significant experience with R, C/C++, CUDA C/C++, Bash, Python.
- Moderate experience with SAS, SQL, AWK, Haskell, JavaScript, Fortran.

Markup

- Significant experience with LaTeX, knitr, HTML, CSS.
- Moderate experience with Markdown, RMarkdown, XML.

References

Jarad Niemi
Assistant Professor

- PhD major professor at Iowa State University.
- niemi@iastate.edu

Peng Liu
Associate Professor

- MS major professor at Iowa State University.
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Additional references available on request.