



# 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](#) to compare popular gene sequencing data analysis methods.
- Created and presented a [poster](#) of the same work at the 2013 Joint Statistical Meetings in Montreal, Canada.

**Teaching**

Lecturer  
GPU Computing Seminar Series

August 2013 – December 2013  
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  
STAT 305: Engineering Statistics

January 2013 – May 2013  
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  
STAT 231: Engineering Probability  
STAT 105: Introduction to Engineering Statistics

August 2011 – December 2011

- 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  
Iowa State University Boxing Club

August 2012 – December 2013

- 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  
Investigation Series  
Office of Precollegiate Programs for Talented and Gifted (OPPTAG)

March 13, 2014

- 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<sub>2</sub>H<sub>4</sub>OH 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

June 2011

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

### Markup

June 2011

- 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](mailto:niemi@iastate.edu)

Peng Liu  
Associate Professor

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