

William Michael Landau

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<http://will-landau.com/>
<http://github.com/wlandau/>

Education

PhD, Statistics, Iowa State University	Expected May 2016
MS, Statistics, Iowa State University	May 2013
BS, Mathematics, University of Chicago	June 2011

Research

Publications

- Niemi, Jarad and Mittman, Eric and **Landau, Will** and Nettleton, Dan Empirical Bayes Analysis of RNA-seq Data for Detection of Gene Expression Heterosis. *Journal of Agricultural, Biological, and Environmental Statistics*, (1-15), 2015.
- **Landau, W. M.** and Liu, P. [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.
- Ratliff, B. J. and Womack, C. C. and Tang, X. N. and **Landau, W. M.** and Butler, L. J. and Szpunar, D. E. Modeling the Rovibrationally Excited C₂H₄OH Radicals from the Photodissociation of 2-Bromoethanol at 193 nm. *Journal of Physical Chemistry*, 114 (14): (4934-45), (April), 2010.

Posters

- **Landau, W. M.** and Niemi, Jarad. [A Fully Bayesian Hierarchical Modeling Strategy for Identifying Gene Expression Heterosis using Parallel Computing with Graphics Processing Units \(GPUs\)](#). Conference on Applied Statistics in Agriculture, Kansas State University, 2015. (Similar poster presented at the Joint Statistical Meetings in Boston, MA in 2014.)
- **Landau, W. M.** and Liu, P. [Dispersion Estimation and its Effect on Test Performance in RNA-Seq Data Analysis](#). Joint Statistical Meetings, 2013. Montreal, QC, Canada.

Employment

Research Assistant⁺⁺

June 2013 - present

- Jointly developed a fully Bayesian method to detect important genes in high-dimensional genomic datasets.
- Authored an R package with a [CUDA](#) backend for massively parallel computation.
- NIH grant R01GM109458

Research Assistant⁺⁺

August 2013 – December 2013

GPU Computing Seminar Series

August 2012 – December 2012

- Authored and presented a high-performance computing seminar

series at <http://will-landau.com/gpu/>, also on [YouTube](#).

Course Instructor⁺⁺
STAT 305: Engineering Statistics

January 2013 – May 2013
January 2012 – May 2012

Teaching Assistant⁺⁺
STAT 231: Engineering Probability
STAT 105: Introduction to Engineering Statistics

August 2011 – December 2011

Leadership

Creator and Organizer⁺⁺
Cloud Computing Working Group

September 2015 – Present

- Presented and coordinated tutorial seminars on cloud computing services and on-campus computing clusters.

Computation Advisory Committee⁺⁺

September 2015 – Present

- Helped make decisions about requesting and allocating departmental computing resources.

Volunteer Instructor⁺

March 13, 2014

Office of Precollegiate Programs for Talented and Gifted (OPPTAG)

- Taught probability concepts to middle school students using an in-class game.

Preparing Future Faculty Fellow⁺

August 2013 – June 2014

Skills

Boxing Club Assistant Coach⁺

August 2012 – December 2013

Data science

- Hierarchical models, Bayesian methods, Markov chain Monte Carlo, high-dimensional data analysis, linear and nonlinear models, data mining, machine learning, predictive modeling, multivariate analysis, statistical computing, exploratory analysis, visualization, genomics data analysis

Computing

- R, R package development, Rcpp, C/C++, CUDA C/C++, shell scripting, Python, JavaScript, SAS, SQL, AWK, Haskell, Fortran

Markup

- R Markdown, Markdown, ioslides, knitr, LaTeX, HTML, CSS

References

Jarad Niemi

niemi@iastate.edu

- PhD major professor

Peng Liu

pliu@iastate.edu

- MS major professor

Additional references available on request.

