

William Michael Landau

201-563-4325
3211 Snedecor Hall
Iowa State University
Ames, IA 50011

landau@iastate.edu
<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

⁺⁺ Iowa State University Department of Statistics

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

Volunteer Instructor⁺
Office of Precollegiate Programs for Talented and Gifted (OPPTAG)

March 13, 2014

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

Preparing Future Faculty Fellow⁺

August 2013 – June 2014

Boxing Club Assistant Coach⁺

August 2012 – December 2013

Skills

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.