

# William Michael Landau

## Office

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## Web

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

## Education

Master of Science, Statistics, May 2013  
Iowa State University, Ames, IA  
Cumulative GPA: 3.90/4.00

Bachelor of Science, Mathematics, June 2011  
University of Chicago, Chicago, IL  
Cumulative GPA: 3.69/4.00

PhD, Statistics, expected May 2016  
Iowa State University, Ames, IA  
Cumulative GPA: 3.90/4.00

## Research

Research Assistant	RNA-seq Research Group Dept. of Statistics Iowa State University	Jun 2010 – Sep 2010
	Implemented a GPU-accelerated Markov Chain Monte Carlo procedure to fit a hierarchical model to RNA-seq datasets. The goal was to detect differentially expressed genes and hybrid vigor in gene expression.	
Research Assistant	The Eric Schwartz Group Dept. of Pharm. and Phys. Sci. University of Chicago	Jun 2010 – Sep 2010
	Investigated the kinetics of synaptic transmission using hidden Markov models.	
Research Fellow	REU VIGRE Dept. of Mathematics University of Chicago	Jun 2009 – Aug 2009
	The REU VIGRE is an undergraduate summer research program. Independent study of Algebraic Topology. Wrote an expository paper on the Fundamental Group.	
Research Assistant	The Laurie Butler Group Dept. of Chemistry University of Chicago	Jun 2008 – Jun 2009
	Jointly wrote a chemical reaction dynamics paper (see Publications). Wrote software to process and analyze data raw experimental data.	

## Teaching

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Lecturer	GPU Computing Subgroup Statistical Computing Research Group Dept. of Statistics Iowa State University	Aug 2013 – Dec 2013 Aug 2012 – Dec 2012
	Lecture series on statistical computing with Graphics Processing Units (GPUs). Created and delivered weekly talks to professors and fellow graduate students. Materials at <a href="http://will-landau.com/gpu">http://will-landau.com/gpu</a> .	
Course Instructor	STAT 305: Engineering Statistics Dept. of Statistics Iowa State University	Jan 2013 – Dec 2013 Jan 2012 – Dec 2012
	Created and delivered bi-weekly lectures to classes of sixty students each. Wrote homework assignments and exams, proctored and graded the exams. Held weekly office hours.	
Teaching Assistant	STAT 231: Engineering Probability STAT 105: Intro to Engineering Statistics Dept. of Statistics Iowa State University	Aug 2011 – Dec 2011
	Wrote solution sets to STAT 231 homework assignments. Graded homework. Held weekly office hours.	
Teaching Assistant	SESAME Program Dept. of Mathematics University of Chicago	Jun 2009 – Aug 2009
	SESAME is a teaching certification program for Chicago public school teachers. Led problem sessions in Methods of Teaching Mathematics Grades 6-8. Lab TA for a computer science course in Java and Number Theory.	
Tutor	Asociacion Civil Puririsun Cusco, Peru	
	Tutored kids ages four to seventeen from a rural community near Cusco.	

## Leadership

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Assistant Boxing Coach	Iowa State University Boxing Club	Aug 2012 – Dec 2013
	Jointly planned and led beginner boxing classes of roughly 70 participants. Coached beginner and competitive boxers one-on-one. Created a system for maintaining the membership roster and finances.	
Junior Firefighter Captain	Volunteer Junior Fire Dept. Mountain Lakes, NJ	Sep 2006 - Jun 2007
	Jointly coordinated operations at fire calls Jointly planned and conducted bimonthly drills. Jointly organized community fundraising events	

## Honors

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Vince Spósito Computing Excellence Award	Dept. of Statistics Iowa State University	Aug 2013
	Awarded for service in statistical computing while working toward a graduate degree.	
GSK Scholar Award	Dept. of Statistics Iowa State University	Sep 2011
	Awarded jointly by GlaxoSmithKline and the Iowa State University Department of Statistics for a strong undergraduate record and an interest in biostatistics.	
Alummni Scholarship	Dept. of Statistics Iowa State University	Sep 2011
	Awarded for a strong application for graduate study.	
Dean's List	University of Chicago	Sep 2007 – Jun 2011
	Awarded for maintaining an annual grade point average above 3.25.	

## Publications

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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  $\text{C}_2\text{H}_4\text{OH}$  radicals from the photodissociation of 2-bromoethanol at 193 nm. *Journal of Physical Chemistry*, 114(14):4934–45, April 2010.

## Skills

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Programming	R, C/C++, CUDA C, Bash, Python Experience with SAS, AWK, SQL, Haskell, Fortran
Markup	LaTeX, HTML, CSS, Markdown Experience with XML, RHTML, RMarkdown
Spanish	Fairly proficient in listening, speaking, reading, and writing

## References

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Prof. Peng Liu pliu@iastate.edu 515-294-7806	Dept. of Statistics Iowa State University	Major Professor Summer 2012 – Present
Prof. Jarad Niemi niemi@iastate.edu	Dept. of Statistics Iowa State University	Advisor: GPU Lectures Summer 2012 – Fall 2012

Prof. Laurie Butler	Dept. of Chemistry University of Chicago	Research Assistant Advisor Summer 2008 - Spring 2009
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“Will is both brilliant and sweet. I wish we could have kept him in the field of chemical physics!” - Feb 2010

Dr. Britni Ratliff	Dept. of Chemistry University of Chicago	Colleague Summer 2008 - Spring 2009
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“Will is a hard-working and considerate team player.” - Feb 2010