# William Michael Landau

## Office

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## Web

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

## Education

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|---|---|
| Master of Science, Statistics, May 2013 | Bachelor of Science, Mathematics, June 2011 |
| Iowa State University, Ames, IA | University of Chicago, Chicago, IL |
| Cumulative GPA: 3.90/4.00 | Cumulative GPA: 3.69/4.00 |

PhD, Statistics, expected May 2016
Iowa State University, Ames, IA
Cumulative GPA: 3.87/4.00

## Research

| Research Assistant | RNA-seq Research Group | Jun 2010 − Sep 2010 |
|---|---|---|
| | Dept. of Statistics | |
| | Iowa State University | |

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 | Jun 2010 − Sep 2010 |
|---|---|---|
| | Dept. of Pharm. and Phys. Sci. | |
| | University of Chicago | |

Investigated the kinetics of synaptic vesicle transmission using hidden Markov models.

| Research Fellow | REU VIGRE | Jun 2009 − Aug 2009 |
|---|---|---|
| | Dept. of Mathematics | |
| | University of Chicago | |

The REU VIGRE is an undergraduate summer research program.
Independent study of Algebraic Topology.
Wrote an expository paper on a topic in Algebraic Topology.

| Research Assistant | The Laurie Butler Group | Jun 2008 − Jun 2009 |
|---|---|---|
| | Dept. of Chemistry | |
| | University of Chicago | |

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

# Leadership

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|---|---|---|
| Preparing Future Faculty Program | Iowa State University | Aug 2013 − Present |
| | Attended courses that offer supplemental training in research, teaching, service, and applying for academic positions.<br>More information at http://www.celt.iastate.edu/pff/. | |
| Assistant Boxing Coach | Iowa State University Boxing Club | Aug 2012 − Dec 2013 |
| | Led and jointly planned beginner boxing classes of roughly 70 participants.<br>Individually coached beginner and competitive college boxers.<br>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

| Vince Sposito 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

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 193 nm. *Journal of Physical Chemistry*, 114(14):4934–45, April 2010.

## Skills

| Programming | R, C/C++, CUDA C, Bash, Python. Experience with Javascript, SAS, AWK, SQL, Haskell, Fortran. |

| Markup | LaTeX, HTML, CSS, Markdown. Experience with XML, RHTML, RMarkdown. |

| Spanish | Able to listen, speak, read and write. |

## References

Prof. Jarad Niemi     Dept. of Statistics     Major Professor
niemi@iastate.edu     Iowa State University     Spring 2014 − Present

Prof. Peng Liu     Dept. of Statistics     Major Professor
pliu@iastate.edu     Iowa State University     Summer 2012 − Spring 2013
515-294-7806

Prof. Laurie Butler     Dept. of Chemistry     Research Assistant Advisor
    University of Chicago     Summer 2008 - Spring 2009

"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     Colleague
    University of Chicago     Summer 2008 - Spring 2009

"Will is a hard-working and considerate team player." - Feb 2010