WILL MCFADDEN

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EDUCATION

University of Chicago *exp. May 2016*
Ph.D. in Biophysical Science with certificate in University Teaching GPA: 3.66/4
Thesis: *Computational models of filament recycling in active networks*

University of Illinois at Urbana-Champaign *Dec 2009*
B.S. in Engineering Physics with minors in Mathematics and Computer Science GPA: 3.67/4

SKILLS

Languages & Markup	Java, MATLAB, Python, JS, bash, perl, SQL, CSS, HTML, LaTeX
Protocols, Frameworks, APIs	MPI, Hadoop, GAE, AWS, Arduino, Bluetooth, D3, JSON, GMaps
Packages & Software Tools	scipy, pandas, sklearn, IPython, git, AutoCAD, Inkscape, WordPress
Nontechnical Skills	Scientific Writing, Public Speaking, Teaching, Mentoring, Mindfulness

EXPERIENCE

University of Chicago, Research Computing Center Apr 2015 - Present
Research Assistant *Chicago, IL*

· Analyzed supercomputer power usage to optimize datacenter energy saving strategies
· Developed measurement techniques to measure energy vs runtime trade-offs

Artifice Tech Education Sep 2015 - Present
CTO and Board Secretary *Chicago, IL*

· Managed volunteer instructors and aided recruiting efforts to quadruple our volunteer staff
· Led development team in administrating internal operations and expanding public relations efforts

University of Chicago, Munro Research Group Aug 2011 - Present
Ph.D. Research Assistant *Chicago, IL*

· Devised statistical methods for novel single-molecule measurement techniques
· Collaborated with experimentalists to build computational models of active biopolymer materials
· Mentored incoming graduate students in data analysis and computational modeling

Bionic Trader Systems Sep 2011 - Dec 2012
Software QA Consultant *Chicago, IL*

· Advised on user experience and stress testing of financial trading software

Institute for Genomic Biology, Robinson Research Group Oct 2009 - May 2010
Compuational Research Assistant *Urbana, IL*

· Built automated video data collection system and data analysis pipeline

National Center for Supercomputing Applications, ISDA Research Group Jun 2008 - Jun 2009
Research Programmer *Urbana, IL*

· Developed machine vision software for large volume electronic document appraisal

AWARDS AND HONORS

USENIX NSDI '16 Student Grant, 2016

University of Chicago Art+Science Collaboration Grant 2011, 2015

NIH Federal Training Grant 2010-2012

University of Illinois, Student Employee of the Year, Honorable Mention 2010

University of Illinois College of Engineering, James Scholars 2007-2010

National Merit Scholarship 2006-2010

LIFE ACHIEVEMENTS

Survived a day without water in a desert slot canyon; Climbed a downtown Chicago high rise; Played at the House of Blues; Gave a best man's speech; Built a treehouse in a Puerto Rican rain forest; Hitchhiked to California; Wrote a rock opera; Went without eating for three days; Biked from Illinois to the Atlantic;

PUBLICATIONS AND PRESENTATIONS

- William McFadden Jon Michaux and Edwin Munro. Modeling the role of filament recycling in steady-state flows of actomyosin networks. In *Biophysical Society 60th Annual Meeting*, 2016.
- Will McFadden Anita Nikolich Ray Parpart and Birali Runesha. Saving on data center energy bills with edeals: Electricity demand-response easy adjusted load shifting. In *USENIX Workshop on Cool Topics in Sustainable Data Centers*, 2016.
- W McFadden A Nikolich S Jacobs, R Parpart and B Runesha. Conserving energy in heterogeneous clusters. In *MindBytes Research Computing Expo and Symposium*, 2015.
- Francois B Robin, William M McFadden, Baixue Yao, and Edwin M Munro. Single-molecule analysis of cell surface dynamics in caenorhabditis elegans embryos. *Nat Meth*, 11(6):677–682, June 2014.
- J. Alberts W. McFadden and E. Munro. Physical models of cortical flows during polarity maintenance in c. elegans embryos. In *ASCB Annual Meeting*, 2012.
- S-C Lee William McFadden, Rob Kooper and Peter Bajcsy. *Application of Machine Learning*, chapter Comprehensive and Scalable Appraisals of Contemporary Documents, pages 87–108. InTech, 2010.
- Jason Kastner Michal Ondrejcek Kenton McHenry Rob Kooper, William McFadden and Peter Bajcsy. Mining large size complex pdf documents for industrial knowledge management and preservation. In *2009 NCSA Private Sector Program (PSP) Annual Meeting*, 2009.
- W. McFadden S-C. Lee and P. Bajcsy. Text, image and vector graphics based appraisal of contemporary documents. In *7th International Conference on Machine Learning and Applications*, 2008.
- R. Kooper M. Ondrejcek A. Yahja W. McFadden, K. McHenry and P. Bajcsy. Advanced information systems for archival appraisals of contemporary documents. In *4th IEEE International Conference on e-Science and Microsoft eScience Workshop*, 2008.