Will McFadden
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online visual resumé: *hellowillmcfadden.appspot.com*

## EDUCATION

**Ph.D. in Biophysical Sciences**
with a Certificate in Teaching
*University of Chicago*, May 2016
GPA: 3.64/4

**B.S. in Engineering Physics with Honors**
with minors in Computer Science and Mathematics
*University of Illinois at Urbana-Champaign*, Dec 2009
GPA: 3.62/4

## RESEARCH CAREER

**Ph.D. Research**
*Munro Lab, University of Chicago,* 2011-present
Provided mathematical expertise in developing novel single-molecule imaging techniques
Collaborated with experimentalists to model active biopolymer materials

**Research Assistant**
*Robinson Lab, Institute for Genomic Biology, Urbana, IL,* 2009-2010
Devised automated video data collection system and data analysis algorithms

**Research Intern**
*Tribology Group, Argonne National Laboratory,* Summer 2009
Measured frictional properties of surfaces in high vacuum and inert environments

## LEADERSHIP AND TEACHING

**Volunteer Organizer**
*@rtifice Youth Hackerspace, Chicago, IL,* 2013-present
Managed 6-10 students and 1-2 volunteers, as Team Lead for after-school program
Organized on-campus volunteer recruitment and funding

**Graduate Teaching Assistant**
*University of Chicago,* 2012-present
Instructed students in quantitative science courses

## SOFTWARE DEVELOPMENT EXPERIENCE

**Software Developer**
*Bionic Trader Systems, Chicago, IL,* 2011-2012
Advised CEO on user experience and stress testing of financial software

**Research Programmer**
*National Center for Supercomputing Applications,* 2008 - 2009
Collaborated with archivists to develop software for electronic document appraisal

**Freelance Software Developer**
*MWH Global,* 2008 - 2009
Converted a client's spreadsheet tool into a standalone application

## PUBLICATIONS

FR Robin, WM McFadden, B Yao, EM Munro, "Single-molecule analysis of cell surface dynamics in Caenorhabditis elegans embryos." Nature methods, 2104

W. McFadden, J. Alberts, and E. Munro, "Physical models of cortical flows during polarity maintenance in C. elegans embryos," ASCB Annual Meeting 2012, poster presentation

Rob Kooper, William McFadden, Jason Kastner, Michal Ondrejcek, Kenton McHenry and Peter Bajcsy, "Mining large size complex PDF documents for industrial knowledge management and preservation.", 2009 NCSA Private Sector Program (PSP) Annual Meeting, May 13-15, 2009, Champaign-Urbana, Illinois, poster presentation

S-C. Lee, W. McFadden and P. Bajcsy, "Text, Image and Vector Graphics Based Appraisal of Contemporary Documents" 7th *International Conference on Machine Learning and Applications* December 11-13, 2008, San Diego, CA.

W. McFadden**,** K. McHenry, R. Kooper, M. Ondrejcek, A. Yahja and P. Bajcsy, "Advanced Information Systems for Archival Appraisals of Contemporary Documents," 4th IEEE International Conference on e-Science and Microsoft eScience Workshop Indianapolis, IN, 7-12 Dec. 2008, poster and Page(s): 440-441 (2008); DOI: 10.1109/eScience.2008.140

## AWARDS AND HONORS

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|---|---|
| Art\|Science Collaboration Grant | 2011 |
| NIH Federal Training Grant | 2010 |
| UIUC Employee of the Year Honorable Mention | 2010 |
| Guy Richard Collins Scholarship | 2007 |
| James Scholar | 2006 |
| Dean's List | 2006 - 2008 |
| National Merit Scholarship | 2006 |
| Charles G. Bosco Memorial Scholarship | 2006 |