

# AMELIA A. MCNAMARA

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## EDUCATION

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**University of California - Los Angeles**, Los Angeles, CA Ph.D. student  
**Field:** Statistics GPA 3.86

**Honors:** Chancellor's Prize Summer Fellowship (2010-2011),  
National Science Foundation Graduate Research Fellowship Program Honorable Mention (2012)

**Macalester College**, St. Paul, MN B.A. May 2010  
**Majors:** Mathematics, English GPA 3.63

**Honors:** *Cum laude* honors (2010), Dean's List (Fall 2008, Spring 2009, Spring 2010), Alliss Scholarship (2007-2010), Xcel Energy Foundation Scholarship (2009-2010), Konhauser Prize for Mathematical Achievement (2010)

**University of Cincinnati**, Cincinnati, OH 2006-2007  
**College:** Design, Architecture, Art and Planning (DAAP) GPA 3.80  
**Honors:** UC|21 Scholar, National Merit Scholar

## RESEARCH

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**Center for Embedded Network Sensing**, Los Angeles, CA Summer 2011-present  
Graduate Student Researcher, Mobilize Project  
· Develop curriculum to be deployed in LAUSD public schools  
· Train teachers on basic statistical concepts, use of inquiry in teaching, and basic statistical software  
· Advisor: Mark Hansen

**Macalester College**, St. Paul, MN Summers 2009, 2010  
Undergraduate Researcher, XMAC lab  
· Performed numerical analysis of Turing patterns  
· Advisor: Chad Topaz  
· Coauthored paper: A. Catllá, A. McNamara, and C.M. Topaz. Instabilities and patterns in coupled reaction-diffusion layers, Phys. Rev. E 85 (2) (2012) 026215.

**Institute for Mathematics and its Applications**, Minneapolis, MN Summer 2009  
REU Participant  
· Participated in a National Science Foundation Research Experience for Undergraduates (REU)  
· Studied a model and optimization for organic photovoltaic cells  
· Advisors: Fadil Santosa, Tsvetanka Sendova

## EMPLOYMENT

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**Macalester College Math Department**, St. Paul, MN 2009-2010  
Applied Calculus Preceptor  
· Held weekly office hours  
· Taught students calculus and R skills  
· Graded homework and projects

**Hamline University**, St. Paul, MN

2008-2010

MathMasters Tutor

- Tutored groups of ninth-grade students who were in danger of failing basic standard math exams
- Material covered was algebra and geometry
- Tailored work to individual students

**Macalester College Media Services**, St. Paul, MN

2007-2010

Acquisition Specialist

- Organized interlibrary loans and intralibrary reserve materials
- Set up and ran audio-visual equipment
- Answered phones
- Shelved materials
- Opened and closed department

## SKILLS

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<b>Language</b>	Conversational in Spanish
<b>Design</b>	Adobe suite (Illustrator, InDesign, etc.), HTML and CSS
<b>Office</b>	Microsoft Office suite, copy editing, proofreading
<b>Technical Software</b>	Matlab, Mathematica, R, Comsol, ArcGIS, Python, LaTeX

## PAPERS

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<b>Instabilities and Patterns in Coupled Reaction-Diffusion Layers</b>	February 2012
Anne J. Catllá, Amelia McNamara and Chad M. Topaz	<i>Physical Review E</i>

## PRESENTATIONS

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<b>Model and Optimization of Organic Photovoltaic Cells</b>	January 2010
Joint Meeting of AMS and MAA	<i>San Francisco, CA</i>
<b>Model and Optimization of Organic Photovoltaic Cells</b>	November 2009
Undergraduate Research Symposium, University of Chicago	<i>Chicago, IL</i>
<b>Model and Optimization of Organic Photovoltaic Cells</b>	October 2009
Macalester College	<i>St. Paul, MN</i>
<b>Model and Optimization of Organic Photovoltaic Cells</b>	July 2009
Institute for Mathematics and its Applications	<i>Minneapolis, MN</i>

## ADDITIONAL CONFERENCES AND WORKSHOPS ATTENDED

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<b>Math Science Partnership Learning Network Conference</b>	January 2012
Framing Effective Teaching in STEM	<i>Washington, DC</i>
<b>Workshop at the Statistical and Applied Mathematical Sciences Institute</b>	October 2009
Space-Time Analysis for Environmental Mapping, Epidemiology and Climate Change	<i>Durham, NC</i>
<b>Workshop at the University of California, Berkeley</b>	Summer 2009
Explorations in Statistics Research	<i>Berkeley, CA</i>

## SERVICE TO DEPARTMENT, PROFESSION AND COLLEGE

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**Jr. Tour Coordinator, UCLA Graduate Student Orientation Planning Committee** 2012  
Assisted the outgoing tours coordinator in organizing volunteer tour guides, preparing materials and checking routes. As a member of the committee, discussed general issues.

**Voting Member, UCLA Graduate Resource Center Oversight Committee** 2011-2012  
Assisted in developing new strategic plan for UCLA's graduate resource center

**Voting Member, Macalester College Honorary Degree Committee** 2010  
Assisted in the determination of honorary degree recipients from the college

**Voting member, Macalester College Financial Affairs Commission (FAC)** 2009-2010  
The FAC is responsible for maintaining the student government's \$100,000 yearly budget

**Department Liaison, Macalester College Math Department** 2008-2009  
Participated in monthly department meetings, provided students' perspectives to faculty

## MEMBERSHIPS IN PROFESSIONAL SOCIETIES

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**American Statistical Association (ASA)** 2012-present

**Society for Industrial and Applied Mathematics (SIAM)** 2012-present

**Association for Women in Mathematics (AWM)** 2008-2010

## RELEVANT COURSEWORK

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### Statistical

Applied Probability	UCLA	Fall 2010
Research Design, Sampling, and Analysis	UCLA	Fall 2010
Statistics Programming	UCLA	Fall 2010
Regression Analysis: Model Building, Fitting, and Criticism	UCLA	Winter 2011
Matrix Algebra and Optimization	UCLA	Winter 2011
Theoretical Statistics	UCLA	Winter 2011
Large Sample Theory	UCLA	Spring 2011
Advanced Modeling and Inference	UCLA	Spring 2011
Monte Carlo Methods for Optimization	UCLA	Spring 2011
Data and the Media Arts	UCLA	Spring 2011
Spatial Statistics	UCLA	Fall 2011
Data, Data Practices, and Data Curation I	UCLA	Winter 2012
Data, Data Practices, and Data Curation II	UCLA	Spring 2012
Computing for Data Analysis	Coursera	Fall 2012

### Mathematical

Linear Algebra	Macalester College	Fall 2007
Discrete Mathematics	Macalester College	Spring 2008
Multivariable Calculus	Macalester College	Spring 2008
Differential Equations	Macalester College	Fall 2008
Algebraic Structures	Macalester College	Spring 2009
Continuous Applied Mathematics	Macalester College	Spring 2009
Real Analysis	Macalester College	Fall 2009
Topics in Modern Algebra	Macalester College	Fall 2009
Complex Analysis	Macalester College	Spring 2010

### Geographical

Urban Geography	Macalester College	Fall 2008
Introduction to Geographic Information Systems	Macalester College	Fall 2009