AMELIA A. MCNAMARA

amelia.mcnamara@stat.ucla.edu ⋄ www.stat.ucla.edu/∼amelia.mcnamara

EDUCATION

University of California - Los Angeles, Los Angeles, CA — Ph.D. expected June 2015
Field: Statistics — GPA 3.90

Honors: Chancellor's Prize Summer Fellowship (2010-2011),
National Science Foundation Graduate Research Fellowship Program Honorable Mention (2012),
Collegium of University Teaching Fellows (2014-2015), Dissertation Year Fellowship (2014-2015)

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

Viewpoints Research Institute, Glendale, CA — June 2013-present
Intern, Communications Design Group
The Communications Design Group (CDG) is a research group directed with a variety of interests including the future of programming, internet-scale computing, and programming language design. I collaborate with other researchers on projects to improve statistical computing tools for novices (those with no statistics or programming experience). Examples include **LivelyR** with Aran Lunzer and **locatr** with Ted Kaehler. Director: Alan Kay.

Mobilize Project, Los Angeles, CA — June 2011-present
Graduate Student Researcher
The Mobilize project brings data analysis and statistics to life by allowing high school students to collect information about the world around them using mobile phones, then analyze the data and do something with it. As a graduate student researcher, I developed curriculum to be deployed in LAUSD public high schools, including the innovative Introduction to Data Science course. Over hundreds of hours of professional development, I trained teachers on basic statistical concepts, use of inquiry in teaching, and basic statistical software. Principal Investigator: Rob Gould.

Macalester College, St. Paul, MN — Summers 2009, 2010
Undergraduate Researcher, XMAC lab
As an undergraduate researcher, performed numerical analysis of Turing patterns under advisement from Dr. Chad Topaz. Produced a 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.

TEACHING

UCLA Statistics Department, Los Angeles, CA Spring 2015
Collegium of University Teaching Fellows
STAT 98T: Data Visualization
· Develop syllabus on data visualization
· As instructor of record, teach the general education seminar to a group of 12-15 students
· Perform formative assessment of students
· Grade final papers and intermediate assessments

UCLA Statistics Department, Los Angeles, CA 2013-2014
Statistics Teaching Fellow
STAT 101A: Introduction to Data Analysis and Regression (Instructor: Mahtash Esfandiari)
STAT 102B: Introduction to Computation and Optimization (Instructor: Juana Sanchez)
STAT 101C: Introduction to Regression and Data Mining (Instructor: Rob Gould)
· Prepped and led weekly discussion sections for students
· Held twice-weekly office hours
· Assisted students' statistics and R learning
· Graded exams and homework

Macalester College Math Department, St. Paul, MN 2009-2010
Preceptor
MATH 135: Applied Calculus (Instructors: Tom Halverson, Karen Saxe)
· 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

PUBLICATIONS

McNamara, A. **Community engagement and subgroup meta-knowledge: Some factors in the soul of a community.** *Computational Statistics.* (submitted 2014).

McNamara, A. and Hansen, M. **Teaching Data Science to Teenagers.** *Proceedings of the 9th International Conference on Teaching Statistics.* (2014).

McNamara, A. **Dynamic Documents with R and knitr** (book review). *Journal of Statistical Software,* Vol. 56, Book Review 2. (2014).

Catllá, A.J., ***McNamara, A.*** and Topaz, C. M. **Instabilities and Patterns in Coupled Reaction-Diffusion Layers.** *Physical Review E,* Vol. 85, Issue 2. (2012).

PRESENTATIONS

Eyeo Highlights — August 2014
Datavis LA Meetup — *Los Angeles, CA*

Teaching Data Science to Teenagers (invited talk, with M. Hansen) — July 2014
International Conference on Teaching Statistics — *Flagstaff, AZ*

Teaching R to High School Students (with J. Molyneux) — July 2014
useR! The R User Conference — *Los Angeles, CA*

LivelyR: Making R Charts Livelier (main author A. Lunzer) — July 2014
useR! The R User Conference — *Los Angeles, CA*

heR Panel Discussion (panelist) — July 2014
useR! The R User Conference — *Los Angeles, CA*

Mobilize Project (with J. Margolis and L. Trusela) — January 2012
Math Science Partnership Learning Network Conference — *Washington, DC*

Model and Optimization of Organic Photovoltaic Cells — January 2010
Joint Meeting of AMS and MAA — *San Francisco, CA*

POSTER PRESENTATIONS

It Ain't Necessarily So: Checking Charts for Robustness (with A. Lunzer) — November 2014
IEEE Vis Conference — *Paris, France*

Tools for Teaching Data Science — May 2014
Women in Statistics Conference — *Cary, NC*

Data Visualization on the Soul of the Community — August 2013
Joint Statistical Meetings — *Montreal, QC*

Model and Optimization of Organic Photovoltaic Cells — January 2010
Joint Meeting of AMS and MAA — *San Francisco, CA*

Model and Optimization of Organic Photovoltaic Cells — November 2009
Undergraduate Research Symposium, University of Chicago — *Chicago, IL*

Model and Optimization of Organic Photovoltaic Cells — October 2009
Macalester College — *St. Paul, MN*

Model and Optimization of Organic Photovoltaic Cells — July 2009
Institute for Mathematics and its Applications — *Minneapolis, MN*

ADDITIONAL CONFERENCES AND WORKSHOPS ATTENDED

Eyeo Festival June 2014
Converge to Inspire *Minneapolis, MN*

rOpenSci hackathon March 2014
Open Science Hackathon (invitation only) *San Francisco, CA*

NICAR 2014 February 2014
Investigative Reporters & Editors Conference *Baltimore, MD*

Eyeo Festival June 2013
Converge to Inspire *Minneapolis, MN*

Computation + Journalism Symposium January 2013
2^{nd} Symposium on Computation + Journalism *Atlanta, GA*

Math Science Partnership Learning Network Conference January 2013
Implementation: From Vision to Impact *Washington, DC*

Interface Symposium: Future of Statistical Computing May 2012
Internet Scale Data, Flexible Modeling, and Visualization *Houston, TX*

Math Science Partnership Learning Network Conference January 2012
Framing Effective Teaching in STEM *Washington, DC*

Workshop at the Statistical and Applied Mathematical Sciences Institute October 2009
Space-Time Analysis for Environmental Mapping, Epidemiology and Climate Change *Durham, NC*

Workshop at the University of California, Berkeley Summer 2009
Explorations in Statistics Research *Berkeley, CA*

SERVICE TO DEPARTMENT, PROFESSION AND COLLEGE

useR! Conference Organizing Committee 2013-2014
Planning Member
- Assisted in planning and executing the 2014 international R user conference (700 attendees)
- Recruited and coordinated 80 student volunteers
- Assisted with conference website before, during, and after the conference
- Promoted conference on social media, encouraged minority participation
- Supervised on-the-ground conference logistics, including registration, catering, and facilities services

Southern California AP Statistics Poster Competition 2014
Judge
- Judged entries to the 2014 Southern California AP Statistics Poster Competition

Macalester College Admissions Department 2013-present
Interviewer and representative
- Performed alumni interviews of Southern California prospective students applying to Macalester
- Represented Macalester at Vistamar College Fair, answering questions about Macalester and the admissions process

UC Day in DC 2013
University of California, Los Angeles Delegate
· Attended the University of California's annual federal advocacy day in Washington, DC
· Represented UCLA and graduate student interests by meeting with congress members and their staff members to discuss Federal funding for programs that impact grad students

UCLA Statistics Department DataFest 2012-present
Planning Member
· Assisted in planning and executing the 2012, 2013, and 2014 UCLA DataFests for undergraduates
· During the weekend-long data hackathon, volunteered 10+ hours as a graduate student consultant

UCLA Graduate Student Orientation Planning Committee 2012-2013
Tour Coordinator
· Helped plan and execute the 2012 and 2013 UCLA grad student orientations, attended by 1,000+ incoming graduate students each year
· Discussed general orientation issues, such as panel topics and logistical concerns
· Organized and trained 15 volunteer tour guides to lead tours campus
· Prepared tour materials and checked routes for North Campus, South Campus, and General tours
· On the day of orientation, coordinated hourly tours and assigned tour guides to routes

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

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

Macalester College Financial Affairs Commission (FAC) 2009-2010
Voting Member
· As a member of the FAC, assessed student groups' requests for funding and helped maintained the student government's $100,000 yearly budget

Macalester College Math Department 2008-2009
Department Liaison
· Participated in monthly department meetings and provided students' perspectives to the faculty

SKILLS

Language	Conversational in Spanish
Design	Adobe suite (Illustrator, InDesign, etc.), HTML and CSS
Office	Microsoft Office suite, copy editing, proofreading
Technical Software	Matlab, Mathematica, R, Comsol, ArcGIS, Python, LaTeX, JavaScript
Social Media	Twitter: **@AmeliaMN**, 2,000 tweets, 550 followers
	Blog: contributor and member of leadership team, **www.datascience.la**
	Blog: maintainer, **www.stat.ucla.edu/∼amelia.mcnamara/blog**

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American Statistical Association (ASA)	2012-present
Society for Industrial and Applied Mathematics (SIAM)	2012-present
Association for Women in Mathematics (AWM)	2008-2010, 2014-present
WNAR: International Biometric Society (WNAR)	2013-2014

RELEVANT COURSEWORK

Statistical		
Applied Probability	UCLA	Fall 2010
Research Design, Sampling, and Analysis	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
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
Computational		
Statistics Programming	UCLA	Fall 2010
Computing for Data Analysis	Coursera	Fall 2012
Programming Media	UCLA	Fall 2012
Computer Programming Languages and Systems	UCLA	Winter 2013
Human/Computer Interaction	UCLA	Winter 2013
Educational		
Teaching College Statistics	UCLA	Fall 2010
High School Reform	UCLA	Fall 2011
High School Reform	UCLA	Winter 2012
Collegium of University Teaching Fellows Seminar	UCLA	Fall 2014