

# Katie Scranton

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I am a PhD data scientist who loves solving complex statistical challenges to better visualize and analyze patterns in data. Throughout my career I have been dedicated to inclusivity in the STEM fields, most recently founding and organizing the local Los Angeles branch of R-Ladies.

## Education

Ph.D., University of California, Berkeley	2006 - 2012
<i>Development of frequentist and Bayesian statistical models for hierarchical experimental designs in ecology</i>	
B.Sc., McGill University	2000 - 2005
Major in Biology, Minor in Mathematics and Statistics	

## Professional Experience

Lecturer, University of California, Los Angeles	2018
<i>Mathematics for Life Scientists.</i> Introduction to the use of calculus in the modeling of biological systems.	
Postdoctoral Fellow, University of California, Los Angeles	2016 - 2018
Development of stochastic population models and statistical methods to perform model inference.	
Postdoctoral Fellow, Yale University	2012 - 2015
Development of stochastic community models and validation of statistical methods across data sets.	

## Technical Skills

**Statistical Modeling:** hypothesis testing, bootstrap resampling, mixed-effects regression, survival analysis, classification theory, Approximate Bayesian Computation (ABC), Monte Carlo algorithms.

**Numerical Modeling:** linear algebra (matrix modeling), ordinary and delay differential equation modeling, stochastic branching processes, Gillespie algorithms.

**Programming Languages and Software:** R, Python, Jupyter, L<sup>A</sup>T<sub>E</sub>X. Some experience with Matlab and Mathematica. Familiar with Fortran, C++, and ArcGIS.

**Communication:** Experienced public speaker for audiences including potential donors (non-technical), university students, and technical experts. Author on 9 peer-reviewed publications.

## Service and Outreach

Founder and Organizer of R-Ladies LA, the local Los Angeles branch of R-Ladies	2016-2018
Women In Science at Yale mentor	2013-2015
New Haven Science Fair mentor, Fairhaven School	2013-2014
Coordinator and Planning Committee member, Expanding Your Horizons conference	2011-2012
NSF GK-12 Fellow. Outdoor, experiential science education for California public schools	2010-2012

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