

## BIOGRAPHICAL SKETCH - JACLYN LANG

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### PROFESSIONAL PREPARATION

|                                       |                 |                  |                        |
|---------------------------------------|-----------------|------------------|------------------------|
| Bryn Mawr College                     | Bryn Mawr, PA   | mathematics      | B.A./M.A., 2009        |
| University of Cambridge               | Cambridge, UK   | pure mathematics | CASM, 2010             |
| University of California, Los Angeles | Los Angeles, CA | mathematics      | Ph.D., 2016 (expected) |

### APPOINTMENTS

- Cota-Robles Fellow (2010-2011, 2015-2016)
- NSF Graduate Research Fellow (2011-2013, 2014-2015)
- UCLA Math Dept. Teaching Assistant Consultant (Fall 2013)
- Summer Program for Women in Mathematics teaching assistant (Summer 2012)
- UCLA Math Dept. Teaching Assistant (Spring 2011); Teaching Fellow (2013-2014)
- Program in Mathematics for Young Scientists Counselor (Summer 2010)

### PUBLICATIONS

#### Related to proposed project

- (1) LANG, J. On images of Galois representation associated to a non-CM Hida family. submitted to *Algebra and Number Theory*, [http://www.math.ucla.edu/~jaclynlang/I\\_0\\_level\\_existence.pdf](http://www.math.ucla.edu/~jaclynlang/I_0_level_existence.pdf), 2015

#### Other publications

- (1) BALAKRISHNAN, J., ÇIPERIANI, M., LANG, J., MIRZA, B., AND NEWTON, R. Shadow lines in the arithmetic of elliptic curves. to appear in *Women in Numbers 3 Proceedings*, <https://www.ma.utexas.edu/users/mirela/ShadowLines.pdf>, 2015.
- (2) DAUB, M., LANG, J., MERLING, M., PITIWAN, N., PACELLI, A., AND ROSEN, M. Function fields with class number indivisible by a prime  $\ell$ . *Acta Arith.* 150, 4 (2011), 339–359.

### SYNERGISTIC ACTIVITIES

#### Increasing participation of underrepresented minorities and women in mathematics

- Co-organized UCLA Women in Math group (2010-present); activities included mentoring young women graduate students, inviting distinguished women mathematicians to campus
- Presenter at EmpowHer STEM Day (2014-2015); presented probability to underprivileged middle school girls through an interactive demonstration of the Monty Hall Problem
- Yale Bouchet Conference on Diversity and Graduate Education (2014); inducted into Bouchet Graduate Honor Society and participated in conference on techniques for increasing diversity in academia

- Curriculum development for MATH 495 (2013); co-created the curriculum for MATH 495 which teaches new math graduate students how to be effective teaching assistants; introduced a lesson on stereotype threat and diversity in the classroom

## Talks

### *Invited talks*

- Five Colleges Number Theory Seminar, Amherst College (September 2015)
- Number Theory Seminar, Massachusetts Institute of Technology (September 2015)
- Mathematics Colloquium, Loyola Marymount University (February 2015)
- Number Theory Seminar, University of Texas, Austin (March 2014)
- Mathematics Colloquium, California State Polytechnic University, Pomona (January 2014)

### *Contributed talks (outside home institution)*

- AMS Western Sectional Meeting, CSU-Fullerton (October 2015)
- BU-Keio U. Workshop, Boston University (September 2015)
- Number Theory Conference, University of Illinois at Urbana-Champaign (August 2015)
- Graduate Summer School on “New Geometric Techniques in Number Theory”, Mathematical Sciences Research Institute (July 2013)
- Women in Mathematics in Southern California Symposium, Loyola Marymount University (October 2012)

## Peer review service

- Referee for *Mathematical Research Letters*
- Referee for *John Coates’ 70th Birthday Conference Proceedings*

## Contributions to SAGE (open source software)

- Helped create method to compute shadow lines of elliptic curves as part of Women in Numbers: 3 project.
- Created a method `has_cm()` at SAGE Days 69: Women in SAGE 6 to test whether a given modular form has CM.

## Leadership positions

- President of UCLA Mathematics Department Graduate Student Organization (2012-2014)
- Organizer of UCLA Mathematics Department professional development workshops: applying for the NSF Graduate Research Fellowship; how to give a math talk; panel on academic jobs; peer editing for academic job documents
- Panelist for undergraduate math majors interested in graduate school: The Aftermath Conference, Harvey Mudd College (February 2013); UCLA (October 2011)

## COLLABORATORS AND OTHER AFFILIATIONS

**Collaborators (Total: 9)** Jennifer Balakrishnan (University of Oxford), Mirela Çiperiani (University of Texas, Austin), Michael Daub (Amazon), Bahare Mirza (McGill University), Mona Merling (Johns Hopkins University), Rachel Newton (Institut des Hautes Études Scientifiques), Allison Pacelli (Williams College), Natee Pitiwan (Chulalongkorn University), Michael Rosen (Brown University)

**Graduate Advisors (Total: 3)** Haruzo Hida (University of California, Los Angeles), Tom Fisher (Trinity College, University of Cambridge), Helen Grundman (Bryn Mawr College)