

AMELIA (MILLY) FARID
Curriculum Vitae

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EDUCATION

- Ph.D. University of California, Berkeley**
Science and Mathematics Education (SESAME); expected 2021
Dissertation: *Relations between disciplinary practices and conceptual understanding in mathematics: Leveraging definitional practices to support students' fraction understanding*
Dissertation Committee: Dor Abrahamson (co-chair), Geoffrey Saxe (co-chair), Alan Schoenfeld
Qualifying Exam specializations: mathematical practices of defining; the development of rational number knowledge; cultural-developmental theories of mathematical cognition
- M.A. University of California, Berkeley**
Mathematics; 2015
Thesis: *The Sato-Tate conjecture: A survey*
Advisor: Xinyi Yuan
Recipient of Chancellor's Fellowship
- B.A. Columbia University, New York, NY**
Mathematics, East Asian Languages and Cultures (double major); 2011
Graduated *cum laude*
Thesis: *Grassroots NGOs in China and their relationship with local government*
Semester abroad at Tsinghua University, Beijing, China

PUBLICATIONS & PROCEEDINGS

- Saxe, G. B., Farid, A. (2021). *The Interplay between Individual and Collective Activity: An analysis of classroom discussions about the Sierpinski triangle*. (Manuscript submitted for publication)
- Farid, A. (2016). Supporting discursive shifts toward mathematical defining. In M. Wood, E. Turner, M. Civil & J. A. Eli (Eds.), *Proceedings of the 38th annual meeting of the North-American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 701). Tuscon, AZ: University of Arizona.
- Brereton J., Farid A., Karnib M., Marple G., Quenon A., & Tefera A. (2011). Combinatorial and Automated Proofs of Certain Identities. *The Electronic Journal of Combinatorics*. 18(2).

PRESENTATIONS

- Farid, A. (2018, June). *Definitional forms and their functions in mathematical thinking: Students' epistemological considerations*. Paper presented at the 48th Annual Meeting of the Jean Piaget Society, Amsterdam, the Netherlands.
- Farid, A., & Kulinsky, E. (2018, April). *Students' mathematical practices of defining: a Piagetian perspective*. Paper presented at the 1st Annual Meeting of Mathematical Cognition and Learning Society, Oxford, UK.
- Farid, A. (2017, June). *Definitional shifts in mathematics*. Paper presented at the 47th Annual Meeting of the Jean Piaget Society, San Francisco, CA.
- Farid, A. (2016, November). *Supporting discursive shifts toward mathematical defining*. Poster session presented at the 38th annual meeting of the North-American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA). Tuscon, AZ: University of Arizona.
- Farid, A. (2016, February). *The Specifications Game: Developing mathematical practices of defining*. Poster session presented at the 16th Annual Education Research Day, Berkeley, CA: UC Berkeley.
- Farid A. (2010, August). *Proofs Outside the Box: Combinatorial Proofs of Certain Identities*. Paper presented at the Mathematical Association of America Mathfest. Pittsburgh, PA.

RESEARCH EXPERIENCE

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| 2017-2018 | Online Placement & Assessment for Undergraduate Mathematics Students
P.I.: Dean Frances Hellman, College of Letters & Sciences, UC Berkeley |
| 2016-2017 | Gesture Enhancement of Virtual Agent Mathematics Tutors
P.I.: Dor Abrahamson, Graduate School of Education, UC Berkeley |
| 2010 | Undergraduate Research in Mathematics, <i>Eisenstein Series and Zeta Functions</i>
P.I.: Yakov Kerzhner, Columbia University |
| 2009 | Summer Undergraduate Research Institute in Experimental Mathematics
P.I.: Aklilu Zeleke, Michigan State University |

TEACHING & MENTORING EXPERIENCE

UC Berkeley

Fall 2018

Thesis Advising

Advised undergraduate student in conducting research and writing undergraduate senior thesis.

Summer 2018

Student Mentoring and Research Teams (SMART) Program

Completed a course on mentoring in higher education; designed a mentored research opportunity for an undergraduate mentee; worked with undergraduate mentee in guided study and mathematics education research.

Spring & Fall 2017

Pre-Calculus

Instructor for courses of ~200 students. Coordinated the work of up to 5 Graduate Student Instructors; taught weekly lectures, created and graded exams and problem sets, and held regular office hours.

Summer 2017

Academic Talent Development Program

Taught one semesters' worth of Algebra I to ~15 middle school students in a summer program at UC Berkeley.

2014 – 2016

Calculus I; Calculus II; Linear algebra; Math for biology

Graduate student instructor for 7 discussion sections for undergraduate mathematics courses, with ~25 students per section; taught weekly sections, created and graded exams and problem sets, held regular office hours.

Columbia University

Fall 2011

Calculus I

Teaching assistant for Calculus students.

SERVICE: PEER REVIEW

Journal

*Digital Experiences in Mathematics Education*RESEARCH & TEACHING INTERESTS

Research

Mathematics teaching and learning; learning trajectories; mathematical practices

Teaching

Learning Sciences: Sociocultural theories of learning; qualitative methods
Mathematics: Pre-Calculus; Calculus; Linear Algebra; Abstract Algebra; Complex Analysis

AWARDS & HONORS

National Academy of Education / Spencer Foundation

NAEd/Spencer Dissertation Fellowship (\$27,000) 2019-2020

University of California, Berkeley

Barbara White Bequest for STEM Education (\$1,080) 2019

Barbara White Bequest for STEM Education (\$1,400) 2018

Summer Mentoring and Research Teams Research Funds (\$1,000) 2018

Summer Mentoring and Research Teams Award (\$5,000) 2018

Graduate Division Conference Travel Grant (\$1,500) 2017

SESAME Block Grant (\$5,000) 2017

Graduate Division Conference Travel Grant (\$900) 2016

SESAME Block Grant (\$2,000) 2016

Chancellor's Fellowship (\$24,500) 2013-2014

Chancellor's Fellowship (\$24,500) 2012-2013

Columbia University

Dean's List 2008-2011

OTHER

Birth place: Hong Kong

Citizenship: USA

Languages: Mandarin (native), English (native), Spanish (fluent), Farsi (fluent).

Leadership and Service: Established and ran a program of social empowerment for middle-school students in Beijing (China), Cali (Colombia), New York (NY), and Berkeley (CA).

REFERENCES

Professor Geoffrey B. Saxe

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Professor Dor Abrahamson

Graduate School of Education,

SESAME program faculty

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