

Sami H. Assaf

ASSOCIATE PROFESSOR OF MATHEMATICS

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Education

- 2007 Ph.D. **University of California Berkeley**, MATHEMATICS (advisor: Mark Haiman)
2001 B.A. **University of Notre Dame**, HONORS MATHEMATICS AND PHILOSOPHY *summa cum laude*

Employment

- 2019 – **University of Southern California**, ASSOCIATE PROFESSOR OF MATHEMATICS
2012 – 2018 **University of Southern California**, ASSISTANT PROFESSOR OF MATHEMATICS
2011 – 2012 **Berkeley Quantitative**, SENIOR QUANTITATIVE RESEARCH ANALYST
2008 – 2011 **Massachusetts Institute of Technology**, C.L.E. MOORE INSTRUCTOR
Sp – 2008 **Mathematical Sciences Research Institute**, POSTDOCTORAL FELLOW
2007 – 2008 **University of Pennsylvania**, NSF POSTDOCTORAL RESEARCH FELLOW

Grant Support

RESEARCH GRANTS

- 2018–2021 **National Science Foundation, Individual Grant**, DMS-1763336 \$150,000
2017–2022 **Simons Foundation, MPS-Collaboration Grants for Mathematicians**, Award 524477, S.A. \$42,000
2013–2015 **National Science Foundation, Individual Grant**, DMS-1265728 \$110,000
2012 **National Science Foundation, Individual Grant**, awarded by NSF; declined by PI \$100,000
2007–2011 **National Science Foundation, Mathematical Sciences Postdoctoral Research Fellowship**, DMS-0703567 \$108,000

TRAVEL GRANTS

- 06/2017 **Association for Women in Mathematics Travel Grant**, London, UK \$3,000
02/2012 **Association for Women in Mathematics Travel Grant**, Nagoya, Japan \$2,000
05/2009 **Association for Women in Mathematics Travel Grant**, Valparaiso, Chile \$2,000
05/2006 **King Juan Carlos I of Spain Travel Grant for the ICM 2006**, Madrid, Spain \$5,000

Honors & Awards

- 2017 **Mentoring Award for Faculty Mentoring Undergraduates**, University of Southern California
2012 **Endowed Chair, Gabilan Assistant Professor of Mathematics**, University of Southern California
2007 **Herb Alexander Prize, for an outstanding dissertation in pure math**, UC Berkeley
2005 **Outstanding Graduate Student Instructor Award**, UC Berkeley
2002 **National Defense Science and Engineering Graduate Research Fellowship**, US DOD
2001 **National Science Foundation Graduate Research Fellowship**, National Science Foundation
2001 **Koletis Award for Excellence in Mathematics**, University of Notre Dame
2001 **Alice T. Schafer Prize, runner-up**, Association for Women in Mathematics

Research Papers

PREPRINTS

43. **Sami Assaf**. “An insertion algorithm for multiplying Demazure characters by Schur polynomials”. arXiv:2109.05651. 2021
42. Sam Armon, **Sami Assaf**, Grant Bowling, and Henry Ehrhard. “Kohnert’s rule for flagged Schur modules”. arXiv:2012.05382. 2021
41. **Sami Assaf** and Danjoseph Quijada. “A Pieri rule for Demazure characters of the general linear group”. arXiv:1908.08502. 2019

PUBLICATIONS

40. **Sami Assaf**. “Queer dual equivalence graphs”. In: *J. Comb.* (). to appear
39. **Sami H. Assaf**. “A bijective proof of Kohnert’s rule for Schubert polynomials”. In: *Combin. Th.* 2.1 (2022), #5
38. **Sami Assaf**. “Demazure crystals for Kohnert polynomials”. In: *Trans. Amer. Math. Soc.* 375.3 (2022), pp. 2147–2186
37. **Sami Assaf** and Stephanie van Willigenburg. “Skew key polynomials and a generalized Littlewood-Richardson rule”. In: *European J. Combin.* 103 (2022), Paper No. 103518
36. **Sami H. Assaf**. “Weak dual equivalence for polynomials”. In: *Ann. Comb.* 26.2 (2022)
35. **Sami Assaf** and Dominic Searles. “Kohnert polynomials”. In: *Experimental Mathematics* 31.1 (2022), pp. 93–119
34. **Sami Assaf** and Nicolle González. “Affine Demazure crystals for specialized nonsymmetric Macdonald polynomials”. In: *Algebr. Comb.* 4.5 (2021), pp. 777–793
33. **Sami H. Assaf**. “A generalization of Edelman-Greene insertion for Schubert polynomials”. In: *Algebr. Comb.* 4.2 (2021), pp. 359–385
32. **Sami Assaf** and Nicolle González. “Demazure crystals for specialized nonsymmetric Macdonald polynomials”. In: *J. Combin. Theory Ser. A* 182 (2021), pp. 105463, 75
31. **Sami Assaf** and Ezgi Kantarci Oğuz. “Toward a Local Characterization of Crystals for the Quantum Queer Superalgebra”. In: *Ann. Comb.* 24.1 (2020), pp. 3–46
30. **Sami H. Assaf** and David E. Speyer. “Specht modules decompose as alternating sums of restrictions of Schur modules”. In: *Proc. Amer. Math. Soc.* 148.3 (2020), pp. 1015–1029
29. **Sami Assaf** and Nantel Bergeron. “Flagged (P, ρ) -partitions”. In: *European J. Combin.* 86 (2020), p. 103085
28. **Sami Assaf** and Stephanie van Willigenburg. “Skew key polynomials and the key poset”. In: *Sém. Lothar. Combin.* 82B (2020), Art. 77, 12
27. **Sami Assaf** and Dominic Searles. “Skew polynomials and extended Schur functions”. In: *Sém. Lothar. Combin.* 82B (2020), Art. 31, 12
26. **Sami Assaf**. “An inversion statistic for reduced words”. In: *Adv. in Appl. Math.* 107 (2019), pp. 1–21
25. **Sami Assaf** and Nicolle S. González. “Crystal graphs, key tabloids, and nonsymmetric Macdonald polynomials”. In: *Sém. Lothar. Combin.* 80B (2018), Art. 81, 12
24. **Sami Assaf** and Danjoseph Quijada. “A Pieri rule for key polynomials”. In: *Sém. Lothar. Combin.* 80B (2018), Art. 78, 12
23. **Sami Assaf** and Ezgi Kantarci Oğuz. “Crystal graphs for shifted tableaux”. In: *Sém. Lothar. Combin.* 80B (2018), Art. 26, 12
22. **Sami Assaf**. “Nonsymmetric Macdonald polynomials and a refinement of Kostka-Foulkes polynomials”. In: *Trans. Amer. Math. Soc.* 370.12 (2018), pp. 8777–8796
21. **Sami Assaf** and Anne Schilling. “A Demazure crystal construction for Schubert polynomials”. In: *Algebr. Comb.* 1.2 (2018), pp. 225–247
20. **Sami Assaf**. “Toward the Schur expansion of Macdonald polynomials”. In: *Electron. J. Combin.* 25.2 (2018), Paper 2.44, 20
19. **Sami Assaf**. “Shifted dual equivalence and Schur P -positivity”. In: *J. Comb.* 9.2 (2018), pp. 279–308
18. **Sami Assaf** and Dominic Searles. “Kohnert tableaux and a lifting of quasi-Schur functions”. In: *J. Combin. Theory Ser. A* 156 (2018), pp. 85–118
17. **Sami Assaf**. “Tableau models for Schubert polynomials”. In: *Sém. Lothar. Combin.* 78B (2017), Art. 12, 12
16. **Sami Assaf** and Dominic Searles. “Slide polynomials”. In: *Sém. Lothar. Combin.* 78B (2017), Art. 11, 12
15. **Sami Assaf** and Dominic Searles. “Schubert polynomials, slide polynomials, Stanley symmetric functions and quasi-Yamanouchi pipe dreams”. In: *Adv. Math.* 306 (2017), pp. 89–122
14. **Sami Assaf**, Noah Forman, and Jim Pitman. “The quantile transform of simple walks and Brownian motion”. In: *Electron. J. Probab.* 20 (2015), no. 90, 39
13. **Sami H. Assaf**. “Dual equivalence graphs I: A new paradigm for Schur positivity”. In: *Forum Math. Sigma* 3 (2015), e12, 33
12. **Sami H. Assaf** and Sara C. Billey. “Affine dual equivalence and k -Schur functions”. In: *J. Comb.* 3.3 (2012), pp. 343–399
11. **Sami Assaf**, Persi Diaconis, and Kannan Soundararajan. “Riffle shuffles with biased cuts”. In: *24th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2012)*. Discrete Math. Theor. Comput. Sci. Proc., AR. Assoc. Discrete Math. Theor. Comput. Sci., Nancy, 2012, pp. 445–456
10. **Sami Assaf**, Persi Diaconis, and K. Soundararajan. “A rule of thumb for riffle shuffling”. In: *Ann. Appl. Probab.* 21.3 (2011), pp. 843–875
9. **Sami H. Assaf** and Peter R. W. McNamara. “A Pieri rule for skew shapes”. In: *J. Combin. Theory Ser. A* 118.1 (2011), pp. 277–290
8. **Sami H. Assaf**. “Cyclic derangements”. In: *Electron. J. Combin.* 17.1 (2010), Research Paper 163, 14

7. **Sami H. Assaf** and Peter R. W. McNamara. “A Pieri rule for skew shapes”. In: *22nd International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2010)*. Discrete Math. Theor. Comput. Sci. Proc., AN. Assoc. Discrete Math. Theor. Comput. Sci., Nancy, 2010, pp. 133–144
6. **Sami Assaf** and Adriano Garsia. “A kicking basis for the two column Garsia-Haiman modules”. In: *21st International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2009)*. Discrete Math. Theor. Comput. Sci. Proc., AK. Assoc. Discrete Math. Theor. Comput. Sci., Nancy, 2009, pp. 103–114
5. **Sami Assaf**, Persi Diaconis, and K. Soundararajan. “Riffle shuffles of a deck with repeated cards”. In: *21st International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2009)*. Discrete Math. Theor. Comput. Sci. Proc., AK. Assoc. Discrete Math. Theor. Comput. Sci., Nancy, 2009, pp. 89–102
4. **Sami H. Assaf**. “A combinatorial realization of Schur-Weyl duality via crystal graphs and dual equivalence graphs”. In: *20th Annual International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2008)*. Discrete Math. Theor. Comput. Sci. Proc., AJ. Assoc. Discrete Math. Theor. Comput. Sci., Nancy, 2008, pp. 141–152
3. **Sami H. Assaf**. “A generalized major index statistic”. In: *Sém. Lothar. Combin.* 60 (2008/09), Art. B60c, 14
2. **Sami Hayes Assaf**. *Dual equivalence graphs, ribbon tableaux and Macdonald polynomials*. Thesis (Ph.D.)—University of California, Berkeley. ProQuest LLC, Ann Arbor, MI, 2007, p. 78
1. **Sami Assaf**, Li-Chung Chen, Tegan Cheslack-Postava, Benjamin Cooper, Alexander Diesl, Thomas Garrity, Mathew Lepinski, and Adam Schuyler. “A dual approach to triangle sequences: a multidimensional continued fraction algorithm”. In: *Integers* 5.1 (2005), A8, 39

ADDITIONAL STUDENT PAPERS ADVISED (NOT CO-AUTHORED)

1. Ezgi Kantarcı Oğuz. “A note on Jing and Li’s type B quasisymmetric Schur functions”. In: *Ann. Comb.* 23.1 (2019), pp. 159–170
2. George Wang. “A cornucopia of quasi-Yamanouchi tableaux”. In: *Electron. J. Combin.* 26.1 (2019), Paper No. 1.10, 21
3. Nicolle S. González. “Categorical Bernstein operators and the boson-fermion correspondence”. In: *Selecta Math. (N.S.)* 26.4 (2020), Paper No. 51, 64
4. Ezgi Kantarcı Oğuz. “A shifted analogue to ribbon tableaux”. In: *J. Comb.* 11.1 (2020), pp. 169–202
5. Ezgi Kantarcı Oğuz. “Descent polynomials, peak polynomials and an involution on permutations”. In: *Sém. Lothar. Combin.* 82B (2020), Art. 41, 7
6. George Wang. “Locks fit into keys: a crystal analysis of lock polynomials”. In: *Ann. Comb.* 24.4 (2020), pp. 767–789
7. Peter Kagey. “Expected value of letters of permutations with a given number of k -cycles”. arXiv:2112.05281. 2021
8. Sam Armon. “Proof of the $n!/2$ conjecture for hook shapes”. arXiv:2203.15146. 2022

Presentations

INVITED CONFERENCES

05/2023	AMS Invited Address , AMS Western Meeting	Fresno, CA
05/2022	Open Problems in Algebraic Combinatorics , plenary speaker	Minnesota, MN
05/2021	Diagrammatic and Combinatorial Methods in Representation Theory , AMS Western Meeting	(virtual)
10/2020	Graduate Research Opportunities for Women , key note speaker	(virtual)
04/2020	Algebraic Combinatorics Online Workshop , Mittag Leffler Institute	(virtual)
01/2020	Representations of Finite Groups and Related Structures , Joint Mathematics Meeting	Denver, CO
09/2019	Integrability, Combinatorics, and Representations , invited speaker	Hyères, France
07/2019	Formal Power Series and Algebraic Combinatorics , refereed presentation	Ljubljana, Slovenia
04/2019	Graduate Student Combinatorics Conference , key note speaker	Philadelphia, PA
03/2019	Asymptotic Algebraic Combinatorics , BIRS	Banff, Canada
01/2019	Representation Theory Connections to (q,t)-Combinatorics , BIRS	Banff, Canada
10/2018	Combinatorial and Categorical Aspects of Representation Theory , AMS Western Meeting	San Francisco, CA
07/2018	Formal Power Series and Algebraic Combinatorics , plenary speaker	Hanover, NH
11/2017	Combinatorial Representation Theory , AMS Western Meeting	Riverside, CA
07/2017	Formal Power Series and Algebraic Combinatorics , refereed presentation	London, England
04/2017	Algebraic Combinatorics , AWM Research Symposium	Los Angeles, CA
02/2017	WimSoCal Symposium , key note speaker	Los Angeles, CA

08/2015	Positivity in Algebraic Combinatorics , BIRS	<i>Banff, Canada</i>
05/2015	Classification of Multiplicity-Free Kronecker Products , BIRS	<i>Banff, Canada</i>
11/2014	Combinatorics and Complexity of Kronecker Coefficients Workshop , AIM	<i>Palo Alto, CA</i>
03/2013	SUMR Reunion Conference honoring Frank Connolly , University of Notre Dame	<i>South Bend, IN</i>
01/2013	Groups, Representations and Applications , Joint Mathematics Meeting	<i>San Diego, CA</i>
01/2013	Algebraic Combinatorics and Representation Theory , Joint Mathematics Meeting	<i>San Diego, CA</i>
12/2012	Rational Catalan Combinatorics Workshop , AIM	<i>Palo Alto, CA</i>
07/2012	Mathematical Society of Japan International conference on Schubert calculus ,	<i>Osaka, Japan</i>
07/2012	Formal Power Series and Algebraic Combinatorics , refereed presentation	<i>Nagoya, Japan</i>
09/2011	Symmetric Functions and Symmetric Group Characters , AMS Southeast Meeting	<i>Winston-Salem, NC</i>
11/2010	Quasisymmetric Functions Workshop , BIRS	<i>Banff, Canada</i>
11/2010	Algebraic and Topological Combinatorics , AMS Central Meeting	<i>Notre Dame, IN</i>
09/2010	Triangle Lectures in Combinatorics , plenary speaker	<i>Durham, NC</i>
07/2010	Affine Schubert Calculus Workshop , Fields Institute	<i>Toronto, Canada</i>
06/2010	Minisymposium on Combinatorial Representation Theory , SIAM Discrete Math Conference	<i>Austin, TX</i>
04/2010	Partition Theory and Combinatorics of Symmetric Functions , AMS Central Meeting	<i>St Paul, MN</i>
04/2010	Combinatorial Representation Theory , AMS Central Meeting	<i>St Paul, MN</i>
03/2010	Combinatorial representation theory , Mathematisches Forschungsinstitut Oberwolfach	<i>Oberwolfach, Germany</i>
03/2010	Localization techniques in equivariant cohomology , AIM	<i>Palo Alto, CA</i>
01/2010	Enumerative Combinatorics , Joint Mathematics Meeting	<i>San Francisco, CA</i>
10/2009	Algebraic Combinatorics , AMS Eastern Meeting	<i>University Park, PA</i>
07/2009	Formal Power Series and Algebraic Combinatorics , refereed presentation	<i>Hagenberg, Austria</i>
01/2009	Connections for Women: Algebraic Geometry and Related Fields , MSRI	<i>Berkeley, CA</i>
10/2008	Combinatorial Representation Theory , AMS Western Regional Meeting	<i>Vancouver, Canada</i>
06/2008	Formal Power Series and Algebraic Combinatorics , refereed presentation	<i>Valparaiso, Chile</i>
04/2008	MIT Women In Mathematics: A Celebration , MIT	<i>Cambridge, MA</i>
01/2008	Introductory Workshop on Combinatorial Representation Theory , MSRI	<i>Berkeley, CA</i>
09/2007	Applications of Macdonald Polynomials , BIRS	<i>Banff, Canada</i>
07/2007	Formal Power Series and Algebraic Combinatorics , refereed presentation	<i>Tianjin, P.R. China</i>
05/2007	Combinatorial Hopf Algebras and Macdonald polynomials , CRM	<i>Montreal, Canada</i>
04/2007	Algebraic Combinatorics , AMS Western Regional Meeting	<i>Tucson, AZ</i>
07/2005	Generalized Kostka polynomials , AIM	<i>Palo Alto, CA</i>

SEMINARS AND COLLOQUIA

04/2022	Algebra Seminar , University of Southern California	<i>Los Angeles, CA</i>
09/2020	Algebraic Combinatorics Seminar , Institute of Mathematical Sciences (IMSc)	<i>(virtual)</i>
11/2019	Algebraic Combinatorics Seminar , Fields Institute	<i>Toronto, CA</i>
04/2019	Combinatorics and Algebraic Geometry Seminar , University of Pennsylvania	<i>Philadelphia, PA</i>
11/2018	Rising Stars Colloquium , Pacific Institute for Mathematical Sciences	<i>Vancouver, Canada</i>
11/2018	Combinatorics Seminar , University of British Columbia	<i>Vancouver, Canada</i>
10/2018	Combinatorics Seminar , University of California Berkeley	<i>Berkeley, CA</i>
10/2018	Colloquium , California Institute of Technology	<i>Pasadena, CA</i>
09/2018	Algebra Number Theory, Combinatorics Seminar , Claremont McKenna College	<i>Claremont, CA</i>
09/2018	Algebra and Combinatorics Seminar , North Carolina State University	<i>Raleigh, NC</i>
09/2018	Geometry Seminar , University of North Carolina	<i>Chapel Hill, NC</i>
09/2017	Combinatorics Seminar , Stanford University	<i>Palo Alto, CA</i>
05/2017	Combinatorics Seminar , UCLA	<i>Los Angeles, CA</i>
04/2016	Combinatorics Seminar , California Institute of Technology	<i>Pasadena, CA</i>
04/2014	Lie Theory Seminar , University of Notre Dame	<i>South Bend, IN</i>
02/2013	Algebra, Number Theory, Combinatorics Seminar , Pomona College	<i>Claremont, CA</i>

02/2013	Combinatorics Seminar , UCLA	Los Angeles, CA
10/2012	Colloquium , North Carolina School of Science and Mathematics	Durham, NC
05/2012	Colloquium , University of Cape Town	Cape Town, South Africa
05/2012	Undergraduate colloquium , University of Cape Town	Cape Town, South Africa
02/2012	Colloquium , University of Southern California	Los Angeles, CA
10/2011	Colloquium , San Jose State University	San Jose, CA
10/2011	Combinatorics Seminar , MIT	Cambridge, MA
10/2011	Colloquium , San Francisco State University	San Francisco, CA
10/2011	Combinatorics Seminar , UC Berkeley	Berkeley, CA
05/2011	Colloquium , Carleton College	Northfield, MN
03/2011	Colloquium , Center for Communications Research	La Jolla, CA
03/2011	Women in Math Lectures , Smith College	Northampton, MA
02/2011	Geometry Seminar , University of North Carolina	Chapel Hill, NC
01/2011	Colloquium , University of Texas at Austin	Austin, TX
01/2011	Special Colloquium , UC San Diego	La Jolla, CA
02/2010	Colloquium , University of Southern California	Los Angeles, CA
02/2010	Colloquium , Dartmouth College	Hanover, NH
01/2010	Distinguished Visiting Professor Lectures , Bucknell University	Lewisburg, PA
01/2010	Combinatorics Seminar , University of Minnesota	Minneapolis, MN
01/2010	Colloquium , University of Minnesota	Minneapolis, MN
11/2009	Geometry-Algebra-Singularities-Combinatorics Seminar , Northeastern University	Boston, MA
11/2009	Algebra Seminar , University of Connecticut	Storrs, CT
11/2009	Combinatorics Seminar , University of Michigan	Ann Arbor, MI
10/2009	Algebra and Combinatorics Seminar , North Carolina State University	Raleigh, NC
03/2009	Undergraduate Mathematics Association Lecture Series , MIT	Cambridge, MA
03/2009	Combinatorics and Algebraic Geometry Seminar , University of Pennsylvania	Philadelphia, PA
01/2009	Combinatorics Seminar , UC San Diego	La Jolla, CA
10/2008	Combinatorics Seminar , MIT	Cambridge, MA
10/2008	Probability Seminar , MIT	Cambridge, MA
10/2008	Combinatorics and Geometry Seminar , University of Washington	Seattle, WA
04/2008	Combinatorics Seminar , MIT	Cambridge, MA
11/2007	Combinatorics and Probability Seminar , University of Pennsylvania	Philadelphia, PA
11/2007	Algebra Seminar , North Carolina State University	Raleigh, NC
10/2007	Colloquium , UC San Diego	La Jolla, CA
04/2007	Combinatorics Seminar , University of Minnesota	Minneapolis, MN
04/2007	Colloquium , University of Notre Dame	South Bend, IN
12/2006	Combinatorics Seminar , MIT	Cambridge, MA
11/2006	Combinatorics and Probability Seminar , University of Pennsylvania	Philadelphia, PA
11/2006	Representation Theory, Geometry and Combinatorics Seminar , UC Berkeley	Berkeley, CA
10/2006	Discrete Mathematics and Representation Theory Seminar , UC Davis	Davis, CA

Students Advised

GRADUATED PH.D. STUDENTS

- 08/2022 Ph.D. **Peter Kagey**, University of Southern California
Thesis title: *(tentative) Statistics, Spinning Switches, Squares, Seating, and Solids*
First position: Harvey Mudd College, Visiting Assistant Professor
- 08/2021 Ph.D. **Dan Joseph Quijada**, University of Southern California
Thesis title: *A Pieri rule for key polynomials*
First position: Art of Problem Solving, Instructor
- 05/2019 Ph.D. **Nicolas González**, University of Southern California
Thesis title: *Categorical operators and crystal structures on the ring of symmetric functions*
First position: UCLA, UC President's Postdoctoral Scholar
- 08/2018 Ph.D. **Ezgi Kantarcı Oğuz**, University of Southern California
Thesis title: *Advances in the combinatorics of shifted tableaux*
First position: KTH Royal Institute of Technology, Postdoctoral Scholar

CURRENT GRADUATE STUDENTS

- Ph.D. **Sam Armon**, University of Southern California (expected graduation 2024)
Ph.D. **Grant Bowles**, University of Southern California (expected graduation 2023)
Ph.D. **Henry Ehrhard**, University of Southern California (expected graduation 2023)

POSTDOCTORAL SCHOLARS

- 2021-2024 **Anne Dranowski**, University of Southern California
2018-2021 **Brendan Pawlowski**, University of Southern California
2015-2018 **Dominic Searles**, University of Southern California

UNDERGRADUATE STUDENTS

- 2017-2018 **Sabrina Enriques**, University of Southern California B.A. 05/2018
2015-2016 **George Wang**, University of Southern California, B.S. 05/2016
2010-2011 **Jon Schneider**, Massachusetts Institute of Technology

Professional Activities

SERVICE TO THE UNIVERSITY OF SOUTHERN CALIFORNIA

- 04/2018 **Mentoring Award Selection Committee for USC Office of the Provost**,
02/2018 **Reviewer for USC Zumberge Individual Grants**,
03/2015 **Interviewer for USC Dornsife Trustee and Presidential Scholarships**,
03/2014 **Interviewer for USC Dornsife Presidential Scholarships**,
03/2014 **Visions and Voices interdisciplinary program**, "Truth Values" PIs: Sami Assaf, KC Cole

SERVICE TO THE USC DEPARTMENT OF MATHEMATICS

- 2012– **Organizer of the USC Combinatorics Seminar**,
2021–2022 **Department of Mathematics Merit Committee**,
2011– **Faculty liaison for Library services**,
2012–2013 **Faculty Organizer for creation of the USC Undergraduate Math Club**,

SERVICE TO OTHER DEPARTMENTS OF MATHEMATICS

- 2009–2011 **Organizer of the Combinatorics Seminar**, MIT
2008–2008 **Organizer of the Postdoc Seminar**, Mathematical Sciences Research Institute
2004–2005 **Member of the Mathematics Department Webpage Committee**, UC Berkeley
2003–2004 **President of the Noetherian Ring**, UC Berkeley
2001–2002 **Co-organizer of the Mentor Lecture Series**, UC Berkeley

SERVICE TO PROFESSIONAL ORGANIZATIONS

2019–2021 **AMS Nominating Committee (chair in 2020)**, American Mathematical Society (elected)

2013–2016 **AWM / AMS Noether Lecture Committee**, American Mathematical Society (appointed)

CONFERENCE ORGANIZATION

05/2023	AMS Western Section Meeting , Special Session organizer	<i>Fresno, CA</i>
05/2022	Southern California Discrete Mathematics Symposium , organizing committee	<i>Claremont, CA</i>
04/2021	Southern California Discrete Mathematics Symposium , organizing committee	<i>Los Angeles, CA</i>
07/2020	Formal Power Series and Algebraic Combinatorics , program committee	<i>Ramat-Gan, Israel</i>
05/2020	AMS Western Section Meeting , Special Session organizer	<i>Fresno, CA</i>
01/2020	Southern California Discrete Mathematics Symposium , organizer	<i>Los Angeles, CA</i>
05/2019	Southern California Discrete Mathematics Symposium , organizer	<i>Claremont, CA</i>
05/2018	Southern California Discrete Mathematics Symposium , organizer	<i>Los Angeles, CA</i>
11/2017	AMS Western Section Meeting , Special Session organizer	<i>Riverside, CA</i>
01/2011	Joint Mathematics Meeting , organizer for AWM Schafer Minisymposium	<i>New Orleans, LA</i>
04/2008	Bay Area Discrete Math Day , local organizer	<i>Berkeley, CA</i>

OUTREACH FOR PRE-K TO 12 STUDENTS

2022– **Venice Math Circle**, Founder and director, serving grades 5–8

2017–2020 **Venice Math Circle**, Founder and director, serving grades PreK–3

04/2017 **UCLA Math Circle**, Special Lecturer for grades 9–12

04/2014 **Mirman School Math Day**, Keynote speaker for grades K–8

10/2012 **North Carolina School of Science and Mathematics**, Colloquium speaker for grades 11–12