Steven V Sam
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EDUCATION
9/2008 – 6/2012 Massachusetts Institute of Technology Ph.D., Math.
Advisors: Richard Stanley, Jerzy Weyman
8/2004 – 5/2008 University of California, Berkeley B.A., Math.

POSITIONS
7/2022 – present University of California, San Diego Professor
7/2020 – 6/2022 University of California, San Diego Associate professor
7/2018 – 6/2020 University of California, San Diego Assistant professor
8/2015 – 7/2018 University of Wisconsin, Madison Assistant professor
7/2012 – 7/2015 University of California, Berkeley Miller research fellow
8/2014 – 12/2014 Simons Institute for Computing Long-term participant
8/2012 – 5/2013 MSRI Postdoctoral fellow

AWARDS, HONORS, GRANTS
2023–2026 NSF standard grant DMS-2302149, $344,491
2018 NSF standard grant DMS-1812462 (co-PI), $15,000
2017–2019 Sloan research fellowship
2017–2023 NSF CAREER grant DMS-1651327 / DMS-1849173, $561,510
2015–2019 NSF standard grant DMS-1500069 / DMS-1848744, $154,866
Nov. 2014 Séminaire Bourbaki talk by A. Djament, “La propriété noethérienne pour les foncteurs entre espaces vectoriels [d’après A. Putman, S. Sam, et A. Snowden]”
2013, 2015 U.S. Junior Oberwolfach Fellow
2012–2015 Miller research fellowship
May 2012 Charles W. and Jennifer C. Johnson Prize (MIT)
2009–2012 Department of Defense NDSEG fellowship
2009 NSF graduate research fellowship
May 2008 UC Berkeley Mathematics departmental citation

PAPERS
Research articles:
81. On the cohomology of tautological bundles over the Quot scheme of curves
   Alina Marian, Dragos Oprea, Steven V Sam
   arXiv:2211.03901
80. Polynomial representations of the Witt Lie algebra
   Steven V Sam, Andrew Snowden, Philip Tosteson
   arXiv:2210.00399

This document was compiled on May 21, 2023.
|   | Title                                                                                      | Authors                                      | Journal/Book Info                           | arXiv Link       |
|---|-------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------|-----------------|
| 79. | A note on projective dimension over twisted commutative algebras                          | Steven V Sam, Andrew Snowden                 | arXiv:2207.05860                            |                 |
| 78. | The representation theory of Brauer categories II: curried algebra                        | Steven V Sam, Andrew Snowden                 | arXiv:2207.04576                            |                 |
| 77. | Jacobi–Trudi formulas and determinantal varieties                                         | Steven V Sam, Jerzy Weyman                  | *Algebraic Combinatorics*, to appear, arXiv:2206.07728 |                 |
| 76. | On some modules supported in the Chow variety                                            | Claudiu Raicu, Steven V Sam, Jerzy Weyman   | *Vietnam J. Math.* 50 (2022), Special issue celebrating the 60th birthday of Bernd Sturmfels, 501–521, arXiv:2108.10910 |                 |
| 75. | Cohomology of flag supervarieties and resolutions of determinantal ideals                 | Steven V Sam, Andrew Snowden                | *Algebr. Geom.*, to appear, arXiv:2108.00504 |                 |
| 74. | A Bruhat atlas for the Mehta–van der Kallen stratification of $T^*GL_n/B$               | Allen Knutson, Steven V Sam                  | *Transform. Groups*, to appear, arXiv:2106.10350 |                 |
| 73. | Hermite reciprocity and Schwarzenberger bundles                                          | Claudiu Raicu, Steven V Sam                 | *Commutative Algebra* (edited by Irena Peeva), 689–721, Springer, 2022, arXiv:2106.04495 |                 |
| 72. | On the geometry and representation theory of isomeric matrices                            | Rohit Nagpal, Steven V Sam, Andrew Snowden  | *Algebra Number Theory* 16 (2022), no. 6, 1501–1529, arXiv:2101.10422 |                 |
| 71. | Supersymmetric monoidal categories                                                       | Steven V Sam, Andrew Snowden                | arXiv:2011.12501                            |                 |
| 70. | The representation theory of Brauer categories I: triangular categories                   | Steven V Sam, Andrew Snowden                | *Appl. Categ. Structures* 30 (2022), 1203–1256, arXiv:2006.04328 |                 |
| 69. | VIC-modules over noncommutative rings                                                     | Andrew Putman, Steven V Sam                  | *Selecta Math. (N.S.)* 28 (2022), no. 5, Art. 88, arXiv:2005.07246 |                 |
| 68. | Schubert varieties and finite free resolutions of length three                           | Steven V Sam, Jerzy Weyman                  | *Proc. Amer. Math. Soc.* 149 (2021), 1943–1955, arXiv:2005.01253 |                 |
| 67. | Sp-equivariant modules over polynomial rings in infinitely many variables                 | Steven V Sam, Andrew Snowden                | *Trans. Amer. Math. Soc.* 375 (2022), 1671–1701, arXiv:2002.03243 |                 |
| 66. | Periodicity in the cohomology of finite general linear groups via $q$-divided powers     | Rohit Nagpal, Steven V Sam, Andrew Snowden  | *Trans. Amer. Math. Soc.* 374 (2021), 5677–5696, arXiv:1910.05690 |                 |
65. **Bi-graded Koszul modules, K3 carpets, and Green’s conjecture**  
Claudiu Raicu, Steven V Sam  
*Compos. Math.* **158** (2022), no. 1, 33–56, arXiv:1909.09122

64. **Linear independence of powers**  
Steven V Sam, Andrew Snowden  
arXiv:1907.02659

63. **Small projective spaces and Stillman uniformity for cohomology of sheaves**  
Daniel Erman, Steven V Sam, Andrew Snowden  
*Algebr. Geom.* **8** (2021), no. 3, 374–388, arXiv:1906.10870

62. **Big polynomial rings with imperfect coefficient fields**  
Daniel Erman, Steven V Sam, Andrew Snowden  
*Michigan Math. J.* **70** (2021), 649–672, arXiv:1806.04208

61. **Generalizations of Stillman’s conjecture via twisted commutative algebras**  
Daniel Erman, Steven V Sam, Andrew Snowden  
*Int. Math. Res. Not. IMRN* (2021), no. 16, 12281–12304, arXiv:1804.09807

60. **Strength and Hartshorne’s conjecture in high degree**  
Daniel Erman, Steven V Sam, Andrew Snowden  
*Math. Z.* **297** (2021), 1467–1471, arXiv:1804.09730

59. **Big polynomial rings and Stillman’s conjecture**  
Daniel Erman, Steven V Sam, Andrew Snowden  
*Invent. Math.* **218** (2019), no. 2, 413–439, arXiv:1801.09852

58. **An equivariant Hilbert basis theorem**  
Daniel Erman, Steven V Sam, Andrew Snowden  
*Math. Res. Lett.* **27** (2020), no. 1, 67–77, arXiv:1712.07532

57. **Stability in the homology of unipotent groups**  
Andrew Putman, Steven V Sam, Andrew Snowden  
*Algebra Number Theory* **14** (2020), no. 1, 119–154, arXiv:1711.11080

56. **Some generalizations of Schur functors**  
Steven V Sam, Andrew Snowden  
*Proc. Amer. Math. Soc.* **147** (2019), no. 1, 77–90, arXiv:1708.06410

55. **On the (non-)vanishing of syzygies of Segre embeddings**  
Luke Oeding, Claudiu Raicu, Steven V Sam  
*Algebr. Geom.* **6** (2019), no. 5, 571–591, arXiv:1708.03803

54. **Hilbert series for twisted commutative algebras**  
Steven V Sam, Andrew Snowden  
*Algebraic Combinatorics* **1** (2018), no. 1, 147–172, arXiv:1705.10718

53. **Homological vanishing for the Steinberg representation**  
Avner Ash, Andrew Putman, Steven V Sam  
*Compos. Math.* **154** (2018), no. 6, 1111–1130, arXiv:1704.08344

52. **Regularity bounds for twisted commutative algebras**  
Steven V Sam, Andrew Snowden  
*Bull. Lond. Math. Soc.* **52** (2020), no. 2, 299–315, arXiv:1704.01630
51. **Regularity of FI-modules and local cohomology**
   Rohit Nagpal, Steven V Sam, Andrew Snowden
   *Proc. Amer. Math. Soc.* **146** (2018), no. 10, 4117–4126, arXiv:1703.06832

50. **GL-equivariant modules over polynomial rings in infinitely many variables. II**
   Steven V Sam, Andrew Snowden
   *Forum Math. Sigma* **7** (2019), e5, 71pp., arXiv:1703.04516

49. **Invariant theory of $\wedge^3(9)$ and genus 2 curves**
   Eric M. Rains, Steven V Sam
   *Algebra Number Theory* **12** (2018), no. 4, 935–957, arXiv:1702.04840

48. **Noetherianity of some degree two twisted skew-commutative algebras**
   Rohit Nagpal, Steven V Sam, Andrew Snowden
   *Selecta Math. (N.S.)* **25** (2019), no. 1, Art. 4, 26 pp., arXiv:1610.01078

47. **Towards Boij–Söderberg theory for Grassmannians: the case of square matrices**
   Nicolas Ford, Jake Levinson, Steven V Sam
   *Algebra Number Theory* **12** (2018), no. 2, 285–303, arXiv:1608.04058

46. **Syzygies of bounded rank symmetric tensors are generated in bounded degree**
   Steven V Sam
   *Math. Ann.*** **368** (2017), no. 3, 1095–1108, arXiv:1608.01722

45. **Questions about Boij–Söderberg theory**
   Daniel Erman, Steven V Sam
   *Surveys on recent developments in algebraic geometry*, 285–304, Proc. Sympos. Pure Math. **95**, Amer. Math. Soc., Providence, RI, 2017, arXiv:1606.01867

44. **Vector bundles on genus 2 curves and trivectors**
   Eric M. Rains, Steven V Sam
   *Algebr. Geom.* **6** (2019), no. 3, 328–345, arXiv:1605.04459

43. **Infinite rank spinor and oscillator representations**
   Steven V Sam, Andrew Snowden
   *J. Comb. Algebra* **1** (2017), no. 2, 145–183, arXiv:1604.06368

42. **Combinatorial constructions of derived equivalences**
   Daniel Halpern-Leistner, Steven V Sam
   *J. Amer. Math. Soc.* **33** (2020), 735–773, arXiv:1601.02030

41. **Ideals of bounded rank symmetric tensors are generated in bounded degree**
   Steven V Sam
   *Invent. Math.* **207** (2017), no. 1, 1–21, arXiv:1510.04904

40. **Supernatural analogues of Beilinson monads**
   Daniel Erman, Steven V Sam
   *Compos. Math.* **152** (2016), no. 12, 2545–2562, arXiv:1506.07558

39. **Equations for the fifth secant variety of Segre products of projective spaces**
   Luke Oeding, Steven V Sam
   *Exp. Math.* **25** (2016), no. 1, 94–99, arXiv:1502.00203

38. **Noetherianity of some degree two twisted commutative algebras**
   Rohit Nagpal, Steven V Sam, Andrew Snowden
   *Selecta Math. (N.S.)* **22** (2016), no. 2, 913–937, arXiv:1501.06925
37. Proof of Stembridge’s conjecture on stability of Kronecker coefficients
   Steven V Sam, Andrew Snowden
   *J. Algebraic Combin.* **43** (2016), no. 1, 1–10, arXiv:1501.00333

36. The cone of Betti tables over three non-collinear points in the plane
   Iulia Gheorghita, Steven V Sam
   *J. Commut. Algebra* **8** (2016), no. 4, 537–548, arXiv:1501.00207

35. Representations of categories of $G$-maps
   Steven V Sam, Andrew Snowden
   *J. Reine Angew. Math.* **750** (2019), 197–226, arXiv:1410.6054

34. On Cohen–Macaulayness of $S_n$-invariant subspace arrangements
   Aaron Brookner, David Corwin, Pavel Etingof, Steven V Sam
   *Int. Math. Res. Not. IMRN* (2016), no. 7, 2104–2126, arXiv:1410.5096

33. Gröbner methods for representations of combinatorial categories
   Steven V Sam, Andrew Snowden
   *J. Amer. Math. Soc.* **30** (2017), 159–203, arXiv:1409.1670

32. Representation stability and finite linear groups
   Andrew Putman, Steven V Sam
   *Duke Math. J.* **166** (2017), no. 13, 2521–2598, arXiv:1408.3694

31. Orthosymplectic Lie superalgebras, Koszul duality, and a complete intersection analogue of the Eagon–Northcott complex
   Steven V Sam
   *J. Eur. Math. Soc. (JEMS)* **18** (2016), no. 12, 2691–2732, arXiv:1312.2255

30. Jacobi–Trudi determinants and characters of minimal affinizations
   Steven V Sam
   *Pacific J. Math.* **272** (2014), no. 1, 237–244, arXiv:1307.6630

29. Homology of analogues of Heisenberg Lie algebras
   Steven V Sam
   *Math. Res. Lett.* **22** (2015), no. 4, 1223–1241, arXiv:1307.1901

28. Representations of rational Cherednik algebras of $G(m, r, n)$ in positive characteristic
   Sheela Devadas, Steven V Sam
   *J. Commut. Algebra* **6** (2014), no. 4, 525–559, arXiv:1304.0856

27. Jack polynomials as fractional quantum Hall states and the Betti numbers of the $(k + 1)$-equals ideal
   Christine Berkesch, Stephen Griffeth, Steven V Sam
   *Comm. Math. Phys.* **330** (2014), no. 1, 415–434, arXiv:1303.4126

26. Tropicalization of classical moduli spaces
   Qingchun Ren, Steven V Sam, Bernd Sturmfels
   *Math. Comput. Sci.* **8** (2014), no. 2, Special issue on computational algebraic geometry, 119–145, arXiv:1303.1132

25. Littlewood complexes and analogues of determinantal varieties
   Steven V Sam, Jerzy Weyman
   *Int. Math. Res. Not. IMRN* (2015), no. 13, 4663–4707, arXiv:1303.0546
24. Stability patterns in representation theory
   Steven V Sam, Andrew Snowden
   *Forum Math. Sigma* 3 (2015), e11, 108 pp., arXiv:1302.5859

23. The cone of Betti tables over a rational normal curve
   Manoj Kummini, Steven V Sam
   *Commutative Algebra and Noncommutative Algebraic Geometry*, 251–264, *Math. Sci. Res. Inst. Publ.* 68, Cambridge Univ. Press, Cambridge, 2015, arXiv:1301.7005

22. Alternating trilinear forms on a 9-dimensional space and degenerations of (3, 3)-polarized Abelian surfaces
   Laurent Gruson, Steven V Sam
   *Proc. Lond. Math. Soc. (3)* 110 (2015), no. 3, 755–785, arXiv:1301.5276

21. Homology of Littlewood complexes
   Steven V Sam, Andrew Snowden, Jerzy Weyman
   *Selecta Math. (N.S.)* 19 (2013), no. 3, 655–698, arXiv:1209.3509

20. The universal Kummer threefold
   Qingchun Ren, Steven V Sam, Gus Schrader, Bernd Sturmfels
   *Exp. Math.* 22 (2013), no. 3, 327–362, arXiv:1208.1229

19. Derived supersymmetries of determinantal varieties
   Steven V Sam
   *J. Commut. Algebra* 6 (2014), no. 2, 261–286, arXiv:1207.3309

18. GL-equivariant modules over polynomial rings in infinitely many variables
   Steven V Sam, Andrew Snowden
   *Trans. Amer. Math. Soc.* 368 (2016), 1097–1158, arXiv:1206.2233

17. Combinatorial realizations of crystals via torus actions on quiver varieties
   Steven V Sam, Peter Tingley
   *J. Algebraic Combin.* 39 (2014), no. 2, 271–300, arXiv:1205.5847

16. Koszul homology of codimension 3 Gorenstein ideals
   Steven V Sam, Jerzy Weyman
   *Proc. Amer. Math. Soc.* 142 (2014), 401–408, arXiv:1203.3168

15. Moduli of Abelian varieties, Vinberg $\theta$-groups, and free resolutions
   Laurent Gruson, Steven V Sam, Jerzy Weyman
   *Commutative Algebra* (edited by Irena Peeva), 419–469, Springer, 2013, arXiv:1203.2575

14. Equations and syzygies of some Kalman varieties
   Steven V Sam
   *Proc. Amer. Math. Soc.* 140 (2012), 4153–4166, arXiv:1105.5756

13. Shapes of free resolutions over a local ring
   Christine Berkesch, Daniel Erman, Manoj Kummini, Steven V Sam
   *Math. Ann.* 354 (2012), no. 3, 939–954, arXiv:1105.2244

12. Tensor complexes: multilinear free resolutions constructed from higher tensors
   Christine Berkesch, Daniel Erman, Manoj Kummini, Steven V Sam
   *J. Eur. Math. Soc. (JEMS)* 15 (2013), no. 6, 2257–2295, arXiv:1101.4604
11. Matrices with restricted entries and $q$-analogues of permutations
Joel Brewster Lewis, Ricky Ini Liu, Alejandro H. Morales, Greta Panova, Steven V Sam, Yan X Zhang
*J. Comb.* 2 (2011), no. 3, 355–396, arXiv:1011.4539

10. Poset structures in Boij–Söderberg theory
Christine Berkesch, Daniel Erman, Manoj Kummini, Steven V Sam
*Int. Math. Res. Not. IMRN* (2012), no. 22, 5132–5160, arXiv:1010.2663

9. Symmetric quivers, invariant theory, and saturation theorems for the classical groups
Steven V Sam
*Adv. Math.* 229 (2012), no. 2, 1104–1135, arXiv:1009.3040

8. Schubert complexes and degeneracy loci
Steven V Sam
*J. Algebra* 337 (2011), 103–125, arXiv:1006.5514

7. Generalized Ehrhart polynomials
Sheng Chen, Nan Li, Steven V Sam
*Trans. Amer. Math. Soc.* 364 (2012), 551–569, arXiv:1002.3658

6. Pieri resolutions for classical groups
Steven V Sam, Jerzy Weyman
*J. Algebra* 329 (2011), Special issue celebrating the 60th birthday of Corrado De Concini, 222–259, arXiv:0907.4505

5. Positivity theorems for solid-angle polynomials
Matthias Beck, Sinai Robins, Steven V Sam
*Beiträge Algebra Geom.* 51 (2010), no. 2, 493–507, arXiv:0906.4031

4. A finite calculus approach to Ehrhart polynomials
Steven V Sam, Kevin M. Woods
*Electron. J. Combin.* 17 (2010), no. 1, Research Paper 68, 13pp., arXiv:0904.0679

3. A bijective proof for a theorem of Ehrhart
Steven V Sam
*Amer. Math. Monthly* 116 (2009), no. 8, 688–701, arXiv:0801.4432

2. Grid graphs, Gorenstein polytopes, and domino stackings
Matthias Beck, Christian Haase, Steven V Sam
*Graphs Combin.* 25 (2009), 409–426, arXiv:0711.4151

1. Maximal periods of (Ehrhart) quasi-polynomials
Matthias Beck, Steven V Sam, Kevin M. Woods
*J. Combin. Theory Ser. A* 115 (2008), 517–525, arXiv:math/0702242

Survey articles:

4. Structures in representation stability
Steven V Sam
*Notices Amer. Math. Soc.* 67 (2020), no. 1, 38–43, arXiv:1912.11139

3. Cubics in 10 variables vs. cubics in 1000 variables: Uniformity phenomena for bounded degree polynomials
Daniel Erman, Steven V Sam, Andrew Snowden
*Bull. Amer. Math. Soc. (N.S.)* 56 (2019), no. 1, 87–114, arXiv:1809.09402
2. **Noetherian properties in representation theory**

Steven V Sam

*Representations of algebras, 215–224, Contemp. Math. 705*, Amer. Math. Soc., 2018, [arXiv:1707.00770](https://arxiv.org/abs/1707.00770)

1. **Introduction to twisted commutative algebras**

Steven V Sam, Andrew Snowden

[arXiv:1209.5122](https://arxiv.org/abs/1209.5122)

**Appendices:**

1. **Appendix to: Patricia Hersh, Victor Reiner, Representation stability for cohomology of configuration spaces in $\mathbb{R}^d$**

Patricia Hersh, Victor Reiner, Steven V Sam

*Int. Math. Res. Not. IMRN* (2017), no. 5, 1433–1486, [arXiv:1505.04196](https://arxiv.org/abs/1505.04196)

**Software:**

2. **Computing Schur complexes**

Michael K. Brown, Hang Huang, Robert P. Laudone, Michael Perlman, Claudiu Raicu, Steven V Sam, João Pedro Santos

*J. Softw. Algebra Geom.* 9 (2019), 111–119, [arXiv:1812.00790](https://arxiv.org/abs/1812.00790)

1. **Computing inclusions of Schur modules**

Steven V Sam

*J. Softw. Algebra Geom.* 1 (2009), 5–10, [arXiv:0810.4666](https://arxiv.org/abs/0810.4666)

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**ADVISING**

**Postdocs:**

1. Reuven Hodges (2021 – 2023), SEW assistant professor

**PhD students:**

2. Robert Laudone, University of Wisconsin (2020)
   “Representation stability for sequences of 0-Hecke modules”

1. Hang (Amy) Huang, University of Wisconsin (2019)
   “Defining equations and syzygies of some $G$-varieties and their thickenings”

**Undergraduates:**

12. Eugene Chiou (September 2022 – March 2023, UCSD undergrad)

11. Rohan Puthukudy (June 2022 – March 2023, UCSD undergrad), UCSD senior thesis

10. Ricardo Arruda (June 2021 – June 2022, UCSD undergrad), UCSD senior thesis

9. Artur Bayramyan (April – September 2020, UCSD undergrad), UCSD senior thesis

8. Keren Shao (July 2019 – June 2020, UCSD undergrad), through NSF CAREER

7. Hantao Yu (July 2019 – May 2021, UCSD undergrad), through NSF CAREER

6. James Boudouris, Sho Kawakami, Jacob Kettinger (June – July 2017, UW-Madison undergrads), through NSF RTG

5. Pallav Goyal (May – Jul. 2016, IIT Kanpur undergrad), through SN Bose Scholars.
   “Invariant theory of finite general linear groups modulo Frobenius powers”, [arXiv:1701.06329](https://arxiv.org/abs/1701.06329).

4. Iulia Gheorghita (Jul. – Sep. 2014, Caltech undergraduate), through Caltech SURF.
   “The cone of Betti tables over three non-collinear points in the plane”, [arXiv:1501.00207](https://arxiv.org/abs/1501.00207).

3. Kiho Park (Feb. – Dec. 2014, Berkeley undergraduate), Berkeley senior thesis.

2. Sheela Devadas (Jan. 2011 – Dec. 2012, high school / MIT undergrad), through MIT PRIMES.
“Representations of rational Cherednik algebras of $G(m, r, n)$ in positive characteristic”, arXiv:1304.0856.

1. Carl Lian (Jan. – Dec. 2011, high school / MIT undergraduate), through MIT PRIMES. “Representations of Cherednik algebras associated to symmetric and dihedral groups in positive characteristic”, arXiv:1207.0182.

**TEACHING**

**University of California, San Diego**

Undergraduate:
- Math 154: Discrete Math & Graph Theory (Winter 2019)
- Math 184: Enumerative Combinatorics (Fall 2018, Fall 2019, Winter 2022, Spring 2023)
- Math 188: Algebraic Combinatorics (Spring 2021, Fall 2022)
- Math 190A: Foundations of Topology I (Fall 2022)
- Math 196: Student Colloquium (Winter 2020)

Graduate:
- Math 200C: Algebra III (Spring 2022)
- Math 201A: Representation Stability (Winter 2019)
- Math 202B: Applied Algebra II (Winter 2020)
- Math 251C: Lie Groups (Spring 2020)
- Math 264C: Combinatorics (Spring 2021)

**University of Wisconsin, Madison**

Undergraduate:
- Math 222: Calculus II (Fall 2016)
- Math 376: Topics in Multi-Variable Calculus and Differential Equations (Spring 2018)
- Math 475: Introduction to Combinatorics (Fall 2015)
- Math 490: Collaborative Undergraduate Research Lab (Spring 2017)

Graduate:
- Math 740: Symmetric Functions (Spring 2017)
- Math 742: Abstract Algebra II (Spring 2016)
- Math 746: Homological Commutative Algebra (Spring 2016)
- Math 847: Representation Stability (Fall 2017)

**ORGANIZING**

**Editorial work:**
- Apr. 2020 – present  Associate editor, Notices of the AMS
Conferences:

| Date           | Event                                                   | Location          |
|----------------|---------------------------------------------------------|-------------------|
| May 22 – Jun. 2, 2023 | Commutative algebra and its interaction with algebraic geometry | U. Notre Dame    |
| Aug. 3 – 7, 2020      | Free resolutions and representation theory              | ICERM             |
| Aug. 19 – 23, 2019    | Structure of length 3 resolutions                       | UCSD              |
| Aug. 13 – 17, 2018    | Michigan representation stability week                  | U. Michigan       |
| Apr. 14 – 18, 2018    | Macaulay2 workshop                                     | UW Madison        |
| Nov. 4 – 5, 2016      | Commutative algebra+ (CA+)                              | UW Madison        |
| Jun. 27 – Jul. 1, 2016| Representation stability workshop                       | American Institute of Math. |
| Nov. 13 – 14, 2015    | Upper midwest commutative algebra colloquium            | UW Madison        |

Seminars and reading groups:

| Date            | Seminar                                           | Location          |
|-----------------|---------------------------------------------------|-------------------|
| April 2020 – June 2021 | Fellowship of the ring                           | Virtual           |
| Fall 2019 – Spring 2020 | Algebra seminar                                  | UCSD              |
| Spring 2017      | Examples in algebraic geometry                    | UW Madison        |
| Fall 2016        | Positivity in algebraic geometry                  | UW Madison        |
| Fall 2014 – Spring 2015 | Combinatorics seminar                           | UC Berkeley       |
| Spring 2013      | Macdonald polynomials                            | UC Berkeley       |
| Fall 2011        | Cluster algebras                                 | Northeastern/MIT  |
| Spring 2011      | Quantum groups                                   | MIT               |
| Spring 2008      | Toric varieties                                  | UC Berkeley       |