

curriculum vitae
Apoorva Khare

*Analysis and Probability Research Group; and
Department of Mathematics
Indian Institute of Science
Bangalore – 560012, INDIA*

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POSITIONS HELD

Indian Institute of Science, Bangalore, India

Associate Professor in Mathematics *2020 – present*

Assistant Professor in Mathematics *2017 – 2020*

Analysis and Probability Research Group, Bangalore: Member *2017+*

Stanford University, Stanford, USA *2011 – 2017*

Research Associate in Mathematics and Statistics

Yale University, New Haven, USA *2009 – 2011*

Lecturer in Mathematics

University of California at Riverside, Riverside, USA *2006 – 2009*

Visiting Assistant Professor in Mathematics

POSITIONS – OTHER

Simons Associate of the ICTP (Trieste, Italy) *2025–27*

Shanti Swarup Bhatnagar Prize from CSIR, Govt. of India (Delhi) *2023+*

Fellow of the Indian Academy of Sciences (Bangalore) *2022+*

SwarnaJayanti Fellow of SERB and DST, Govt. of India (Delhi) *2020 – 2025*

Ramanujan Fellow of SERB, Govt. of India (Delhi) *2018 – 2023*

Young Investigator of Infosys Foundation, India (Bangalore) *2017 – 2019*

EDUCATION

University of Chicago, Chicago, USA *2000 – 2006*

Ph.D. in Mathematics, June 2006

M.S. in Mathematics, December 2001

Lecturer of Mathematics in the College

Indian Statistical Institute, Kolkata, India *1997 – 2000*

B. Stat. (Hons.), June 2000: Graduated First Class with Distinction

SHORT ACADEMIC VISITS

Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany *Sep–Oct 2025*

International Centre for Mathematical Sciences, Edinburgh, UK *Nov 2024*

ETH Zürich, Zürich, Switzerland *May 2024*

University of Plymouth, Plymouth, UK *Apr–May 2024*

National University of Singapore, Singapore *Oct 2023*

SHORT ACADEMIC VISITS (cont.)

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| <i>Institute for Advanced Study (IAS)</i> , Princeton, NJ, USA | Jul 2023 |
| <i>American Institute of Mathematics</i> , Pasadena, CA, USA | Jul 2023 |
| <i>Mathematical Sciences Institute</i> , Australian National University, Canberra, AUS | Apr–May 2023 |
| <i>University of Delaware</i> , Newark, DE, USA | Aug 2022 |
| <i>University of Delaware</i> , Newark, DE, USA | Dec 2021 |
| <i>University of Delaware</i> , Newark, DE, USA | Jan–Feb 2020 |
| <i>University of California at Los Angeles</i> , Los Angeles, CA, USA | Sep–Oct 2018 |
| <i>American Institute of Mathematics</i> , San Jose, CA, USA | Nov 2016 |
| <i>International Centre for Mathematical Sciences</i> , Edinburgh, UK | Aug 2016 |
| <i>University of Illinois at Chicago</i> , Chicago, IL, USA | Sep–Oct 2015 |
| <i>Harish-Chandra Research Institute</i> , Allahabad, India | Dec 2014 |
| <i>American Institute of Mathematics</i> , Palo Alto, CA, USA | Oct 2014 |
| <i>Institut Fourier</i> , Grenoble, France | Jun 2008 |
| <i>Tata Institute of Fundamental Research</i> , Mumbai, India (<i>Nurture Program</i>) | Jun 2000 |
| <i>Tata Institute of Fundamental Research</i> , Mumbai, India (<i>VSRP</i>) | Dec 1999 |
| <i>Tata Institute of Fundamental Research</i> , Mumbai, India (<i>Nurture Program</i>) | Jun 1999 |
| <i>Tata Institute of Fundamental Research</i> , Mumbai, India (<i>Nurture Program</i>) | Jun 1998 |
| <i>International Mathematical Olympiad Training Camp</i> , Mumbai, India | May 1997 |
| <i>International Mathematical Olympiad Training Camp</i> , Mumbai, India | May 1996 |

SELECTED TALKS

- *INSA–IMU Colloquium*, ISI Kolkata – **Invited talk** 2025
- *3rd conference on Recent advances in Mathematics and related areas*,
SRM University AP – **Invited talk** 2025
- *International Conference on Recent Trends in Mathematics and Statistics*,
Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon –
Keynote address 2025
- *Harish-Chandra birth centenary lectures*, IIT Kanpur 2024
- *6th Sarvadaman Chowla Memorial Lecture*, Panjab University, Chandigarh 2023
- *Indian Mathematical Society*, 89th Annual Conference (BITS Pilani at Hyderabad):
A.K. Agarwal Award Lecture 2023
- *2nd International Conference on Mathematical Analysis and Applications in Modeling*,
Jadavpur University – **Plenary talk** 2023
- *AMS Joint Mathematics Meetings (JMM, Boston, USA)*:
ILAS Invited Address (Plenary) 2023
- *Indian Mathematical Society*, 88th Annual Conference (BIT Mesra):
Hansraj Gupta Memorial Award Lecture 2022

SELECTED TALKS (cont.)

- *Formal Power Series and Algebraic Combinatorics* (FPSAC) Meeting (India): 2022
Invited (Plenary) talk
- *2nd conference on Recent advances in Mathematics and related areas*,
 Kerala School of Mathematics – **Invited talk** 2022
- *4th BRICS Mathematics Conference*, IISER Thiruvananthapuram – **Invited talk** 2021
- *Ramanujan Mathematical Society*, 36th Annual Conference (Amrita University): 2021
Invited talk (Semiplenary)
- *International Linear Algebra Society* (ILAS) Meeting (Brazil): 2019
Plenary speaker (designated as the *LAMA Lecturer*)
- *20th Professor Wazir Hasan Abdi Memorial Lecture*, 2019
 Cochin University of Science and Technology (CUSAT)
- *ICM Satellite Conference* (International Congress of Mathematicians)
 on Representation Theory (Peru): **Invited talk** 2018
- *MCA 2017* (Mathematical Congress of the Americas, Canada) 2017
Sectional talk: Representations of Lie Algebras

RESEARCH GRANTS AND AWARDS

- *Abdus Salam International Centre for Theoretical Physics (Trieste, Italy)*: 2025–2027
 Simons Associateship (with full funding for a PhD student to visit each year)
- *Mathematisches Forschungsinstitut Oberwolfach* (Germany): 2025
 Oberwolfach Research Fellowship
- *Ganit Ratna Award*, by Professor Thakare Gaurav Sanstha 2025
- *Indian Mathematical Society* (90th annual conference): B.N. Waphare Award 2024
 (joint with Projesh Nath Choudhury)
- *Institute for Advanced Study (IAS, Princeton, USA)*: 2023
 Summer Collaborators program
- Shanti Swarup Bhatnagar Prize for 2022 in Mathematical Sciences 2023+
Funding Agency: Council of Scientific & Industrial Research (CSIR), Govt. of India
- *American Institute of Mathematics (Pasadena, CA, USA)*: 2023
 Research award to co-organize a workshop (with full funding for
 28 participants) on “Theory and applications of total positivity”
- *Indian Mathematical Society* (89th annual conference): A.K. Agarwal Award 2023
- *Mathematical Sciences Institute (Australian National University, Canberra, AUS)*: 2023
 Mathematical Sciences Research Visitor Program
- SPARC (Scheme for Promotion of Academic and Research Collaboration) 2023 – 2025
 Research Grant in Mathematics,
Funding Agency: Ministry of Human Resource Development (MHRD), Govt. of India
 (Co-PI; PIs: Tirthankar Bhattacharya and J. Martin Lindsay; Rs. 6, 200, 000 \approx \$75,000)
- SwarnaJayanti Fellowship (Research grant) in Mathematics 2020 – 2025
Funding Agencies: Department of Science and Technology (DST), Govt. of India,
 and Science and Engineering Research Board (SERB), Govt. of India
 Grants # *DST/SJF/MS/2019/3* and # *SB/SJF/2019-20/14*
 (Sole PI; Direct costs: Rs. 970,000 \approx \$13,000 per year)

RESEARCH GRANTS AND AWARDS (cont.)

- Ramanujan Fellowship (Research grant) in Mathematics 2018 – 2023
Funding Agency: Science and Engineering Research Board (SERB), DST, Govt. of India
 Grant # *SB/S2/RJN-121/2017*
 (Sole PI; Direct costs: Rs. 700,000 \approx \$10,500 per year)
- MATRICS Research grant in Mathematics 2018 – 2021
Funding Agency: Science and Engineering Research Board (SERB), DST, Govt. of India
 Grant # *MTR/2017/000295*
 (Sole PI; Direct costs: Rs. 200,000 \approx \$3,000 per year)
- Infosys Young Investigator Research grant 2017 – 2019
Funding Agency: Infosys Foundation, India
 (Sole PI; Direct costs: Rs. 600,000 \approx \$9,000 per year)
- *International Centre for Mathematical Sciences (Edinburgh, UK):* 2016
 RiG (Research-in-Groups) programme
 (Co-PI; Direct costs: £9,000 \approx \$13,140)
- *American Institute of Mathematics:* Research award to co-organize 2014
 a workshop (with full funding for 31 participants) on “Positivity,
 graphical models, and modeling of complex multivariate dependencies”
- Research grant # *DARPA YFA N66001-11-1-4131* 2011 – 2013
Funding Agency: Defense Advanced Research Projects Agency (DARPA), USA
 (Co-Investigator; PI: Bala Rajaratnam; \$150,000 per year)

TRAVEL GRANTS, ACADEMIC AWARDS, AND SCHOLARSHIPS

- *ILAS:* Invited Address Award + Travel Support for delivering a Plenary talk 2023
 (ILAS Invited Address) at 2023 Joint Mathematics Meetings in Boston, USA
- *NUS:* Travel Support from National University of Singapore to visit 2023
- *Tata Trusts, via Indian Institute of Science:* Travel Grant 2019,20
- *ILAS–LAMA* Travel Support for delivering a Plenary talk (the LAMA Lecture) 2019
 at ILAS 2019 in Rio, Brazil
- *Indian Institute of Science:* Travel Support Grant 2019
- *NSF and NSA (USA):* Travel Award for presenting a poster 2016
 at FPSAC 2016 in Vancouver, Canada
- *University of Chicago:* Robert R. McCormick Fellowship 2000 – 2002
- *National Board of Higher Mathematics:* Nurture Program award 1998, 1999
- *Indian Statistical Institute at Kolkata:* Academic excellence award 1998
- *Indian Statistical Institute at Kolkata:* Student Fellowship 1997 – 2000
- Indian National Mathematical Olympiad (INMO) Scholarship 1996
- *Odisha Mathematical Society:* Braja Bihari Patnaik Memorial Prize, 1995, 1996
 for securing first place in the Regional Mathematical Olympiads
- National Talent Search Examination (NCERT, Govt. of India) Scholarship 1995

OTHER DISTINCTIONS

- Elected a *Fellow of the Indian Academy of Sciences*, Bangalore (India) 2022+
- *DST (Dept. of Science & Technology)* and *Vigyan Prasar*, Government of India: 2022
One of 75 scientists profiled in the book “75 under 50: Scientists Shaping Today’s India”
- Elected to *Board of Directors*, International Linear Algebra Society 2021 – 2024
- *Tarun Tejankit Puraskar* by Loksatta newspaper, Mumbai (India) 2019
- *Indian Institute of Science*: Selected by Office of Deans / Divisional Chairs to showcase research in the IISc Annual Report 2018, 2023
- *Editorial Boards* (see “Service”): *Acta Scientiarum Mathematicarum* (Szeged); *American Mathematical Monthly*; *Indian Journal of Pure and Applied Mathematics*; *Linear Algebra and its Applications*; *Linear and Multilinear Algebra*; *São Paulo Journal of Mathematical Sciences*; *Texts and Readings in Mathematics (TRIM) Series*

SELECTED PUBLICATIONS (*see Publication List* for full list)**Published/in press:**

- (1) (**Book.**) *Matrix analysis and entrywise positivity preservers*, 2022.
Vol. 471 in London Mathematical Society Lecture Note Series, Cambridge University Press, xxii+292 pp.; and Vol. 82 in Texts and Readings In Mathematics (TRIM Series), Hindustan Book Agency, xxii+339 pp.
- (2) (*Invited survey article.*) The entrywise calculus and dimension-free positivity preservers, with an Appendix on sphere packings – 90th anniversary of the Indian National Science Academy (INSA), *in press*.
- (3) *KRP’s contributions in Lie theory*, The Indian Mathematics Consortium Bulletin (tribute volume to Prof. K.R. Parthasarathy): Volume 5 issue 4, pages 5–8, 2024;
Reprinted in: *Indian Journal of Pure and Applied Mathematics* (tribute volume to Prof. K.R. Parthasarathy): Volume 55 issue 3, 834–837, 2024.
- (4) (With Projesh Nath Choudhury.) *Distance matrices of a tree: two more invariants, and in a unified framework*, *European Journal of Combinatorics*, 115: art.# 103787, 30 pp., 2024.
- (5) (With Alexander Belton, Dominique Guillot, and Mihai Putinar.) *Totally positive kernels, Pólya frequency functions, and their transforms*, *Journal d’Analyse Mathématique*, 150(1):83–158, 2023.
- (6) (With Siddhartha Sahi.) *From Cauchy’s determinant formula to bosonic and fermionic immanant identities*, *European Journal of Combinatorics*, 110: art.# 103683, 16 pp., 2023; erratum.
- (7) (With Alexander Belton, Dominique Guillot, and Mihai Putinar.) *Moment-sequence transforms*, *Journal of the European Mathematical Society*, 24(9):3109–3160, 2022.
- (8) *Smooth entrywise positivity preservers, a Horn–Loewner master theorem, and symmetric function identities*, *Transactions of the American Mathematical Society*, 375(3):2217–2236, 2022.
- (9) (With Gurbir Dhillon.) *The weights of simple modules in Category \mathcal{O} for Kac–Moody algebras*, *Journal of Algebra*, 603:164–200, 2022.
- (10) (With Alexander Belton, Dominique Guillot, and Mihai Putinar.) *Hirschman–Widder densities*, *Applied and Computational Harmonic Analysis*, 60:396–425, 2022.

Published: (cont.)

- (11) (With Terence Tao.) *On the sign patterns of entrywise positivity preservers in fixed dimension*, American Journal of Mathematics, 143(6):1863–1929, 2021.
- (12) (With Projesh Nath Choudhury and M. Rajesh Kannan.) *Sign non-reversal property for totally non-negative and totally positive matrices, and testing total positivity of their interval hull*, Bulletin of the London Mathematical Society, 53(4):981–990, 2021.
- (13) (With Carolina Benedetti, Rafael S. González D’León, Christopher R.H. Hanusa, Pamela E. Harris, Alejandro H. Morales, and Martha Yip.) *A combinatorial model for computing volumes of flow polytopes*, Transactions of the American Mathematical Society, 372(5):3369–3404, 2019.
- (14) (Survey article, peer-reviewed, with A. Belton, D. Guillot, and M. Putinar.) *A panorama of positivity*: arXiv:math.CA/1812.05482 (unified version).
 - *Part I: Dimension free*, in *Analysis of Operators on Function Spaces* (The Serguei Shimorin Memorial Volume; A. Aleman, H. Hedenmalm, D. Khavinson, M. Putinar, Eds.), pp. 117–165, Trends in Mathematics, Birkhauser, 2019.
 - *Part II: Fixed dimension*, in *Complex Analysis and Spectral Theory*, Proceedings of the CRM Workshop held at Laval University, QC, May 21–25, 2018 (G. Dales, D. Khavinson, J. Mashreghi, Eds.). CRM Proceedings – AMS Contemporary Mathematics 743, pp. 109–150, American Mathematical Society, 2020.
- (15) (As D.H.J. Polymath: with Tobias Fritz, Siddhartha Gadgil, Pace Nielsen, Lior Silberman, and Terence Tao.) *Polymath14: Homogeneous length functions on groups*, Algebra & Number Theory, 12(7):1773–1786, 2018.
- (16) *Generalized nil-Coxeter algebras over discrete complex reflection groups*, Transactions of the American Mathematical Society, 370(4):2971–2999, 2018.
- (17) (With Gurbir Dhillon.) *Faces of highest weight modules and the universal Weyl polyhedron*, Advances in Mathematics, 319:111–152, 2017.
- (18) (With Bala Rajaratnam.) *The Hoffmann-Jørgensen inequality in metric semigroups*, Annals of Probability, 45(6A):4101–4111, 2017.
 - Sequel paper: *Probability inequalities for strongly left-invariant metric semigroups/monoids, including all Lie groups*, Indian Journal of Pure and Applied Mathematics (tribute volume in memory of K.R. Parthasarathy), 55(3):1026–1039, 2024.
- (19) (With Dominique Guillot and Bala Rajaratnam.) *Preserving positivity for rank-constrained matrices*, Transactions of the American Mathematical Society 369(9):6105–6145, 2017; erratum.
- (20) *Standard parabolic subsets of highest weight modules*, Transactions of the American Mathematical Society 369(4):2363–2394, 2017; erratum.
- (21) (With Alexander Belton, Dominique Guillot, and Mihai Putinar.) *Matrix positivity preservers in fixed dimension. I*, Advances in Mathematics 298:325–368, 2016.
- (22) (With Dominique Guillot and Bala Rajaratnam.) *Preserving positivity for matrices with sparsity constraints*, Transactions of the American Math. Society 368(12):8929–8953, 2016.
- (23) (With Dominique Guillot and Bala Rajaratnam.) *Critical exponents of graphs*, Journal of Combinatorial Theory, Series A 139:30–58, 2016.
- (24) *Faces and maximizer subsets of highest weight modules*, Journal of Algebra 455:32–76, 2016.

Published: (cont.)

- (25) (With Akaki Tikaradze.) *On Category \mathcal{O} over triangular generalized Weyl algebras*, Journal of Algebra 449:687–729, 2016.
- (26) (With Peter Diao, Dominique Guillot, and Bala Rajaratnam.) *Differential calculus on graphon space*, Journal of Combinatorial Theory, Series A 133:183–227, 2015.
- (27) (**Book**, with Anna Lachowska.) *Beautiful, Simple, Exact, Crazy: Mathematics in the Real World* (480 pp.), Yale University Press, 2015.
- (28) (*Invited survey article*, peer-reviewed.) Representations of complex semi-simple Lie groups and Lie algebras, in *Connected at Infinity II: A Selection of Mathematics by Indians* (Rajendra Bhatia, Conjeevaram S. Rajan, and Ajit I. Singh, Eds.), TRIM, Hindustan Book Agency, pp. 85–129, 2013.
- (29) (With Wee Liang Gan.) *Quantized symplectic oscillator algebras of rank one*, Journal of Algebra 310(2):671–707, 2007.

Submitted:

- (30) (With G. Krishna Teja.) *A weight-formula for all highest weight modules, and a higher order parabolic category \mathcal{O}* (2022), arXiv:math.RT/2203.05515.
- (31) (With Alexander Belton, Dominique Guillot, and Mihai Putinar.) *Negativity-preserving transforms of tuples of symmetric matrices* (2023), arXiv:math.CA/2310.18041.
- (32) (With Jacob P. Matherne, and Avery St. Dizier.) *Log-concavity of characters of parabolic Verma modules, and of restricted Kostant partition functions* (2025), arXiv:math.RT/2504.01623.
- (33) (With Prateek K. Vishwakarma.) *Cholesky decomposition for symmetric matrices, Riemannian geometry, and random matrices* (2025), arXiv:math.RA/2508.02715.
- (34) (With Hong Chen and Siddhartha Sahi.) *Majorization via positivity of Jack and Macdonald polynomial differences* (2025), arXiv:math.CO/2509.19649.

PROFESSIONAL SERVICE**A. EDITORIAL**

- Associate Editor, American Mathematical Monthly Sep 2024 – present
- Associate Editor, Linear Algebra and its Applications 2023 – present
- Editor, Acta Scientiarum Mathematicarum (Szeged) 2022 – present
- Editor, Indian Journal of Pure and Applied Mathematics 2020 – present
- Editor of “Texts and Readings in Mathematics” (TRIM) Series, Hindustan Book Agency 2018 – present
- Associate Editor, São Paulo Journal of Mathematical Sciences 2018 – present
- Guest Editor, Journal of Algebraic Combinatorics (Special issue in honor of Vyjayanthi Chari’s 65th birthday) forthcoming
- Guest Editor, Indian Journal of Pure and Applied Mathematics (Tribute volume in memory of K.R. Parthasarathy: Volume 55 issue 3) 2024
- Guest Editor, Journal of Indian Institute of Science (Special volume on “Number Theory and Representation Theory”: Volume 102 issue 3) 2022

- Editor, Linear and Multilinear Algebra *Jan 2020 – Dec 2022*
- Proceedings Editor, Volume 80B, Séminaire Lotharingien de Combinatoire *2018*

B. OTHER

- Board of Directors, International Linear Algebra Society *Mar 2021 – Feb 2024*

C. REFEREEING (including *quick opinion)

- | | |
|---|---|
| • Transactions of the American Math. Society | • Letters in Mathematical Physics |
| • International Math. Research Notices IMRN | • AMS Contemporary Mathematics |
| • Forum of Mathematics, Sigma* | • Journal of Algebraic Combinatorics* |
| • Journal of the London Math. Society* | • Indian J. Pure and Applied Math. |
| • Israel Journal of Mathematics | • FPSAC (Sem. Loth. Combin.) |
| • Journal of Functional Analysis | • Discrete Mathematics |
| • Journal of Combinatorial Theory Series A | • Linear and Multilinear Algebra |
| • European Journal of Combinatorics* | • Communications in Algebra |
| • Journal of Geometric Analysis | • Algebras and Representation Theory |
| • Mathematische Zeitschrift | • Acta Mathematica Hungarica |
| • Journal of Algebra | • Journal of Algebra and its Applications |
| • SIAM Journal on Discrete Mathematics | • Computational and Applied Math.* |
| • Bulletin of the London Mathematical Society | • Results in Mathematics* |
| • Proceedings of the American Math. Society | • Operators and Matrices |
| • Pacific Journal of Mathematics | • Electronic Journal of Linear Algebra |
| • Kyoto Journal of Mathematics | • Bulletin of the Iranian Math. Society |
| • Journal of Non-commutative Geometry | • Open Mathematics |
| • Journal of Pure and Applied Algebra | • Resonance |
| • Linear Algebra and its Applications | • American Math. Monthly |

D1. CONFERENCE AND SEMINAR ORGANIZATION

- 2019 – present Organizer: Eigenfunctions Seminar, Indian Institute of Science.
- 2019 – present Co-organizer: APRG Seminar, Indian Institute of Science.
- 2018 – present Co-organizer: Algebra & Combinatorics Seminar, Indian Institute of Science.
- 2021 – 2022 Co-organizer: ARCSIN Seminar, IISc–IIT Kanpur–IMSc.
- Jan 12–16, 2026 *Conference:* First Indo–European Conference in Mathematics: Symposium on Positivity and Matrix Analysis, Savitribai Phule Pune University (SPPU) and Indian Institute of Science Education and Research (IISER).
Co-organizer: Alexander Belton (U. Plymouth).

D1. CONFERENCE AND SEMINAR ORGANIZATION (cont.)

- Nov 30–Dec 5, 2025 *Conference:* BIRS–CMI Workshop on Quivers in Representation Theory, Chennai Mathematical Institute.
Co-organizers: T. Brüstle (Univ. Sherbrooke and Bishop’s Univ.), A. Kuber (IIT Kanpur), and S. Srivastava (IIT Dharwad).
- Jul 28–Aug 1, 2025 *Conference:* Third joint SIAM/CAIMS annual meetings (AN25), Montréal: Member of the Organizing Committee. *Organizing Co-chairs:* Sue Ann Campbell (U. Waterloo) and Arvind K. Saibaba (NC State Univ.).
- Jun 23–27, 2025 *Conference:* Mini-symposium on Total positivity, International Linear Algebra Society (ILAS) Meeting, Kaohsiung.
Co-organizer: Projesh Nath Choudhury (IIT Gandhinagar).
- Nov 13–24, 2023 *Conference:* Algebraic and Combinatorial Methods in Representation Theory (in honour of Vyjayanthi Chari’s 65th birthday), ICTS Bangalore: Member of the Scientific Committee. *Organizers:* B. Ravinder (IIT Tirupati), R. Venkatesh (IISc Bangalore), and S. Viswanath (IMSc Chennai).
- Jul 24–28, 2023 *Conference:* Workshop on “Theory and applications of total positivity” (supported by the AIM and NSF), American Institute of Mathematics.
Co-organizers: Dominique Guillot (U. Delaware) and Shaun Fallat (U. Regina).
- Jun 20–24, 2022 *Conference:* Invited Mini-symposium on Distance matrices of graphs, with funding for an LAA Early Career speaker, International Linear Algebra Society (ILAS) Meeting, Galway.
Co-organizer: Projesh Nath Choudhury (IISc Bangalore).
- Sep 17–18, 2021 *Conference:* Joint Mathematics Symposium with IISER Pune (virtual).
Co-organizers: Chandrasheel Bhagwat and Tejas Kalelkar (IISER Pune) and Vamsi Pritham Pingali (IISc Bangalore).
- Jul 29–30, 2021 *Conference:* Farewell Symposium for Dilip P. Patil, Indian Instt. of Science.
Co-organizers: Ravi A. Rao (NMIMS, Mumbai), Jugal K. Verma (IIT Bombay), Kriti Goel (IIT Gandhinagar), Shreedevi Masuti (IIT Dharwad), and R. Venkatesh (IISc Bangalore).
- Jul 16–20, 2018 *Conference:* 30th International Conference on Formal Power Series and Applications (FPSAC), supported by the NSF, Dartmouth College.
Co-organizers: See the conference website.
- Jul 24–28, 2017 *Conference:* Invited Mini-symposium on Linear Algebra and Positivity with Applications to Data Science, with funding for an LAA Early Career speaker, International Linear Algebra Society (ILAS) Meeting, Ames. *Co-organizers:* Dominique Guillot (U. Delaware) and Bala Rajaratnam (UC Davis).
- Jan 13, 2015 *Conference:* AMS Special Session on Positivity and Matrix Inequalities, AMS–MAA Joint Mathematics Meetings, San Antonio.
Co-organizers: Dominique Guillot and Bala Rajaratnam (Stanford).

D1. CONFERENCE AND SEMINAR ORGANIZATION (cont.)

- Jan 12, 2015 *Conference:* AMS Special Session on Limits of Discrete Structures, AMS–MAA Joint Mathematics Meetings, San Antonio. *Co-organizers:* Peter Diao, Dominique Guillot, and Bala Rajaratnam (Stanford).
- Oct 13–17, 2014 *Conference:* Workshop on “Positivity, graphical models, and modeling of complex multivariate dependencies” (supported by the AIM and NSF), American Institute of Mathematics. *Co-organizers:* Dominique Guillot and Bala Rajaratnam (Stanford) and Hélène Massam (York University).
- Feb 1–2, 2014 *Conference:* Lie Theory Workshop on Quantum Groups (supported by the NSF and Stanford), Stanford University.
Co-organizers: Daniel Bump and Persi Diaconis (Stanford).
- May 26–27, 2012 *Conference:* Young Researchers Meet (Mathematics and Computer Science), Stanford University. *Co-organizer:* Govindan Rangarajan (IISc Bangalore).
- Feb 4–5, 2012 *Conference:* Lie Theory Workshop on Quantum Groups (supported by the NSF and Stanford), Stanford University.
Co-organizers: Daniel Bump (Stanford) and Anne Schilling (UC Davis).
- 2009 Co-organized the Lie Theory Seminar at the Univ. of California at Riverside.
- 2001–02 Co-organized a weekly graduate student seminar, University of Chicago.

D2. WORKSHOPS ORGANIZED (PRIMARILY) FOR STUDENTS

- Jun 19–Jul 8, 2023 *NCM Advanced Instructional School* on Lie Groups and Lie Algebras, supported by the NBHM, Indian Institute of Science.
Co-organizer: R. Venkatesh (IISc Bangalore).
- Apr 30–May 1, 2022 *Symposium* on Combinatorics and Probability, Indian Statistical Institute Kolkata. (Co-organizer.)

TEACHING AND MENTORING*A. MENTORING EXPERIENCE***Indian Institute of Science**, Bangalore*2017 – present*

- Advisor to 4 Mathematics PhD students (3 graduated).
- Mentored 13 Postdocs (NBHM/NPDF/CV Raman/other) and INSPIRE Faculty Fellows.

Stanford University, Stanford*2011 – 2017*

Mentored graduate/undergraduate students at Stanford, including:

- Mathematics PhD student of Bala Rajaratnam at Stanford (*2012 – 2016*).
- Mathematics PhD student of Vyacheslav Futorny at Universidad de São Paulo (*Spring–Summer 2016*).
- MS student, in Independent Study in Probability (*Spring 2014*).

Yale University, New Haven*2009 – 2011*

Mentored undergraduate Math Majors.

University of California at Riverside, Riverside*2006 – 2009*

Mentored graduate students through and outside of the Lie Theory Seminar (and undergrads).

University of Chicago, Chicago 2000 – 2006

Directed Reading Program: Mentored undergraduate students on selected topics in:

- (a) elementary number theory (including Möbius functions on partially ordered sets), and
- (b) the Banach–Tarski Paradox and related topics.

B. GRADUATE TEACHING EXPERIENCE

Indian Institute of Science: Faculty in Mathematics 2017 – present

- *Math 212*: Algebra I
- *Math 219*: Linear Algebra
- *Math 220*: Representation theory of finite groups
- *Math 221*: Analysis I: Real Analysis
- *Math 315*: Representation theory of Lie algebras
- *Math 341*: Matrix Analysis and Positivity (**new course**: developed and taught at IISc)

Stanford University: Research Associate in Mathematics and Statistics 2011 – 2017

- *Stats 217*: Introduction to Stochastic Processes (multiple years)

University of California at Riverside: Visiting Assistant Professor (Math.) 2006 – 2009

- Fall 2008: Designed and taught a **mini-course**: Quivers, with a view toward Gabriel’s theorem

C. UNDERGRADUATE TEACHING EXPERIENCE

Indian Institute of Science: Faculty in Mathematics 2017 – present

UM102: Analysis and Linear Algebra II

Stanford University: Research Associate in Mathematics and Statistics 2011 – 2017

Math 16 (cross-listed as *Stats 90*): Mathematics and Statistics in the Real World

(developed and proposed at Stanford, co-taught with Bala Rajaratnam)

Stats 116: Theory of Probability (SCPD course with video streaming)

Book: Co-authored a Course Book (for Yale *Math. 107*) with Anna Lachowska: Aug 2015

Beautiful, Simple, Exact, Crazy: Mathematics in the Real World, Yale University Press.

Yale University: Lecturer in Mathematics 2009 – 2011

Math. 107: Mathematics in the Real World (**new course**: developed and taught at Yale)

Math. 115a: Integral Calculus

Math. 118: Introduction to Functions of Several Variables

Math. S120: Calculus – Several Variables (Summer Session)

Math. 120: Calculus – Several Variables (Special Section with Mathematica)

Math. 225a: Linear Algebra and Matrix Theory

Math. 370: Fields and Galois Theory

University of California at Riverside: Visiting Assistant Professor (Math.) 2006 – 2009

Math. 8B: Introduction to College Mathematics for Science

Math. 9B, 9C: First Year Calculus

Math. 10A, 10B: Calculus: Several Variables

Math. 23: Applied Matrix Algebra

Math. 46: Ordinary Differential Equations

Math. 132: Linear Algebra – II

University of Chicago, Lecturer in Mathematics: 2002 – 2006

Math. 151, 152, 153: Calculus – I, II, III

Math. 195, 196: Mathematical Methods for the Social Sciences – I, II

TALKS AT CONFERENCES/WORKSHOPS

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| Dec 22, 2025 | International conference on Frontiers in Mathematical Sciences: Theory, Applications and Innovations, University of North Bengal, Siliguri |
| Dec 19, 2025 | International Conference on Linear Algebra and its Applications (ICLAA), Centre for Advanced Research in Applied Mathematics and Statistics (CARAMS), Manipal Academy of Higher Education (MAHE), Manipal |
| Nov 25, 2025 | Indian Statistical Institute Kolkata: INSA–IMU Colloquium 2025 |
| Oct 26, 2025 | AMS Fall Eastern Virtual Sectional Meeting: Special Session on Notions of Positivity, Preserving Transforms, and Inequalities |
| Sep 12, 2025 | National conference on Emerging trends of mathematical analysis and applications, University of Kalyani |
| Jul 15, 2025 | International Workshop on Operator Theory and its Applications (IWOTA), University of Twente, Enschede, Netherlands: Special Session on Matrix theory and linear algebra I |
| Jun 23, 2025 | International Linear Algebra Society (ILAS) 2025 Meeting, National Sun Yat-sen University, Kaohsiung, Taiwan: Mini-symposium on Total Positivity |
| Jun 16, 2025 | TIFR Centre for Applicable Mathematics (CAM): Summer Programme 2025: Special Lecture |
| May 22, 2025 | Workshop (online) on Recent trends in linear algebra and applications, National Institute of Technology (NIT) Calicut |
| May 11, 2025 | Indian Institute of Technology – Indian School of Mines (IIT-ISM) Dhanbad: Workshop (online) on Theoretical, Algorithmic, and Spectral approaches in Graph Theory |
| Feb 7, 2025 | International conference on Recent Trends in Mathematics and Statistics, Kavayitri Bahinabai Chaudhari North Maharashtra University (Jalgaon): Keynote address |
| Jan 19, 2025 | SRM University AP: 3rd conference on Recent advances in Mathematics and related areas |
| Dec 16–21, 2024 | NCM Advanced Instructional School on Representation theory of quivers and BGG Category \mathcal{O} for semisimple Lie algebras, IIT Kanpur: Mini-course on Category \mathcal{O} (with notes and videos) |
| Dec 13, 2024 | International workshop on Combinatorial Methods in Enumerative Algebra, International Centre for Theoretical Sciences (ICTS) Bangalore |
| Nov 5, 2024 | Workshop on Applied Matrix Positivity II, ICMS, Edinburgh, Scotland |
| Oct 28, 2024 | Conference on probability theory (in honor of Rahul Roy’s superannuation), Indian Statistical Institute at Delhi |
| Jun 11, 2024 | International Conference on Lie Algebra and Number Theory (ICLANT), NIT Calicut, Keynote lecture |
| Jun 10, 2024 | International Conference on Discrete Mathematics, Savitribai Phule Pune University (Pune), Plenary talk |

TALKS AT CONFERENCES/WORKSHOPS (cont.)

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| Dec 24, 2023 | 89th Annual Conference, Indian Mathematical Society (BITS Pilani at Hyderabad): A.K. Agarwal Award Lecture |
| Dec 21–23, 2023 | National Centre for Mathematics Workshop on Matrix Theory, Panjab University, Chandigarh |
| Dec 18, 2023 | International Conference on Linear Algebra and its Applications (ICLAA), Centre for Advanced Research in Applied Mathematics and Statistics (CARAMS), Manipal Academy of Higher Education (MAHE), Manipal |
| Nov 17, 2023 | Workshop on Tensor Computation and Machine Learning, IISc Bangalore |
| Oct 25, 2023 | Oppenheim Workshop on Random Systems, Institute for Mathematical Sciences (IMS), National University of Singapore |
| Oct 9, 2023 | 2nd International Conference on Mathematical Analysis and Applications in Modeling (ICMAAM), Jadavpur University, Kolkata: Plenary talk |
| Jul 24, 2023 | American Institute of Mathematics: Workshop on “Theory and applications of total positivity” |
| Jun 19–24, 2023 | NCM Advanced Instructional School on Lie Groups and Lie Algebras, IISc Bangalore |
| Jun 15,16, 2023 | Presidency University, Bangalore: International Workshop on Combinatorial methods in graph theory – two lectures |
| May 8, 2023 | Mathematical Sciences Institute (ANU Canberra): Workshop on Braids: Algebra and Geometry |
| Mar 9–11, 2023 | National Centre for Mathematics Workshop on Operator Theory and Operator Algebra, Indian Institute of Technology (IIT) Gandhinagar |
| Feb 14, 2023 | Workshop on Popular Mathematics , Indian Institute of Technology (IIT) Madras: Lecture 2 |
| Feb 13, 2023 | Workshop on Popular Mathematics , Indian Institute of Technology (IIT) Madras: Lecture 1 |
| Jan 4, 2023 | AMS Joint Mathematics Meetings (Boston, USA): ILAS Invited Address (Plenary) |
| Dec 28, 2022 | 88th Annual Conference, Indian Mathematical Society (BIT Mesra, Ranchi): Hansraj Gupta Memorial Award Lecture |
| Dec 10, 2022 | Indian Women and Mathematics (VNIT, Nagpur): Regional Workshop on Research and Opportunities |
| Oct 10, 2022 | Karnataka State Higher Education Academy (KSHEA): Continuous Wholistic Training Program in Mathematics |
| Aug 24, 2022 | Jain College Bangalore (with The Indian Mathematics Consortium): Faculty Development Programme on <i>Algebra, Geometry and Graph Theory: Emerging Interconnections</i> |
| Jul 21, 2022 | International conference on ‘Formal Power Series and Algebraic Combinatorics’ (33rd FPSAC, <i>Satellite of ICM-2022</i>), Indian Institute of Science, Bangalore: Invited (Plenary) talk |

TALKS AT CONFERENCES/WORKSHOPS (cont.)

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| Jun 22, 2022 | International Linear Algebra Society (ILAS) Meeting, National University of Ireland, Galway: Mini-Symposium on General Preservers |
| May 18–21, 2022 | NCM Advanced Instructional School on Advanced Linear Algebra, Indian Statistical Institute at Bangalore |
| Apr 21, 2022 | Kerala School of Mathematics: 2nd conference on Recent advances in Mathematics and related areas |
| Mar 17, 2022 | Mathematisches Forschungsinstitut Oberwolfach: Workshop on The Laguerre–Pólya Class and Combinatorics |
| Dec 17, 2021 | International Conference on Linear Algebra and its Applications (ICLAA), Centre for Advanced Research in Applied Mathematics and Statistics (CARAMS), Manipal Academy of Higher Education (MAHE), Manipal |
| Dec 7, 2021 | 4th BRICS Mathematics Conference, Indian Institute of Science Education and Research (IISER) Thiruvananthapuram: Invited talk |
| Aug 5, 2021 | 36th Annual Conference, Ramanujan Mathematical Society (Amrita University, Coimbatore): Invited talk (Semiplenary) |
| Jul 19, 2021 | Workshop on Applied Matrix Positivity, ICMS, Edinburgh, Scotland |
| Jul 2021 | 8th Asian Mathematical Conference (Ha Long, Vietnam): Special Section: Mathematical Analysis [<i>cancelled due to CoVid-19 pandemic</i>] |
| Jul 2021 | 3rd Math Days in Sofia, Bulgarian Acad. Sci., Sofia, Bulgaria: Mini-Symposium on Hausdorff Geometry of Polynomials [<i>cancelled due to CoVid-19 pandemic</i>] |
| Sep 23, 2020 | TEQIP Course: Matrix Analysis and its Applications, Ambedkar National Institute of Technology (Jalandhar) |
| Sep 18, 2020 | UGC Course: Symmetry in Science and Engineering, Mumbai University |
| Dec 16, 2019 | Discussion Meeting in Representation Theory, Indian Institute of Science |
| Nov 17, 2019 | 6th India Taiwan Conference on Discrete Mathematics, IIT-Varanasi (BHU) |
| Oct 20, 2019 | 2nd Conference on Functional Analysis, Indian Institute of Technology (IIT) Bombay |
| Sep 10, 2019 | 8th MAT TRIAD: International Conference on Matrix Analysis and its Applications, Liblice, Czech Republic: Special session on total positivity |
| Jul 16, 2019 | 8th International Conference on Matrix Analysis and Applications (ICMAA), University of Nevada at Reno, USA |
| Jul 9, 2019 | International Linear Algebra Society (ILAS) Meeting, Rio de Janeiro, Brazil: Plenary talk – LAMA Lecturer |
| Dec 19, 2018 | Operator Theory and Operator Algebras (4th OTOA), Indian Statistical Institute at Bangalore |
| Dec 7, 2018 | Indian Academy of Sciences Discussion Meeting on Linear Analysis, Evolve Back (formerly Orange County Hotel), Coorg |

TALKS AT CONFERENCES/WORKSHOPS (cont.)

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| Dec 5, 2018 | Algebras, Combinatorics, and Representation Theory, Indian Institute of Science Education and Research (IISER) Thiruvananthapuram |
| Aug 27, 2018 | ICM Satellite Conference: Algebras, Representations and Applications, Cusco, Peru |
| Jun 8,9, 2018 | Two motivating guest lectures, in the Training Program in Mathematics, National Institute of Science Education and Research (Bhubaneswar) |
| Mar 8,10, 2018 | Advanced Training in Mathematics Workshop, on Modern Aspects of Function Theory, Operator Theory, and Operator Algebras, Indian Statistical Institute at Bangalore |
| Jan 9, 2018 | 3rd Indo–Russian Joint Conference in Statistics and Probability, Indian Institute of Science |
| Oct 15, 2017 | 1st Conference on Functional Analysis, Indian Institute of Technology (IIT) Bombay |
| Jul 28, 2017 | 2nd Mathematical Congress of the Americas (Montréal, QC): Special Session on Representations of Lie Algebras |
| Jul 24, 2017 | International Linear Algebra Society (ILAS) Meeting, Iowa State University: Mini-Symposium on Representation Theory |
| Jan 4, 2017 | AMS–MAA Joint Mathematics Meetings (Atlanta, GA): Special Session on Gaussian Graphical Models and Combinatorial Algebraic Geometry |
| Jan 6, 2016 | AMS–MAA Joint Mathematics Meetings (Seattle, WA): Special Session on Interactions between Noncommutative Algebra, Algebraic Geometry, and Representation Theory |
| Oct 27, 2015 | SIAM Conference on Applied Linear Algebra (Atlanta, GA): Minisymposium on “Generalizations of Positive Matrices” |
| Oct 3, 2015 | AMS Central Fall Sectional Meeting (Loyola University, Chicago): Special Session on Algebraic Statistics and its Interactions with Combinatorics, Computation, and Network Science |
| May 2, 2015 | 30th Bay Area Discrete (BAD) Math Day, Bay View Academy, Monterey, CA |
| Jan 13, 2015 | AMS–MAA Joint Mathematics Meetings (San Antonio, TX): Special Session on Positivity and Matrix Inequalities |
| Jan 12, 2015 | AMS–MAA Joint Mathematics Meetings (San Antonio, TX): Special Session on Limits of Discrete Structures |
| Jan 10, 2015 | AMS–MAA Joint Mathematics Meetings (San Antonio, TX): Special Session on Algebraic Combinatorics and Representation Theory |
| Oct 13, 2014 | American Institute of Mathematics: Workshop on “Positivity, graphical models, and modeling of complex multivariate dependencies” |
| Sep 20, 2014 | AMS Central Fall Section Meeting (University of Wisconsin at Eau Claire): Special Session on Lie Algebras and Representation Theory |
| Jun 7, 2013 | International Linear Algebra Society (ILAS) Meeting (Providence, RI) |
| May 16, 2010 | Young Researchers Meet, Brown University |

TALKS AT CONFERENCES/WORKSHOPS (cont.)

- Apr 11, 2010 AMS Spring Central Section Meeting (Macalester College, St. Paul):
Special Session on Hecke Algebras and Deformations in Geometry and Topology
- Nov 7, 2009 AMS Fall Western Section Meeting (University of California at Riverside):
Special Session on Representation Theory
- Jul 2, 2008 Institut Fourier at Grenoble: Graduate Student Seminar,
2008 Summer School on Geometric Methods in Representation Theory
- May 3, 2008 AMS Spring Western Section Meeting (Claremont McKenna College):
Special Session on Hopf Algebras and Quantum Groups
- Mar 29, 2008 AMS Spring Southeastern Section Meeting (Louisiana State University at Baton
Rouge): Special Session on Geometric and Combinatorial Representation Theory
- May 9, 2007 Workshop on Representation Theory and Geometry, University of California at
Berkeley
- Nov 4, 2006 AMS Fall Southeastern Section Meeting (University of Arkansas at Fayetteville):
Special Session on Combinatorial Representation Theory
- May 27, 2006 Graduate Student Conference on Algebra And Representation Theory,
Kansas State University at Manhattan

POSTER PRESENTATIONS

- Jul 17, 2018 International conference on ‘Formal Power Series and Algebraic Combinatorics’
(30th FPSAC), Dartmouth College, Hanover: Poster presentation (Session B)
- Jul 16, 2018 International conference on ‘Formal Power Series and Algebraic Combinatorics’
(30th FPSAC), Dartmouth College, Hanover: Poster presentation (Session A)
- Jul 4, 2016 International conference on ‘Formal Power Series and Algebraic Combinatorics’
(28th FPSAC), Vancouver, BC: Poster presentation

TALKS AT BIRTHDAY CONFERENCES

- Nov 12, 2025 International Conference on Analysis, Discrete Mathematics, and Applications
(in honour of S.B. Nimse’s 75th birthday), NACS College (Ahilyanagar)
- Feb 3, 2025 Representations of groups and algebras (in honour of K.N. Raghavan’s 60th
birthday), Institute of Mathematical Sciences (Chennai)
- Oct 24, 2024 Noncommutative Mathematics and Applications (in honour of
Kalyan B. Sinha’s 80th birthday), Indian Statistical Institute at Bangalore
- Nov 29, 2023 International Conference on Spectral and Approximation Theory (in honour of
M.N.N. Namboodiri’s 70th birthday), Cochin University of Science And Technol-
ogy (CUSAT)
- Nov 22, 2023 Algebraic and Combinatorial Methods in Representation Theory (in honour of
Vyjayanthi Chari’s 65th birthday), International Centre for Theoretical Sciences
(ICTS) Bangalore
- Nov 26, 2022 Operator Theory and Complex Geometry (in honour of Gadadhar Misra’s 65th
birthday), Indian Institute of Science Education and Research (IISER) Kolkata

TALKS AT BIRTHDAY CONFERENCES (cont.)

- Dec 27, 2019 Conference on Linear Algebra and its Applications (in honour of Ravindra B. Bapat's 65th birthday and retirement), Indian Statistical Institute at Delhi
- Dec 12, 2019 KBS Fest: Conference in honour of Kalyan B. Sinha's 75th birthday, Indian Statistical Institute at Bangalore
- Jun 22, 2018 Analysis and Applications: Conference in honour of Sudhir H. Kulkarni's 65th birthday, Indian Institute of Technology (IIT) Chennai
- Nov 30, 2017 Matrix and functional analysis: Conference in honour of Rajendra Bhatia's 65th birthday, Ambedkar National Institute of Technology (Jalandhar)
- Oct 2, 2015 International Conference on Groups, Rings, Group Rings, and Hopf Algebras (celebrating the 75th birthday of Donald S. Passman), Loyola University, Chicago
- Dec 17, 2014 International Conference on "Infinite Dimensional Lie Theory and its Applications" (in honour of S. Eswara Rao's 60th birthday), Harish-Chandra Research Institute, Allahabad
- May 19, 2005 Conference on "Lie Algebras, Vertex Operator Algebras and their Applications": in honor of Robert L. Wilson and James Lepowsky (on their 60th birthdays), North Carolina State University at Raleigh

COLLOQUIA, JOINT SEMINARS, ANNUAL DAY TALKS, ETC.

- Dec 5, 2025 Indian Institute of Technology (IIT) Madras: Colloquium
- May 15, 2025 Tata Institute of Fundamental Research: 5th Aveek Guha Memorial Lecture of the Alumni Association
- Apr 9, 2025 Indian Institute of Technology (IIT) Bombay: Colloquium
- Apr 4, 2025 Indian Institute of Science Education and Research (IISER) Pune: Colloquium
- Apr 3, 2025 Tata Institute of Fundamental Research: Mathematics Colloquium
- Feb 3, 2025 Indian Institute of Technology (IIT) Jammu: Colloquium
- Dec 23, 2024 Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore: *7th Srinivasa Ramanujan Memorial Oration*, on National Mathematics Day
- Dec 23, 2024 Indian Institute of Technology (IIT) Roorkee: National Mathematics Day Lecture
- Feb 1, 2024 Indian Institute of Technology (IIT) Kanpur: Colloquium
- Jan 30–Feb 1, 2024 Indian Institute of Technology (IIT) Kanpur: Harish-Chandra birth centenary lecture series
- Dec 22, 2023 Joint between (a) Chapters of NASI, INSA, & INYAS North Central Zone, (b) Society of Promotion of Science & Technology in India (SPSTI), and (c) Amity University Punjab: National Mathematics Day Lecture
- Dec 22, 2023 Indian Institute of Science Education and Research (IISER) Mohali: National Mathematics Day Lecture
- Dec 20, 2023 Panjab University, Chandigarh: 6th Sarvadaman Chowla Memorial Lecture
- May 11, 2023 University of Queensland, Brisbane: Maths Colloquium

COLLOQUIA, JOINT SEMINARS, ANNUAL DAY TALKS, ETC. (cont.)

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| Apr 28, 2023 | Mathematical Sciences Institute (ANU Canberra): Public Lecture |
| Apr 13, 2023 | Mathematical Sciences Institute (ANU Canberra): Colloquium |
| Mar 17, 2023 | University of Toledo: Colloquium |
| Feb 15, 2023 | Indian Institute of Technology (IIT) Madras: Colloquium |
| Jul 8, 2022 | Indian Academy of Sciences Mid-Year Meeting (IISc Bangalore): Inaugural Fellows' Lecture |
| Jan 5, 2022 | Institute of Mathematics Research and Training (IMRT): 2nd K.S.S. Namboori- pad Endowment Lecture |
| Oct 29, 2021 | National Institute of Science Education and Research (NISER) Bhubaneswar: Colloquium |
| Oct 20, 2021 | Indian Institute of Technology (IIT) Gandhinagar: Mathematics Discipline Semi- nar |
| Feb 20, 2021 | Indian Institute of Technology (IIT) Roorkee: Research Scholars' Day |
| Jan 15, 2021 | Indian Institute of Science Education and Research (IISER) Pune: Colloquium |
| Sep 28, 2020 | International Centre for Theoretical Sciences: ICTS monthly colloquium |
| Feb 29, 2020 | Indian Institute of Science Education and Research (IISER) Kolkata: Annual Math-Stat Departmental Symposium |
| Jan 29, 2020 | Drexel University: Colloquium |
| Oct 17, 2019 | Delhi University: Colloquium |
| Sep 20, 2019 | Cochin University of Science and Technology (CUSAT): 20th Professor Wazir Hasan Abdi Memorial Lecture |
| Apr 17, 2019 | Chennai Mathematical Institute: Colloquium |
| Apr 4, 2019 | Indian Institute of Technology (IIT) Kanpur: Math-Stat Colloquium |
| Mar 12, 2019 | TIFR Centre for Applicable Mathematics (CAM): Colloquium |
| Nov 22, 2018 | The Institute of Mathematical Sciences, Chennai: Colloquium (two hours) |
| Jul 12, 2018 | City University of New York: Joint NY Group Theory and NY Combinatorics Seminar |
| May 16, 2018 | Indian Institute of Technology (IIT) Bombay: Colloquium |
| May 16, 2018 | International Mathematical Olympiad Training Camp (Homi Bhabha Centre for Science Education, Mumbai): Valedictory Day Lecture |
| May 10, 2018 | Indian Statistical Institute at Bangalore: Colloquium |
| Oct 17, 2017 | Tata Institute of Fundamental Research: STCS Colloquium |
| Apr 19, 2017 | San Francisco State University: Joint Algebra–Geometry–Combinatorics + Analysis Seminar |
| Nov 27, 2013 | Indian Statistical Institute at Bangalore: Colloquium |
| Oct 18, 2013 | DePaul University: Colloquium |
| Apr 5, 2013 | University of Toledo: Colloquium |

COLLOQUIA, JOINT SEMINARS, ANNUAL DAY TALKS, ETC. (cont.)

- Feb 18, 2011 Iowa State University; Colloquium
 Sep 9, 2009 Institute of Mathematical Sciences (Chennai): Colloquium

SELECTED TALKS (other, after 2008)

- Sep 26, 2025 Illinois Institute of Technology, Chicago: Discrete Applied Math Seminar
 Jul 17, 2025 University of Maryland Baltimore County: Summer Seminar
 May 8, 2025 Maths Circle India (ICTS): Lecture to high school students: Invited 2-hour talk
 May 6, 2025 Indian Institute of Science: IISc–Agastya Science Enrichment Program for high school students
 Feb 8, 2025 Chennai Mathematical Institute: STEMS Camp for high school students: Invited 75-minute talk
 Jul 30, 2024 Mathematical Sciences Institute, Belagavi: Symposium in memory of Krishna B. Athreya
 Jul 17, 2024 North Carolina State University: Algebra and Combinatorics Seminar
 Jul 15, 2024 George Washington University: Combinatorics and Algebra Seminar
 May 14, 2024 ETH Zürich: DACO Seminar
 May 8, 2024 University of Exeter: Exeter Number Theory, Algebra and Geometry Seminar
 Apr 29, 2024 University of Plymouth: Plymouth Pure Maths Seminar
 Jan 25, 2024 Indian Statistical Institute at Delhi: Stat–Math Unit special seminar
 Jan 22, 2024 ISI Bangalore Math Club: Special Lecture
 Nov 17, 2023 Maths Circle India (ICTS): Lecture to high school students: Invited 2-hour talk
 Oct 20, 2023 National University of Singapore, Representation Theory and Number Theory Seminar
 Oct 16, 2023 National University of Singapore, Seminar
 May 31, 2023 IISc Bangalore: PROMYS India – Guest Lecture
 Apr 28, 2023 Mathematical Sciences Institute (ANU Canberra): PDE & Analysis Seminar
 Apr 18, 2023 Mathematical Sciences Institute (ANU Canberra), Algebra & Topology Seminar
 Apr 14, 2023 University of Melbourne: Pure Mathematics Student Seminar
 Apr 11, 2023 Mathematical Sciences Institute (ANU Canberra), Algebra & Topology Seminar
 Apr 5, 2023 University of Otago, Dunedin: Mathematics Seminar
 Apr 3, 2023 University of Sydney: Algebra Seminar
 Jan 6, 2023 Université du Québec à Montréal: Séminaire du LaCIM
 Jan 3, 2023 Northeastern University: Representation Theory and Related Topics (RTRT) Seminar
 Sep 30, 2022 Università degli Studi di Roma “Tor Vergata”, ARTS (Algebra and Representation Theory Seminar)

SELECTED TALKS (other, after 2008) (cont.)

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| Sep 26, 2022 | Università degli Studi di Roma “La Sapienza”, Algebra and Geometry Seminar |
| Sep 2, 2022 | Azim Premji University: Weekly Science Seminar for students |
| Aug 29, 2022 | Cochin University of Science and Technology (CUSAT): Maths Seminar |
| Aug 4, 2022 | Unofficial Indian Math Olympiad Training Camp: Invited 90-minute talk |
| May 20 and Jun 2,9, 2022 | ARCSIN Seminar (Algebra, Representations, Combinatorics and Symmetric functions in INDia) |
| May 9, 2022 | University of Georgia at Athens: Algebra Seminar |
| May 2, 2022 | Ruhr Universität Bochum (Germany): Algebraic Lie Theory Seminar |
| May 19, 2021 | Simion Stoilow Institute of Mathematics of the Romanian Academy (IMAR): Operator theory seminar |
| Mar 25, 2021 | Universidade de São Paulo: LieJor online seminar |
| Mar 3, 2021 | Webinars on Operator Theory and Operator Algebras |
| Feb 25, 2021 | Indian Institute of Science Education and Research (IISER) Mohali: Analysis and Probability Seminar |
| Feb 14, 2021 | Chennai Mathematical Institute: STEMS Camp for high school students: Invited 90-minute talk |
| Jan 20, 2021 | Indian Statistical Institute at Delhi: Stat–Math Unit Seminar |
| Dec 12, 2020 | St. Berchmans College, Webinar series in Mathematics: Prof. M.T. Kurian Memorial Lecture |
| Nov 18,25, 2020 | Functional Analysis and Operator Theory Webinar |
| Nov 20, 2020 | Indian Institute of Technology (IIT) Kharagpur: Seminar on Graphs, Matrices and Applications |
| Nov 12, 2020 | Institute of Mathematical Sciences (Chennai): Algebraic Combinatorics Seminar |
| Sep 10,24, 2020 | Ashoka University / IIT-Gandhingar / JNU: Special Functions and Number Theory Seminar |
| Feb 7, 2020 | University of Delaware: Discrete Mathematics Seminar |
| Feb 3, 2020 | Temple University: Algebra Seminar |
| Jan 31, 2020 | City University of New York: Harmonic Analysis and PDEs Seminar |
| Jan 29, 2020 | University of Delaware: Inverse Problems and Analysis Seminar |
| Jan 21, 2020 | University of Pennsylvania: CAGE: Philadelphia Area Combinatorics and Algebraic Geometry Seminar |
| Nov 6, 2019 | Indian Institute of Science: 1st Math Symposium of Infosys Young Investigators |
| Oct 22, 2019 | Tata Institute of Fundamental Research: STCS Seminar |
| Jul 23, 2019 | University of Maryland at College Park: Algebra–Number Theory Seminar |
| Jul 19, 2019 | City University of New York: New York Combinatorics Seminar |

SELECTED TALKS (other, after 2008) (cont.)

- Jul 18, 2019 Rutgers University: Lie Group/Quantum Mathematics Seminar
- Jun 3, 2019 Indian Statistical Institute at Bangalore, LIMIT Camp for high school students:
Invited 90-minute talk
- Apr 17, 2019 Chennai Mathematical Institute: Seminar
- Apr 12, 2019 Indian Institute of Science: Eigenfunctions Seminar (with Gautam Bharali)
- Apr 5, 2019 Indian Institute of Technology (IIT) Kanpur: Seminar
- Mar 29, 2019 Tata Institute of Fundamental Research: Maths Seminar
- Sep 28, 2018 University of California at Los Angeles: Analysis and PDE Seminar
- Jul 13, 2018 Massachusetts Institute of Technology: Combinatorics Seminar
- Apr 6, 2018 University of Sydney: Algebra Seminar
- Apr 5, 2018 University of Sydney: Research Seminar
- Feb 2, 2018 Indian Institute of Science: Maths Seminar
- Jan 15, 2018 Indian Institute of Science: Eigenfunctions Seminar (with Siddhartha Gadgil)
- Dec 15, 2017 University of California at Los Angeles: Analysis and PDE Seminar
- Dec 7, 2017 University of California at Berkeley: Combinatorics Seminar
- Oct 16, 2017 Indian Institute of Science Education and Research (IISER) Pune:
Two-hour Maths Seminar
- Aug 18, 2017 Indian Institute of Science: Eigenfunctions Seminar (two hours)
- May 18, 2017 University of California at Los Angeles: Combinatorics Seminar
- May 17, 2017 California Institute of Technology: Combinatorics Seminar
- May 4, 2017 Stanford University: Combinatorics Seminar
- Apr 28, 2017 City University of New York: Representation Theory Seminar
- Apr 28, 2017 City University of New York: New York Combinatorics Seminar
- Apr 24, 2017 Bronx Community College: Math Meeting
- Apr 18, 2017 Stanford University: Representation Theory Seminar
- Apr 17, 2017 Stanford University: Analysis/PDE Seminar
- Dec 8, 2016 Indian Institute of Science: Maths Seminar
- May 19, 2016 University of California at Santa Barbara, Algebra Seminar
- Nov 23, 2015 University of Pennsylvania: CAGE: Philadelphia Area Combinatorics and Algebraic Geometry Seminar
- Nov 20, 2015 Rutgers University, Lie Theory/Quantum Mathematics Seminar
- Nov 18, 2015 University of Delaware, Inverse Problems and Analysis Seminar
- Oct 23, 2015 Northeastern University, Representation Theory and Related Topics (RTRT) Seminar
- Oct 21, 2015 University of Massachusetts at Amherst, Representation Theory Seminar
- Oct 20, 2015 Brandeis University, Combinatorics Seminar

SELECTED TALKS (other, after 2008) (cont.)

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| Oct 1, 2015 | University of Chicago, Scientific and Statistical Computing Seminar |
| Sep 30, 2015 | DePaul University: Algebra, Combinatorics, and Number Theory Seminar |
| Sep 28, 2015 | University of Illinois at Chicago: Combinatorics Seminar |
| Apr 22, 2015 | San Francisco State University: Algebra-Geometry-Combinatorics Seminar |
| Dec 15, 2014 | Indian Institute of Technology (IIT), Mumbai: Algebraic Groups Seminar |
| Nov 19, 2014 | University of California at Berkeley: Representation Theory Special Seminar |
| Sep 22, 2014 | University of Wisconsin, Madison: Combinatorics Seminar |
| Dec 10, 2013 | Tata Institute of Fundamental Research: Maths Seminar |
| Nov 28, 2013 | Indian Institute of Science: Maths Seminar |
| Oct 17, 2013 | Loyola University: Algebra and Combinatorics Seminar |
| Oct 16, 2013 | University of Illinois at Chicago: Number Theory Seminar |
| Oct 15, 2013 | University of Illinois at Urbana-Champaign: Algebra-Geometry-Combinatorics Seminar |
| Sep 3, 2013 | University of Washington: Algebra and Algebraic Geometry Seminar |
| Apr 4, 2013 | University of Toledo: Algebra Seminar |
| Jul 7, 2011 | Indian Institute of Science Education and Research (IISER) Pune: Seminar |
| Jun 28, 2011 | Indian Statistical Institute at Delhi: Maths Seminar |
| Nov 15, 2010 | University of Michigan at Ann Arbor: Group theory, Number theory, and Representation theory seminar |
| Oct 14, 2010 | University of California at Riverside: Lie Theory Seminar |
| Jan 8, 2010 | Tata Institute of Fundamental Research: Maths Seminar |
| Dec 7, 2009 | University of Michigan at Ann Arbor: Group theory, Number theory, and Representation theory seminar |
| Nov 20, 2009 | Boston University: Special Geometry Seminar |
| Nov 16, 2009 | University of Massachusetts at Amherst: Representation Theory Seminar |
| Nov 6, 2009 | California Institute of Technology: Combinatorics and Lie Algebra Seminar |
| Oct 12, 2009 | Yale University: Geometry, Symmetry, and Physics Seminar |
| Sep 10,11, 2009 | Institute of Mathematical Sciences (Chennai): Algebra Seminar |
| Sep 2, 2009 | National Institute of Science Education and Research (NISER, Bhubaneswar, India): Special Seminar |
| Mar 9, 2009 | University of Southern California: Algebra Seminar |
| Dec 18, 2008 | Tata Institute of Fundamental Research: Maths Seminar |
| Dec 17, 2008 | Indian Institute of Science: Maths Seminar |
| Nov 25, 2008 | University of Chicago: Representation Theory Seminar |
| Nov 24, 2008 | University of Illinois at Chicago: Algebra Seminar |
| Oct 23, 2008 | University of California at Riverside: Lie Theory Seminar |

SELECTED TALKS (other, after 2008) (cont.)

- Sep 4, 2008 Rutgers University: Algebra Seminar
Sep 3, 2008 Yale University: Algebra and Lie Groups Seminar
Aug 29, 2008 Cornell University: Lie Groups Seminar
Jul 21, 2008 DePaul University: Algebra Seminar
Apr 4, 2008 University of California at Riverside: Commutative Algebra Seminar