

Manjil P. Saikia

Mathematical & Physical Sciences Division
School of Arts & Sciences, Ahmedabad University
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July 25, 2024

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Degrees/Diploma & Academic Positions

- **Ahmedabad University** Ahmedabad, India
Assistant Professor (tenure-track) *Jul 2023 – present*
 - Major Advisor for Mathematical & Computational Sciences (Jan 2024 – present)
 - Minor Advisor for Mathematics (Jan 2024 – present)
 - Faculty Mentor, Quiz Club (May 2024 – present)
 - School of Arts & Sciences Social Media Coordinator (Jul 2024 – present)
 - Minor Advisor for Computer Science (Oct 2023 – Jan 2024)
 - University Statistical Training Software Co-Coordinator (Oct 2023 – Jul 2024)
- **Indian Institute of Information Technology** Imphal, India
Guest Assistant Professor *Dec 2022 – May 2023*
 - Examination in-charge (Feb 2023 – May 2023)
 - Library in-charge (Feb 2023 – May 2023)
- **Cardiff University** Cardiff, UK
Postdoctoral Research Associate *Nov 2019 – Oct 2022*
 - Supervisor: Professor Roger E. Behrend
 - Supported by a grant from the Leverhulme Trust
- **Universität Wien** Vienna, Austria
Dr. rer. nat. Mathematics *Sep 2015 – Sep 2019*
 - Advisor: Professor Ilse Fischer
 - Thesis: Topics on Alternating Sign Matrices and Aztec Rectangles
 - Graduated with distinction
 - Supported by a grant from the Austrian Science Fund
 - Member, Student Steering Committee of the Vienna Doctoral School in Mathematics (Aug 2017 – Sep 2019)
- **International Centre for Theoretical Physics** Trieste, Italy
Postgraduate Diploma in Mathematics *Sep 2014 – Aug 2015*
 - Advisor: Professor Fernando R. Villegas
 - Thesis: Representations of the Symmetric Group
 - Supported by a scholarship from UNESCO
- **Tezpur University** Tezpur, India
M.Sc. Mathematics *Aug 2009 – Jun 2014*
 - Advisor: Professor Nayandeep Deka Baruah
 - Thesis: A study of the crank function with special emphasis on Ramanujan's Lost Notebook
 - Awarded with Gold Medal for academic excellence
 - Supported by a scholarship from INSPIRE-DST, Government of India

Awards, Grants & Honours

Elected Membership of the Indian National Young Academy of Science (INYAS) . . .	2024 – 2029
Conference funding of USD 300 to attend Combinatory Analysis in Penn State, USA	2018
Conference funding of CAD 350 to attend 28th FPSAC in Vancouver, Canada	2016
Gold Medal (Tezpur University)	2014
National Eligibility Test (UGC-CSIR)	2014
INSPIRE Scholarship (DST, Government of India)	2009 – 2014
Prof. Bapu Krishna Choudhury Memorial Prize (Assam Academy of Mathematics)	2008
Qualified Regional Mathematical Olympiad (RMO)	2008
Dr. Subratananda Dowerah Memorial Gold Medal (Assam Academy of Mathematics)	2007
Anundoram Barooah Award (Government of Assam)	2007

Teaching Experience

Courses which were designed/co-designed by me are marked in brown.

- **Gateway to Abstract Reasoning (MAT165)** Ahmedabad University
Instructor *Bi-semester 2024-25*
– Co-taught the course.
- **Combinatorial Enumeration (MAT315)** Ahmedabad University
Instructor *Monsoon 2024*
- **Combinatorial Enumeration (MAT515)** Ahmedabad University
Instructor *Monsoon 2024, Winter 2024*
– Taught as a reading course in Winter 2024.
- **Differential Equations (MAT256)** Ahmedabad University
Instructor *Monsoon 2024*
- **Mathematics for Business (MAT000)** Ahmedabad University
Instructor *Summer 2024, Summer 2023*
– Co-taught the course.
- **Mathematical Problem Solving** Lodha Genius Programme, Ashoka University
Instructor *Summer 2024, Summer 2023*
– Taught mathematical problem solving (number theory, combinatorics and geometry) for grades 9 to 12.
- **Applied Linear Algebra (MAT248)** Ahmedabad University
Instructor *Winter 2024*
– Co-taught the course.
- **Introductory Calculus (MAT142)** Ahmedabad University
Instructor *Bi-semester 2023-24*
- **Introduction to Data Structures and Algorithms (CSC210)** Ahmedabad University
Instructor *Monsoon 2023*
– Co-taught the course.

- **Theory of Computing (CSE525)** Ahmedabad University
Instructor Monsoon 2023
- **Foundation Programme: Environment and Climate Change** Ahmedabad University
Instructor Monsoon 2023
 - Co-taught the third module (week-long) of this unique programme, which builds the foundations of interdisciplinary learning at Ahmedabad University and engages with issues of the society through project-based learning.
- **Multivariable Calculus & ODEs (MA1012 Mathematics II)** IIIT Manipur
Instructor Spring 2023
- **Optimization Techniques (MA305)** IIIT Manipur
Instructor Spring 2023
- **Linear Algebra & Single Variable Calculus (MA1011 Mathematics I)** IIIT Manipur
Instructor Autumn 2022-23
- **Single Variable Calculus (MA1006 Foundations of Mathematics II)** Cardiff University
Teaching Associate Spring 2022

Publications (available at <http://manjilsaikia.in/research/>)

Five most significant are marked in bold.

Undergraduate/Masters student authors (at the time of writing) are listed in brown.

Preprints/Under preparation

7. P. Paul and M. P. Saikia. *The Aztec Diamond Theorem Revisited*. under preparation, 2024.
6. N. D. Baruah, H. Das, M. P. Saikia, and A. Sarma. *Congruences for Andrews-Uncu's partition function $\mathcal{EO}_u(n)$* . preprint, 2024.
5. D. Haje, D. Ahmed, H. Izanloo and M. P. Saikia. *The Signed Roman Domination Number of Ladder graphs, circular Ladder graphs and their complements*. preprint, 2024.
4. H. Das, M. P. Saikia, and A. Sarma. *Arithmetic Properties Modulo Powers of 2 and 3 for Overpartition k -Tuples with Odd Parts*. under review, 2024.
3. F. S. Jeba, P. J. Mahanta, A. Roy, and M. P. Saikia. *On near F_k -perfect and deficient F_k -perfect numbers*. under review, 2024.
2. M. P. Saikia, A. Sarma, and J. A. Sellers. *Arithmetic Properties Modulo Powers of 2 for Overpartition k -Tuples with Odd Parts*. under review, 2023. [doi](#)
1. P. J. Mahanta, M. P. Saikia, and A. Sarma. *Biases in Non-Unitary Partitions*. preprint, 2023. [doi](#)

Peer-Reviewed Journal Articles

Quartile rankings of journals are added for the year of publication; current rankings may differ.

24. M. P. Saikia, A. Sarma, and P. Talukdar. Ramanujan-type Congruences for Partition k -Tuples with 5-Cores. *Indian Journal of Pure and Applied Mathematics*, accepted, 2024. [doi](#) **Q3**
23. P. J. Mahanta, and M. P. Saikia. Extensions of some results of Jovovic and Dhar. *Journal of the Ramanujan Mathematical Society*, accepted, 2023. [doi](#) **Q3**

22. M. P. Saikia. Conjectures on congruences of binomial coefficients modulo higher powers of a prime number. *Journal of the Assam Academy of Mathematics*, 13:5-7, 2023. [doi](#)
21. M. P. Saikia. Some Missed Congruences modulo powers of 2 for t -colored overpartitions. *Boletín de la Sociedad Matemática Mexicana*, 29(1):15, 2023. [doi](#) **Q2**
20. P. B. Borah, P. J. Mahanta, and M. P. Saikia. Representing Even Perfect and Near-Perfect Numbers as Sums of Cubes. *Journal of the Assam Academy of Mathematics*, 12:1-7, 2022. [doi](#)
19. P. J. Mahanta and M. P. Saikia. Refinement of some partition identities of Merca and Yee. *International Journal of Number Theory*, 18(5):1131-1142, 2022. [doi](#) **Q2**
18. P. J. Mahanta and M. P. Saikia. Some New and Old Gibonacci Identities. *Rocky Mountain Journal of Mathematics*, 52(2):645-665, 2022. [doi](#) **Q2**
17. K. Banerjee, [S. Bhattacharjee](#), M. G. Dastidar, P. J. Mahanta, and M. P. Saikia. **Parity Biases in Partitions and Restricted Partitions**. *European Journal of Combinatorics*, 103:103522, 2022. [doi](#) **Q1**
16. I. Fischer and M. P. Saikia. **Refined Enumeration of Symmetry Classes of Alternating Sign Matrices**. *Journal of Combinatorial Theory, Series A*, 178:105350, 2021. [doi](#) **Q1**
15. P. J. Mahanta and M. P. Saikia. A family of lacunary recurrences for Lucas Numbers. *The Fibonacci Quarterly*, 58(4):356-360, 2020. [doi](#)
14. P. J. Mahanta, M. P. Saikia, and D. Yaqubi. Some properties of Zumkeller numbers and k -layered numbers. *Journal of Number Theory*, 217:218–236, 2020. [doi](#) **Q2**
13. [J. T. Akagi](#), [C. F. Gaona](#), [F. Mendoza](#), M. P. Saikia, and M. Villagra. **Hard and Easy Instances of L -Tromino Tilings**. *Theoretical Computer Science*, 815:197-212, 2020. [doi](#) **Q2**
12. P. Dutta and M. P. Saikia. On Deficient Perfect Numbers with Four Distinct Prime Factors. *Asian-European Journal of Mathematics*, 13(7):2050126, 2020. [doi](#) **Q3**
11. M. P. Saikia. **Enumeration of Domino Tilings of an Aztec Rectangle with boundary defects**. *Advances in Applied Mathematics*, 89:41–66, 2017. [doi](#) **Q2**
10. A. Laugier and [M. P. Saikia](#). Some Properties of Fibonacci Numbers, Generalized Fibonacci Numbers and Generalized Fibonacci Polynomial Sequences. *Kyungpook Mathematical Journal*, 57(1):1–84, 2017. [doi](#) **Q3**
9. A. Laugier, [M. P. Saikia](#), and [U. Sarmah](#). Some Results on Generalized Multiplicative Perfect Numbers. *Annali Della Università di Ferrara*, 62(2):293–312, 2016. [doi](#) **Q2**
8. A. Laugier and [M. P. Saikia](#). A combinatorial proof of a result on generalized Lucas Polynomials. *Demonstratio Mathematica*, 49(3):266–270, 2016. [doi](#) **Q3**
7. [M. P. Saikia](#). A study of the crank function in Ramanujan’s Lost Notebook. *The Mathematics Student*, 84(1-2):105-121, 2015. [doi](#)
6. A. Laugier and [M. P. Saikia](#). Some results about Linear Recurrence Relation Homomorphisms. *Notes on Number Theory and Discrete Mathematics*, 20(4):58-68, 2014. [doi](#)
5. A. Laugier and [M. P. Saikia](#). A characterization of a prime p from the binomial coefficient $\binom{n}{p}$. *The Mathematics Student*, 83(1-4):221-227, 2014. [doi](#)

4. M. P. Saikia. Cranks in Ramanujan's Lost Notebook. *Journal of the Assam Academy of Mathematics*, 6:59-63, 2013. [doi](#)
3. A. Laugier and M. P. Saikia. A new proof of Lucas' Theorem. *Notes on Number Theory and Discrete Mathematics*, 18(4):1-6, 2012. [doi](#)
2. M. P. Saikia and J. Vogrinc. Binomial Symbols and Prime Moduli. *Journal of the Indian Mathematical Society*, 79(1-4):137-143, 2011. [doi](#)
1. M. P. Saikia and J. Vogrinc. A Simple Number Theoretic Result. *Journal of the Assam Academy of Mathematics*, 3:91-96, 2010. [doi](#)

Peer-Reviewed Conference Proceedings

4. F. S. Jeba, A. Roy, and M. P. Saikia. On k -Facile Perfect Numbers. In *Proceedings of International Conference on Algebra and its Applications 2023, Fez, Morocco*, Springer, to appear. [doi](#)
3. F. S. Jeba, A. Roy, and M. P. Saikia. On near-perfect numbers with five prime factors. In *Proceedings of 2nd ICRTMPCS 2023 "Advances in Mathematical and Computational Sciences"*, DeGruyter, to appear. [doi](#)
2. K. Banerjee, S. Bhattacharjee, M. G. Dastidar, P. J. Mahanta, and M. P. Saikia. Parity Biases in Partitions and Restricted Partitions. *Seminaire Lotharingien de Combinatoire (Proceedings of the 34th Conference on Formal Power Series and Algebraic Combinatorics)*, 86B.21, 2022. [doi](#) **Q4**
1. J. T. Akagi, C. F. Gaona, F. Mendoza, M. P. Saikia, and M. Villagra. Hard and Easy Instances of L -Tromino Tilings. *Proceedings of the 13th International Conference and Workshops on Algorithms and Computation (WALCOM) 2019, Lecture Notes in Computer Science (LNCS)*, Volume 11355, 82-95, 2019. [doi](#) **Q2**

Selected Non Peer-Reviewed Papers/Articles

14. M. P. Saikia. *Collection of Book Reviews*. Mathematical Association of America Reviews, 2020 – present. [doi](#)
13. M. P. Saikia. *Further congruences for $(4, 8)$ -regular bipartition quadruples modulo powers of 2*. unpublished, 2023. [doi](#)
12. M. P. Saikia. *Is an Assamese-Medium Medical College Just a Poll Gimmick?*. The Wire Science, 10 Feb 2021. [doi](#)
11. M. P. Saikia. *The Remarkable Sequence 2, 7, 42, 429, 7436, ...*. Ganit Bikash, 67(2):44-50, 2020. [doi](#)
10. M. P. Saikia. *Freeman Dyson: A Short Portrait*. Ganit Bikash, 67(2):25-27, 2020. [doi](#)
9. M. P. Saikia and M. P. Talukdar. *The Perils of the Indian Education System*. Pragyana, Tinsukia College Magazine, 2019. [doi](#)
8. M. P. Saikia. *On Deficient Perfect Numbers with Four Distinct Prime Factors, II*. unpublished, 2018. [doi](#)
7. M. P. Saikia. *Debate: The Case for Intellectual Colonialism*. The Wire, 09 Dec 2017. [doi](#)
6. M. P. Saikia. *Book review: The Surprising Mathematics of Longest Increasing Subsequences*. Newsletter of the European Mathematical Society, 102(12):52-53, 2016. [doi](#)

5. **M. P. Saikia**. *John Forbes Nash, Jr.: A Short Obituary*. Asia Pacific Mathematics Newsletter, 5(2):42-43, 2015. [doi](#)
4. **M. P. Saikia**. *The Pythagoras' Theorem*. Asia Pacific Mathematics Newsletter, 5(2):5-8, 2015. [doi](#)
3. A. Laugier and **M. P. Saikia**. *Periodic Sequences modulo m*. unpublished, 2015. [doi](#)
2. **P. J. Mahanta** and **M. P. Saikia**. *Gonit Sora-the two year journey*. Asia Pacific Mathematics Newsletter, 3(4):25-27, 2013. [doi](#)
1. **M. P. Saikia**. *An interesting number theoretic problem*. Ganit Bikash, 57, 2011. [doi](#)

Solutions to Problems

2. **M. P. Saikia**. *Problem 4, 2015 (1-2)*. The Mathematics Student, 84(3-4):181, 2015. [doi](#)
1. **B. Deb** and **M. P. Saikia**. *Problem 1908*. The Mathematics Magazine, 86(5):384-385, 2013. [doi](#) **Q4**

Presentations

* = Invited; † = Contributed

- **The Evolution of Trust**
* *ENABLE Activity, New Students Orientation, Ahmedabad University, India* July 2024
- **Discovering the Joy of Mathematics**
* *Ahmedabad Grand Challenge Programme, Ahmedabad University, India* July 2024
- **Arithmetic Properties of Overpartition k -Tuples with Odd Parts**
† *2nd Meru Combinatorics Conference, GEHU, Bhimtal, India* June 2024
- **The Aztec Diamond Theorem Revisited**
* *COMbinatorial Number Theory And Connected Topics (CONTACT - III), online* March 2024
- **Alternating Sign Matrices and Plane Partitions**
† *38th Annual Conference of the RMS, IITG, India* December 2023
* *Research Seminar Series, Ahmedabad University, India* May 2023
* *Combinatorics Seminar, University of Bristol, UK* October 2022
- **Partitions with fixed differences between parts with fixed multiplicities**
† *COMbinatorial Number Theory And Connected Topics (CONTACT - II), online* February 2023
- **An Introduction to Algebraic Topology**
* *National Mathematics Day 2022, D. C. B. Girls College, Jorhat, India* December 2022
- **JEE Mathematics Problem Solving**
* *IIT Manipur, India* December 2022
- **An Introduction to Mathematical Cryptography**
* *Institute Seminar, Chaitanya Bharathi Inst. of Technology, Hyderabad, India* November 2022
- **Some Combinatorial Problems**
* *Assam Academy of Mathematics, Bongaigaon Branch, Assam, India* October 2022
* *Mathematics Seminar, Dibrugarh University, Assam, India* October 2019
- **Logarithms and Hyperbolic Area**
* *IDM, Sipajhar College, Assam, India, online* March 2022
* *Patharkandi College, Assam, India, online* February 2022

- **Gonit Sora: Assessment and Future Needs**
* CSIR-NIScPR, New Delhi, India February 2022
- **What is Pseudoscience**
* InSCIgnis, Tezpur University, Assam, India (video) February 2022
- **Parity Biases in Partitions and Restricted Partitions**
† *Combinatorial Number Theory And Connected Topics (CONTACT - I)*, online December 2021
* *Mathematics Colloquium, Ashoka University, India* (video) November 2021
- **How Mathematics has helped shape civilization**
* *Mathematics Seminar, Sambalpur University, Odisha, India* December 2021
* *15 Minit Xikhya, Assam, India, online* (video) November 2021
- **How to Discover the Rogers - Ramanujan Identities**
* *National Mathematics Day, Tezpur University, India* (video) December 2021
* *St. Berchmans College, Kerala, India* (video) August 2021
- **An Introduction to q -analysis**
* *Talk Series, Club of Mathematics, IISER, Thiruvananthapuram, India* November 2021
- **Euler's Pentagonal Number Theorem and Generalizations**
* *Online Seminar in Number Theory, Tezpur University, Assam, India* October 2021
* *Webinar Series in Mathematics, Rangapara College, Assam, India* September 2021
- **Combinatorial Reciprocity Theorems: Some Examples**
* *Institute Seminar, Institute of Mathematics and Applications, Bhubaneswar, India* July 2021
- **Signed Roman Domination Function on Some Graphs**
* *Joint Mathematics Meetings (AMS-MAA), online* January 2021
- **Refined enumeration of symmetry classes of Alternating Sign Matrices**
* *Topics in Special Functions and Number Theory, India, online* (video) November 2020
Combinatorics in Algebra, Topology and Graph Theory (CATGT) Webinar, India September 2020
* *GAPT Seminar, Cardiff University, UK* April 2020
† *Combinatory Analysis 2018, PSU, State College, USA* July 2018
- **The Remarkable Sequence 1, 1, 2, 7, 42, 429, 7436, . . .**
* *Webinar, Gurucharan College, Silchar, India* (video) August 2020
Interdisciplinary Symposium of VDS, Universität Wien, Austria September 2017
- **Permutations and Games**
Webinar, Kaziranga University, Jorhat, India August 2020
- **The Concrete Tetrahedron**
* *Webinar, Digboi College, Digboi, India* August 2020
- **Perspectives on Mathematics Education**
* *Assam Down Town University, Guwahati, India* July 2020
- **Hard and Easy Instances of L-Tromino Tilings**
* *Int'l Conf. on Mathematical Modelling in Appl. Scs., Dibrugarh U., India* June 2020
† *13th WALCOM, IITG, India* February 2019
- **Introduction to the Theory of Computation**
Mathematics Colloquium, Tezpur University, Assam, India October 2019
- **Refined enumeration of Vertically Symmetric Alternating Sign Matrices**
Mathematics Colloquium, Tezpur University, Assam, India May 2018
Mathematics Colloquium, North-Eastern Hill University, Shillong, India May 2018
* *Vienna Discrete Mathematics Seminar, Technische Universität Wien* April 2018
† *80th SLC, Lyon, France* March 2018

- **The Story of Alternating Sign Matrices ... so far**
Mathematics Seminar, The Abdus Salam ICTP, Trieste, Italy *July 2019*
- **Tiling Problems and Perfect Matchings**
PhD Colloquium, Fakultät für Mathematik, Universität Wien, Austria *March 2018*
Mathematics Colloquium, Tezpur University, Assam, India *November 2016*
- **Perfect Matchings and Game Theory**
** Mini-Conference on Networks and Games, Indian Statistical Institute, Kolkata, India* *July 2017*
- **Graphical Condensation and Aztec Rectangles**
Stat-Math Unit Seminar, Indian Statistical Institute, Delhi, India *February 2017*
† Int'l Conf. of TIMC, BHU, Varanasi, India *December 2016*
† ALEA in Europe Young Researcher's Workshop *September 2016*
** Vienna Discrete Mathematics Seminar, Technische Universität Wien* *June 2016*
- **Domino Tilings of Aztec Rectangles with Boundary Dents**
† 3rd AEC Summer School, RISC, Hagenberg, Austria *August 2016*
- **Some Results on Generalized Multiplicative Perfect Numbers**
† Nat'l Seminar on Advances in Math. Sciences, Gauhati U., Assam, India *December 2015*
- **Binomial Symbols and Prime Moduli**
** ICM Int'l Satellite Conf. on Rings and Near Rings, NEHU, Shillong, India* *September 2010*

Selected Conferences/Workshops Attended

Excluding the ones where I have given a talk.

- International Conference on Graph Theory and its Applications, Presidency University, Bengaluru, India, June 2024
- FPSAC (Formal Power Series and Algebraic Combinatorics) 2022 Online, July 2022
- Ramanujan and Euler: Partitions, mock theta functions, and q -series, Online, July 2022
- FPSAC (Formal Power Series and Algebraic Combinatorics) 2021 Online, January 2022
- Lattice Paths, Combinatorics and Interactions, CIRM, Marseille Luminy, France, online, June 2021
- International Conference on Number Theory and Algebra, IIT (BHU), Varanasi, India, online, December 2020
- International Conference on Special Functions & Applications (ICSFA-2020), Babu Banarasi Das University, Lucknow, India, online, December 2020
- International Conference on Number Theory and Discrete Mathematics, Rajagiri School of Engineering and Technology, Kochi, India, online, December 2020
- FPSAC (Formal Power Series and Algebraic Combinatorics) 2020 Online, July 2020
- Combinatorial and Additive Number Theory 2020, online, June 2020
- Algebraic Combinatorics Online Workshop, online, April 2020
- 5th Algorithmic and Enumerative Combinatorics Summer School, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, Austria, July-August 2019

- 31st International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC), University of Ljubljana, Ljubljana, Slovenia, July 2019
- 13th International Conference and Workshops on Algorithms and Computation (WALCOM), Indian Institute of Technology, Guwahati, India, February-March, 2019
- 4th Algorithmic and Enumerative Combinatorics Summer School, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, Austria, July-August 2018
- Workshop on Computer Algebra in Combinatorics, Erwin Schrödinger International Institute for Mathematics and Physics, Universität Wien, Austria, November 2017
- Workshop on Enumerative Combinatorics, Erwin Schrödinger International Institute for Mathematics and Physics, Universität Wien, Austria, October 2017
- ALEA in Europe Workshop, Technische Universität Wien, Austria, October 2017
- European Conference on Combinatorics, Graph Theory and Applications, Technische Universität Wien, Austria, August-September 2017
- Elliptic Hypergeometric Functions in Combinatorics, Integrable Systems and Physics, Erwin Schrödinger International Institute for Mathematics and Physics, Universität Wien, Austria, March 2017
- Computer Algebra and Elementary Particle Theory at the Large Scale: 10 Years of JKU-DESY Collaboration, Research Institute for Symbolic Computation, Johannes Kepler Universität Linz, Austria, February 2017
- 2016 Symposium Diskrete Mathematik, Freie Universität Berlin, Zuse-Institut Berlin, Germany, July 2016
- 28th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC), Simon Fraser University, Vancouver, Canada, July 2016
- 76th Séminaire Lotharingien de Combinatoire, Obernai, France, April 2016
- Conference dedicated to the scientific legacy of Marcel-Paul Schützenberger, Université de Bordeaux, Bordeaux, France, March 2016
- CIMPA International Research School and Conference on Fourier analysis of groups in Combinatorics, North-Eastern Hill University, Shillong, India, November 2013
- Advanced Instructional School on Analytic Number Theory, Kalinga Institute of Industrial Technology (KIIT) University, Bhubaneswar, India, June 2013
- The Legacy of Srinivasa Ramanujan, University of Delhi, New Delhi, India, December 2012
- Pan Asian Number Theory Conference, Indian Institute of Science Education and Research, Pune, India, July 2012
- Advanced Instructional School on Number Theory (The Circle Method), The Institute of Mathematical Sciences, Chennai, India, June - July 2012

PhD Students

- Mohit Dilipbhai Rohida (Jan. 2024 – present, Member, Doctoral Advisory Committee); Ahmedabad University, Ahmedabad, India
- Flora Jeba S (Jan. 2021 – present, External Supervisor); CHRIST Deemed to be University, Bangaluru, India

Academic Service and Professional Activities

- Member of the editorial board of the following journals/periodicals:
 - [Journal of the Assam Academy of Mathematics](#) (June 2021 – present)
 - [Ganit Bikash](#) (July 2020 – present)
 - * Deputy Editor (July 2020 – March 2024)
- **Executive Committee Member** of the **Assam Academy of Mathematics** (since 2020)
- **Organising Committee Member** of the **Distinguished Lecture Series** of **The (Indian) Mathematics Consortium TMC** (October 2020 – October 2022).
- Delivered a series of talks at the **EAUMP-ICTP School: Topics in Concrete Mathematics** on **Combinatorial Representation Theory** in online mode, organized by **ICTP-East African Institute for Fundamental Research (EAIFR) in Kigali, Rwanda** (August 2021)
- Organized a series of talks and a department colloquium by Prof. Fernando Rodriguez Villegas at the Faculty of Mathematics, University of Vienna (November 2018)
- Refereed papers for the following journals and conferences:
 - Advances in Applied Mathematics
 - Advances in Mathematics
 - AIMS Mathematics
 - Annals of Combinatorics
 - Axioms
 - Discrete Mathematics
 - Indian Journal of Pure and Applied Mathematics
 - Journal of Algebraic Combinatorics
 - Journal of Algebraic Systems
 - Journal of the Assam Academy of Mathematics
 - Journal of the Indian Mathematical Society
 - Journal of the Korean Mathematical Society
 - Mathematica Slovaca
 - Mathematical Communications
 - Mathematics
 - Notes on Number Theory and Discrete Mathematics
 - Palestine Journal of Mathematics
 - SIGMA (Symmetry, Integrability and Geometry: Methods and Applications)
 - Symmetry

- The Mathematics Student
- The Ramanujan Journal
- CSAE 2018
- Reviewer for Mathematical Reviews (American Mathematical Society).
January 2015 – present
- Reviewer for Zentralblatt Math (European Mathematical Society).
September 2014 – present

Memberships

- **American Mathematical Society**, ordinary member (since 2015)
- **Ramanujan Mathematical Society**, life member (since 2018)
- **Assam Academy of Mathematics**, life member (since 2019)

Outreach

- Co-Organized a successful **series of online seminars** (June 2020 – June 2021) for **Early Career Mathematicians from India**.
- Organized a successful **series of webinars** (June 2020 – May 2021) under the aegis of **Gonit Sora**, where **speakers from 7 different countries gave 29 talks** aimed mainly at school and college students of India.
- I was a **Core Team Member** of **Xomidhan**, a career counselling platform for students from North-East India. In this role I assisted in organizing several online and offline events for students in various parts of Assam (India).
- **Co-founded** the online bilingual (English & Assamese) magazine **Gonit Sora** in April 2012. (Serving as the **Managing Editor** in charge of the overall management of the website since its inception.)
- Co-founded the **Students' Science Council** (SSC) while an undergraduate at Tezpur University. SSC now successfully does school science outreach and organizes the largest science festival in North-East India, called **InSCIgnis**.

Mentoring

- Mentor for an internship program run by **Gonit Sora** and have so far **mentored four undergraduate students** from different parts of India (each for 3 months at a time).
- I have given the following advanced level courses on a volunteer basis to students (masters & PhD) in India (all online):

- **Rogers-Ramanujan Identities and Related Topics** (Fall 2022 & Summer 2024): a few lectures from Summer 2024 are available [online](#).
 - **q -Series and Partitions** (Spring 2022): a few lectures are available [online](#).
 - **Perfect Numbers and its Generalizations** (Spring 2022): a few lectures are available [online](#).
 - **Topics on Alternating Sign Matrices** (Summer 2021): discussed the book **Proofs and Confirmations** by David Bressoud.
 - **Generating Functions in Combinatorics** (Spring 2021): discussed the book **generatingfunctionology** by H. Wilf.
- Actively involved in Mathematical Olympiad training camps in the North-East of India since 2008. I have delivered lectures for high school students at the following places:
 - Inspire Academics, Tezpur, India (2018)
 - Birjhora Higher Secondary School, Bongaigaon, India (2017)
 - North-Eastern Hill University, Shillong, India (2012, 2013, 2014)
 - Darrang College, Tezpur, India (2011, 2014)
 - Gauhati University, Guwahati, India (2012, 2013, 2014)
 - Tinsukia Women’s College, Tinsukia, India (2013)
 - Kaliabor College, Kuwaritol, India (2008, 2012, 2013)

Technical Skills

- Markup Languages
 - \LaTeX , HTML
- Specialized Software
 - Mathematica
- Web Development
 - Apache Web Server

Other Research Experience

- **Visiting Student** IASc, Bangaluru, Karnataka India
Algebra *June 2013 – July 2013*
 - Mentored by Prof. R. Sujatha
- **IASc Summer Research Fellowship** IMSc, Chennai, Tamil Nadu, India
Additive Combinatorics *June 2012 – July 2012*
 - Mentored by Prof. R. Balasubramanian
- **IASc Summer Research Fellowship** IISER Mohali, Punjab, India
Algebraic Number Theory *June 2011 – July 2011*
 - Mentored by Prof. Kapil H. Paranjape

- **CMI Summer Research Fellowship**
Analytic Number Theory
– Mentored by Prof. Purusottam Rath

CMI, Chennai, Tamil Nadu, India
June 2010 – July 2010

References

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