Professor
School of Mathematical Sciences
National Institute of Science Education Research, Bhubaneswar
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Brundaban Sahu

Personal:

- Place of Birth   :   Jharanipali, Balangir
- Nationality   :   Indian

Research Interests:

- Number Theory, Modular forms, Jacobi forms,
- Representations of numbers by quadratic forms

Education:

- Ph.D. in Mathematics, 2008
  Harish-Chandra Research Institute/ degree awarded by University of Allahabad
  Thesis Title: *Some Problems in Number Theory,*
  Advisor : Professor B. Ramakrishnan.
- M. Sc. in Mathematics (83.8 %), Sambalpur University, 2001.
- B. Sc. in Mathematics (75.5 %), G. M. College, Sambalpur, 1999.
- Higher Secondary (66.7 %), G. M. College, Sambalpur, 1996.
- Secondary (77.2 %), I. G. High School, Jharanipali, Balangir, 1994.

Employment:

- Professor (July 01, 2022–), NISER, Bhubaneswar
- Associate Professor (July 01, 2017– June 30, 2022), NISER, Bhubaneswar
- Reader-F (July 01, 2014– June 30, 2017), NISER, Bhubaneswar
- Assistant Professor (August 02, 2010– June 30, 2014), NISER, Bhubaneswar
- Science Foundation of Ireland (SFI) Postdoctoral Fellow
  (November 2008– October 2010), University College Dublin
  Postdoctoral Advisor: Professor Dr. Robert Osburn
- Junior/ Senior Research Fellow (2002-2008), HRI, Allahabad.
- NBHM Junior Research Fellow (2001), ISI, Bangalore

2

Publications/ Preprints:

(1) *Nonvanishing of L-functions and Poincare series for Jacobi forms of matrix index* (with Shivansh Pandey)

(2) *On the number of representations of certain quadratic forms of sixteen variables II* (with B. Ramakrishnan and Anup Kumar Singh)

(3) *Representation of a natural number as sum of odd number of squares and convolution sums of divisor functions* (with Shivansh Pandey)

(4) *L-function associated to Jacobi forms of half-integral weight and a converse theorem* (with Abhash Kumar Jha and Shivansh Pandey), Journal of Mathematical Analysis and Applications, 534 (2024), no. 1, paper number. 128041

(5) *Evaluation of triple convolution sums* (with B. Ramakrishnan and Anup Kumar Singh), International Journal Number Theory, 20 (2024), 4, 1073-1098

(6) *A simple extension of Ramanujan-Serre derivative map and some applications* (with B. Ramakrishnan and Anup Kumar Singh) Ramanujan Journal 61 (2023), 4, 1379-1410

(7) *Representations of squares by certain diagonal quadratic forms in odd number of variables* (with B. Ramakrishnan and Anup Kumar Singh) Rocky Mountain Journal of Mathematics, 53 (2023), no. 4, 1219-1244

(8) *Nonvanishing of kernel functions for Jacobi forms and Poincaré series* (with Shivansh Pandey) Journal of Mathematical Analysis and Applications, 515 (2022), no. 2, paper number. 126455

(9) *On the number of representations of a natural number by certain quaternary quadratic forms*, (with B. Ramakrishnan and Anup Kumar Singh), Modular forms and related topics in number theory, 173–198, Springer Proc. Math. Stat., 340, Springer, Singapore, 2020

(10) *Rankin-Cohen type operators for Hilbert-Jacobi forms* (with Moni Kumari), Modular forms and related topics in number theory, 143–156, Springer Proc. Math. Stat., 340, Springer, Singapore, 2020

(11) *Rankin-Cohen brackets on Jacobi forms of several variables and special values of certain Dirichlet series* (with Abhash Kumar Jha) Int. J. Number Theory (15), 2019, no-5, 925-933

(12) *On the number of representations by certain quadratic forms in 8 variables* (with B. Ramakrishnan and Anup Kumar Singh) Automorphic Forms and Related Topics, 215-224, Contemp. Math., Vol-732, American Mathematical Society, Providence, RI, 2019

(13) *Differential operators on Jacobi forms and special values of certain Dirichlet series* (with Abhash Kumar Jha) Automorphic Forms and Related Topics, 91-99, Contemp. Math., Vol-732, American Mathematical Society, Providence, RI, 2019

(14) *Rankin-Cohen brackets on Hilbert modular forms and special values of certain Dirichlet series*, Funct. Approx. Comment. Math, 58 (2018), 2, 257-268 (with Moni Kumari)

(15) *On the number of representations of certain quadratic forms and a formula for the Ramanujan Tau function*, Funct. Approx. Comment. Math, 58 (2018), 2, 233-244 (with B. Ramakrishnan and Anup Kumar Singh)

(16) *On the number of representations of certain quadratic forms and a formula for the Ramanujan Tau function* (with B. Ramakrishnan and Anup Kumar Singh) In: Akbary, Amir, Gun, Sanoli (eds.) Geometry, Algebra, Number Theory and Their Information Technology Applications, Springer Proceedings in Mathematics and Statistics, vol 251, pp: 383-409, 2018

(17) *On the number of representations by certain octonary quadratic forms with coefficients 1, 2, 3, 4 and 6*, Int. J. Number Theory, 14 (2018), 3, 751- 812 (with B. Ramakrishnan and Anup Kumar Singh)

(18) *On the representations of a positive integer by certain classes of quadratic forms in eight variables* (with B. Ramakrishnan and Anup Kumar Singh) pp 641-664, In: Andrews G., Garvan F. (eds) Analytic Number Theory, Modular Forms and q-Hypergeometric Series. ALLADI60 2016. Springer Proceedings in Mathematics & Statistics, vol 221. Springer

(19) *On the number of representations of certain quadratic forms in 20 and 24 variables*, Funct. Approx. Comment. Math. 54 (2016), 2, 151-161 (with B. Ramakrishnan)

(20) *Rankin-Cohen brackets on Siegel modular forms and Special values of Certain Dirichlet series*, The Ramanujan Journal, 44 (2017), 1, 63-73 (with Abhash Kumar Jha)

(21) *Rankin-Cohen brackets on Jacobi Forms and the adjoint of some linear maps*, The Ramanujan Journal, 39 (2016), 3, 533-544 (with Abhash Kumar Jha)

(22) *Evaluation of convolution sums and some remarks on cusp forms of weight 4 and level 12* Mathematical Journal of Okayama University, 59 (2017), 71-79 (with B. Ramakrishnan)

(23) *Identities for the Ramanujan Tau function and certain convolution sum identities for the divisor functions*, Number Theory, RMS-Lecture Notes Series, No. 23, 2016, 63-75 (with B. Ramakrishnan)

(24) *Supercongruences for Sporadic Sequences* Proceedings of the Edinburgh Mathematical Society (Series 2), 59 (2016), 2, 503-518 (with R. Osburn, A. Straub)

(25) *On the number of representations of an integer by certain quadratic forms in sixteen variables* Int. J. Number Theory, 10 (2014), 8, 1929- 1937 (with B. Ramakrishnan),

(26) *Evaluation of the convolution sums $\sum_{l+15m=n} \sigma(l)\sigma(m)$ and $\sum_{3l+5m=n} \sigma(l)\sigma(m)$ and an application*, Int. J. Number Theory, 9 (2013), 3, 799- 809 (with B. Ramakrishnan) .

(27) *A supercongruence for generalized Domb numbers*, Funct. Approx. Comment. Math., 48 (2013), 1, 29-36 (with R. Osburn).

(28) *Supercongruences for Apéry-like numbers* (with R. Osburn), Advances in Applied Mathematics, 47, (2011), no. 3, 631-638 .

(29) *Congruences via Modular forms* (with R. Osburn), Proc. Amer. Math. Soc., Vol 139 (2011), no. 7, 2375-2381.

(30) *Rankin-Cohen Brackets and van der Pol-Type Identities for the Ramanujan's Tau Function* (with B. Ramakrishnan), arXiv:0711.3512v1.

(31) *Rankin's method and Jacobi forms of several variables* (with B. Ramakrishnan), Journal of Australian Math. Soc., 88 (2010), no. 1, 131-143.

(32) *Distribution of Residues Modulo p* (with S. Gun, F. Luca, P. Rath, R. Thangadurai), Acta Arith. 129 (2007), no. 4, 325-333.

(33) *On the Fourier expansion of Half Integral weight Jacobi Forms* (with B. Ramakrishnan), Int. J. Math. Math. Sci., 2006, Art. ID 14726.

(34) *On Maximal Elementary Abelian Subgroups of the Symmetric Group*, (with Binod K. Sahoo) J. Appl. Algebra Discrete Struct. 4 (2006), no. 1, 47-56.

(35) *Distribution of Quadratic non-residues which are not primitive roots* (with S. Gun, R. Thangadurai, B. Ramakrishnan), Math. Bohem., 130 (2005), no. 4, 387–396.

Research Visits:
- University College Dublin, Dublin (June 5-9, 2017)
- Harish-Chandra Research Institute, Allahabad (September 26–October 1, 2016, June 29–July 9, 2015, September 23-October 4, 2013, 2012 December 9-15, 2012, July 9-20, 2012, December 12-23, 2011)
- University College Dublin, Dublin (July 9-23, 2011)
- Institut des Hautes Études Scientifiques (IHÉS), Paris (July 15- September 15, 2009)

Research Grant(s):
- Core Research Grant (CRG/2022/000359)
  Funding Organisation: SERB, Department of Science and Technology
  Duration: 2023-2026
- MATRICS (MTR/2017/000228)
  Funding Agency: SERB, Department of Science and Technology
  Period: 2018-2021, Rs 6, 60, 000/
- Title: Modular forms and Supercongruences (SR/FTP/MS-053/2012)
  Funding Agency: SERB, Department of Science and Technology
  Period: 2014-2017, Rs 12, 24, 000/

Advising:
- Mr. Abhash Kumar Jha (Ph.D. 2016, NISER)

- Ms. Moni Kumari (Ph.D. 2018, NISER)
- Mr. Shivansh Pandey (Ph.D. Thesis 2024, NISER)
- Ms. Sneha Chaubey (M. Sc. Thesis, 2012, NISER)
- Mr. Ankush Goswami (M. Sc. Thesis, 2013, NISER)
- Mr. Sagar Srivastava (M. Sc. Thesis, 2016, NISER)
- Mr. Akash Jena (M. Sc. Thesis, 2017, NISER)
- Mr. Swaroop S. Hegde (M. Sc. Thesis 2020, NISER)
- Mr. Paresh Singh Arora (M. Sc. Thesis 2021, NISER)
- Mr. Archisman Bhattacharya (M. Sc. Thesis 2022, NISER)
- Mr. Ayanava Mandal (M. Sc. Thesis 2024, NISER)

Post Doctoral Fellows:
- Dr. Prem Prakash Pandey (August 2016–May 2017)
- Dr. Balesh Kumar Pandey (August 2019–December 2019)
- Dr. Anup Kumar Singh (January, 2021–April 2023)
- Dr. Gargi Mukherjee (June, 2023–July 2024)

Doctoral Committee of Ph.D students:
- Mr. Shahanwaj Sabnam, NISER (Chairman, Doctoral Committee 2024–)
- Mr. Devjyoti Das, NISER (Chairman, Doctoral Committee 2024–)
- Ms. Malvika IISER Berhampur (Member, RPC 2023–27)
- Ms. Pinki Pradhan, NISER (Chairman, Doctoral Committee 2022–27)
- Mr. Ankit Abhinav, NISER (Chairman, Doctoral Committee 2020–25)
- Mr. Susobhan Bandopadhyay, NISER (Chairman, Doctoral Committee 2020-25-)
- Mr. Annada Prasad Behera, NISER (Chairman, Doctoral Committee 2019–24)
- Ms. Rucha B. Joshi, NISER (Chairman, Doctoral Committee 2019–24)
- Mr. Mahesh Kumar Ram, IISER Berhampur (Member, RPC 2018–23)
- Mr. Mrityunjoy Charan, NISER (Chairman, Doctoral Committee 2018–23)
- Mr. Gorekh Prasad Sena, NISER (Chairman, Doctoral Committee 2017–22)
- Mr. Puspendu Pradhan, NISER (Chairman, Doctoral Committee 2017–)

External Ph.D. Thesis Reviewer:
- Adersh V K (Calicut University) 2024
- Babita, IIT BHU, 2024
- Abinash Sarma (IISER, TVM) 2024
- Sreejith M M (Calicut University) 2023
- Makeshwari (CUTN, Thiruvarur) 2023
- Sumukha S (NIT, Surathkal) 2022

- N. Sudhir Singh (Manipur University, Imphal) 2019
- Jagannath Bhanja (IIT, Roorkee) 2019
- Pramath A V (IISc, Bengaluru) 2019
- Usha Keshav Sangale (SRTM University, Nanded), 2016

Summer Students (Indian Academy of Sciences) Guidance:

- Arpita Jena, ISM, Dhanwad, 2013
- Sujeet Kumar, Patna College, 2013
- Sambit Mohanty, St. Stephen's College, New Delhi, 2014
- Aneesh Palsule, IISER, Bhopal, 2014
- Brahadeesh Sankaranarayanan, IISER, Bhopal, 2015
- Amitayush Thakur, BITS, Pilani, 2015
- Brahadeesh Sankaranarayanan, IISER, Bhopal, 2016
- Shivam Pandey, Ewing Christian College, Allahabad, 2018
- Anjali Naik, Guru Ghasidas Vishwavidyalaya, Bilaspur, 2018
- Anushka Agrawal, VSSUT, Burla, 2020
- Suraj Kulkarni, IMA, Bhubaneswar, 2020
- Purna Dutta, IISER, Berhampur, 2021
- Prassanna Nand Jha, Sri Venkataswara College, Delhi, 2021
- Nazrul Haque, RKMVC College, Rahara, 2022
- Mukesh Kumar, Deshbandhu College, Delhi, 2024

Conferences/Workshops/School Co-organised:

- Inter IISER-NISER Math Meet 2023 (September 29- October 1, 2023), NISER Bhubaneswar
- Discussion Meeting on Automorphic Forms (December 21-27, 2016), NISER, Bhubaneswar
- School and Workshop on Modular Forms and Black Holes (January 5–14, 2017), NISER, Bhubaneswar
- Workshop on Number Theory (November 30–December 6, 2018), NISER, Bhubaneswar
- Advanced Foundation School (AFS- III), July 1–27, 2019, NISER, Bhubaneswar
- Lecture series on Transcendence on Commutative Algebraic Groups (December 9–15, 2019) by Professor M. Waldschmidt, NISER, Bhubaneswar

Talks in International Conferences/Workshops:

- **Nonvanishing of L-functions and Poincaré series for Jacobi forms**, Drécimas Jornadas de Teorría de Números (July 8-12, 2024) ICMAT, UAM, Madrid, Spain
- **Evaluation of Convolution sums and modular forms**, 36th Annual Workshop on Automorphic Forms and Related Topics (May 20-24, 2024) Oklahoma State University, Stillwater, USA.

- **A simple extension of Ramanujan-Serre derivative map and some applications**, 32mes Journes Arithmtiques, (July 3–7, 2023), Universit/'e de Lorraine, Nancy, France

- **A simple extension of Ramanujan-Serre derivative map and some applications**, 5th EU-US Workshop on Automorphic forms (August 1-13, 2022) University of Sarajevo, Bosnia and Horzegovina.

- **Modular forms and the number of representations of a natural number by certain quadratic forms**, 2nd international webinar on Recent Development on Number Theory (October 1–4, 2021), KIIT, Bhubaneswar

- **Rankin-Cohen brackets on Jacobi forms of several variables and special values of certain Dirichlet series** International Conference on Number Theory and Algebra (December 22-23, 2020), IIT BHU, Varanasi

- **Supercongruences of Apéry-like numbers**, Workshop on Additive Combinatorics (February 24–March 06, 2020), ICTS, Bengaluru

- **Rankin-Cohen brackets on modular forms and special values of certain Dirichlet series**, Value Distribution of Zeta and L-functions and Related topics (March 21-27, 2019), RIKEN, Wako/Tokyo, Japan.

- **Rankin-Cohen brackets on modular forms and special values of certain Dirichlet series**, Conference on Number Theory (March 11-13, 2019), IISER, Trivandrum

- **Rankin-Cohen brackets on Hilbert forms and special values of certain Dirichlet series**, Conference on Number Theory (December 10-14, 2018), KSOM, Calicut.

- **Rankin-Cohen brackets on Jacobi forms of several variables and certain Dirichlet series**, Discussion meeting on Modular Forms (October 3-14, 2018), KSOM, Calicut.

- **Rankin-Cohen brackets on modular forms and certain Dirichlet series**, (July 11, 2018) Applied Mathematics Seminar at Mahidol University International College, Bangkok, Thailand

- **Rankin-Cohen brackets on Hilbert modular forms and special values of certain Dirichlet series**, Discussion meeting on Modular Forms (February 12–24, 2018), KSOM, Calicut

- **Rankin-Cohen brackets on Hilbert modular forms and special values of certain Dirichlet series**, Conference on Number Theory: Arithmetic, Diophantine and Transcendence (December 22-25, 2017), IIT, Ropar

- **Rankin-Cohen brackets on Jacobi forms and Siegel modular forms and certain Dirichlet series**, XXXmes Journes Arithmtiques, (July 3–7, 2017), University de Caen, France

- **Rankin-Cohen brackets on Jacobi forms and Siegel modular forms and certain Dirichlet series**, Combinatorics and Number Theory Meet, (February 19-23, 2017), Harish-Chandra Resaerch Institute, Allahabad
- **Rankin-Cohen brackets on Jacobi forms and Siegel modular forms and certain Dirichlet series**, INSA Annual Meeting (December 28–30, 2016), NISER, Bhubaneswar
- **On congruences on Apéry-like numbers**, International Conference on Number Theory (August 17-21, 2016), Kerala School of Mathematics, Kozhikode, India
- **Convolution sums of the divisor function and the number of representations of certain quadratic forms**, 3rd EU-US Workshop on Automorphic forms (March 18-22, 2016) University of Sarajevo, Bosnia and Horzegovina.
- **Rankin-Cohen brackets on Jacobi forms and Siegel modular forms and certain Dirichlet series**, Symposium on Number Theory, Ramanujan Mathematical Society Annual Conference, Tiruchirapalli (June 17–21, 2016), India
- **Rankin-Cohen brackets on Jacobi forms and Siegel modular forms and certain Dirichlet series**, Workshop on Automorphic forms (February 10-16, 2016), Kerala School of Mathematics, Kozhikode, India
- **Convolution sums of the divisor function and the number of representations of certain quadratic forms**, 30th Annual Workshop on Automorphic Forms and Related Topics (March 7-10, 2016) Wake Forest University, Winston-Salem, USA.
- **Rankin-Cohen brackets on Siegel modular forms and certain Dirichlet series**, Workshop on Automorphic forms (February 10-16, 2016), Kerala School of Mathematics, Kozhikode, India
- **Jacobi Cusp Forms and the adjoint of linear maps constructed with the Rankin-Cohen brackets**, 29th Annual Workshop on Automorphic Forms and Related Topics (March 2-5, 2015) University of Michigan, Ann Arbor, USA.
- **Construction of Jacobi cusp forms**, International conference on Automorphic forms and applications (February 13-14, 2015), Kerala School of Mathematics, Kozhikode, India
- **Supercongruences of Apéry-like numbers via modular forms**, International Conference on Automorphic forms and Number Theory, August 30- September 3, 2013, KSOM, Kerala
- **Quasimodular forms and Evaluation of certain convolution sums of divisor functions**, Contributed talk at The Legacy of Srinivasa Ramanujan, (December 17-22, 2012), University of Delhi, India
- **Differential operators on modular forms and quasimodular forms and some applications**, School on Modular Forms (October 3-19, 2012), Kerala School of Mathematics, Kozhikode, India

- **Congruences of Apéry-like numbers via modular forms**, 26th Automorphic Forms Workshop (April 26-29, 2012), University of British Columbia, Vancouver, Canada
- **Rankin-Cohen brackets on quasimodular forms and some applications**, Summer School on Quasimodular Forms (June 20-26, 2010) Clermont-Ferrand, France.
- **Differential operators on modular forms**, Workshop on the theory of Jacobi forms and Siegel modular forms, (November 23- December 5, 2009), Chennai, India.
- **Congruences for Apéry-like numbers**, XXVI Journées Arithmétiques (July 6-10, 2009) in Saint-Étienne, France
- **Rankin-Cohen Brackets and van der Pol type identities for the Ramanujan Tau function**, 23rd Annual Workshop on Automorphic Forms and Related Topics (May 10-13, 2009) Bucknell University, USA.
- **Hilbert Modular Forms**, Workshop on Arithmetic Geometry (Sept 24-Oct 05, 2007) in Chennai Mathematical Institute, Chennai, India.
- **On the Rankin-Cohen Brackets for Jacobi forms of higher degree**, Jacobi Forms and Applications (May 7-11, 2007) CIRM, Luminy, France.
- **On the Rankin-Cohen Brackets for Jacobi forms of higher degree**, International Conference on Number Theory and Applications (Dec 27-29, 2006) in RKM Vivekananda College, Chennai.
- **On the Fourier expansion of Jacobi forms of half-integral weights**, International Conference on Number Theory (Dec 1-5, 2006) in HRI, Allahabad

Seminar Talks:

- **Modular forms and the number of representations of a natural number by certain quadratic forms** (July 31, 2024), Sambalpur University.
- **A simple extension of Ramanujan-Serre derivative map and some applications**, (Arpril 23, 2024), IISER, TVM.
- **On the number of representations of a natural number by certain quadratic forms**, (January 4, 2020), HRI, Prayagraj
- **Rankin-Cohen brackets on modular forms and certain Dirichlet series**, (November 19, 2019) IIT, Guwahati
- **Rankin-Cohen Brackets on Quasimodular forms and Convolutions sums of the divisor functions**, (March 20, 2012), NISER, Bhubaneswar.
- **Representations of integers as sums of squares and modular forms**, (March 17, 2012), UGC aided Seminar, F. M. College, Balasore.
- **Differential operators on modular forms**, (December 16, 2009) NISER, Bhubaneswar.
- **Rankin-Cohen Brackets and van der Pol type identities for the Ramanujan Tau function**, (February 4, 2009), K-Theory, Quadratic Forms and Number Theory Seminar, UCD.

- **Some problems in number theory**, Thesis Seminar, University of Allahabad.
- **Some prime producing polynomials and class number**, (July, 2004), HRI, Allahabad
- **van der Waerden's Theorem and its applications,** (July, 2004), HRI, Allahabad.
- **Quadratic reciprocity law**, (December, 2002), HRI, Allahabad.

Conferences/Workshops Attended:

- **GIAN course "Transcendental Numbers and Special values of Dirichlet Series"** (December 16–21, 2017), IIT, Ropar
- **Indefinite Theta functions and Applications in Physics and Geometry** (June 6–9, 2017), Hamilton Mathematics Institute, Trinity College Dublin, Ireland
- **Workshop on Bianchi Modularity** (July 11-15, 2013), University of Luxembourg, Luxembourg
- **Advanced School and Workshop on L-functions and modular forms** (September 1-12, 2014), ICTP, Trieste, Italy
- **Conference on Analytic Theory of Automorphic Forms** (December 9-13, 2013), IMSc, Chennai, India
- **International Conference on Automorphic forms and Number Theory** (August 30- September 3, 2013), KSOM, Kerala
- **The Legacy of Srinivasa Ramanujan**, (December 17-22, 2012), University of Delhi, India
- **School on Modular Forms** (October 3-19, 2012), Kerala School of Mathematics, Kozhikode, India
- **26th Automorphic Forms Workshop** (April 26-29, 2012), University of British Columbia, Vancouver, Canada
- **International Colloquium on Automorphic Representations and L-functions** (Jan 3-12, 2012), TIFR, Mumbai, India
- **International meeting on Number Theory** (Dec 15-20, 2011), HRI, Allahabad
- **School and Conference on Modular Forms and Mock Modular Forms and their applications in Arithmetic, Geometry and Physics** (Feb 28-March 18, 2011), ICTP, Italy
- **Prospects in q-series and modular forms** (July 14-16, 2010) UCD, Dublin, Ireland.
- **Summer School on Quasimodular Forms** (June 20-26, 2010) Clermont-Ferrand, France.
- **Workshop on the theory of Jacobi forms and Siegel modular forms** (November 23- December 5, 2009), Chennai, India
- **XXVI Journées Arithmétiques** (July 6-10, 2009) Saint-Étienne, France
- **Activités Additives et Analytiques** (June 30- July 4, 2009), Lille, France

- **Mock theta functions and applications in combinatorics, algebraic geometry, and mathematical physics** (May 25-29, 2009) Max Planck Institute for Mathematics, Bonn, Germany
- **UCD-Nottingham Number Theory Day** (May 2, 2009), University of Nottingham, UK
- **23rd Annual Workshop on Automorphic Forms and Related Topics** (March 10-13, 2009), Bucknell University, USA
- **International Colloquium on Cycles, Motives and Shimura Varieties** (Jan 3-12, 2008), TIFR, Mumbai, India
- **Workshop on Arithmetic Geometry** (Sept 24-Oct 05, 2007), Chennai Mathematical Institute, Chennai, India
- **Jacobi Forms and Applications** (May 7-11, 2007), CIRM, Luminy, France
- **School and Conference on Analytic Number Theory** (April 23-May 04, 2007), ICTP, Italy
- **International Conference on Number Theory and Cryptography** (Feb 23-27, 2007), HRI, Allahabad
- **International Conference on Number Theory and Applications** (Dec 27-29, 2006), RKM Vivekananda College, Chennai
- **International Conference on Number Theory** (Dec 1-5, 2006), HRI, Allahabad
- **India-UK Number Theory Conference** (Sept 18-23, 2006), IMSc, Chennai
- **33rd Annual Odisha Mathematical Society Conference** (Feb 4-5, 2006), Sambalpur University, Sambalpur
- **International Conference on Number Theory and Mathematical Physics** (December 20-22, 2005), Srinivas Ramanujan Center, Kumbakonam
- **AMS-INDIA Conference** (December 17-20, 2003), IISc, Bangalore

Teaching:

- M101 (Mathematics-I), Fall-2024, NISER.
- MTH601 (Algebra I, Ph.D.), Fall-2024 (IISER, Berhampur)
- M402 (Representations of Finite Groups), Spring 2024, NISER
- MA601(Algebra-I, Ph.D.), Fall-2023, NISER.
- M463 (Finite Fields), Spring 2023, NISER
- M307/M703 (Number Theory), Fall 2022, NISER
- MA605 (Topology I, Ph. D.), Spring 2022, NISER
- M463 (Finite Fields), Fall 2021, NISER
- M308 (Complex Analysis), Spring 2021, NISER
- M403 (Commutative Algebra), Fall 2020, NISER
- M553 (Classical Groups), Spring 2020, NISER

- MA601(Algebra-I, Ph.D.), Fall-2019, NISER.
- M101 (Mathematics-I), Summer-2019, NISER.
- MTH302 (Rings and Modules), Spring 2019 (IISER, Berhampur)
- M402 (Representations of Finite Groups), Spring 2019, NISER
- M463 (Finite Fields), Fall 2018, NISER
- M102 (Mathematics-II), Summer-2018, NISER.
- M402 (Representations of Finite Groups), Spring 2018, NISER
- M463 (Finite Fields), Fall 2017, NISER
- M205 (Linear algebra), Spring 2017, NISER.
- M101 (Mathematics-I), Fall-2016, NISER.
- M101 (Mathematics-I), Summer-2016, NISER.
- M458 (Algebraic Number Theory), Spring-2016, NISER.
- M601 (Algebra-I, Ph.D.), Fall-2015, NISER.
- M560 (Modular Forms of one variable), Spring-2015, NISER.
- M302 (Algebra-III), Fall-2014, NISER.
- M307 (Algebra-IV), Spring-2014, NISER.
- M601 (Algebra-I, Ph.D.), Fall-2013, NISER.
- M307 (Algebra-IV), Spring-2013, NISER.
- M461 (Commutative Algebra), Fall-2012, NISER.
- M601 (Algebra-I, Ph.D.), Fall-2012, NISER.
- M459/M605 (Algebraic Topology), Spring-2012, NISER.
- M601 (Algebra -I, Ph.D.), Fall-2011, NISER.
- M202 (Algebra-I), Fall-2011, NISER.
- ME601/ME801 (Commutative Algebra), Spring-2011, NISER.
- M501 (Topology), Fall-2010, NISER.
- MATH 20160 (Polynomial Rings and Group Theory), Spring-2009, University College Dublin.

Involvement in Academic and other activities at NISER:

- Member, Board of Studies (Mathematics), NIST Berhampur (2024–)
- Chairperson, School of Mathematical Sciences, NISER (2022–)
- Member, Board of Studies (Mathematics), HBNI (2021–)
- Chairman, Departmental Promotion Committee 2024
- Member, Departmental Promotion Committee 2023
- Member, Departmental Promotion Committee 2023
- Member, Screening Committee for APO posts, 2021
- Member, Promotion Interview Committee Technical Staff promotion 2020
- Member, Screening Committee for Technical Staff promotion, 2020

- Chairman, Screening Committee Scientific Officer, 2019
- Member, Screening committee for Scientific Officers promotion, 2018
- Member, Screening committee for Scientific Officers promotion, 2015
- Screening Committee for S &T Staff Promotion
- NEST Co-ordinator, NISER (2020-22)
- Chairman, Task Force for COVID-19, NISER (2021)
- Chairman, Coordination Committee for Quarantine, NISER (2020–21)
- Member, IWC, NISER (2019–2021)
- Chief Warden, NISER (2018–2020)
- Member, Library Advisory Committee, NISER (2012–2020)
- Member, PGCI, NISER (2013-14)
- Convenor, PGCS (SMS), NISER (2013-14)

Mathematical Services:

- External Reviewer for a Discovery grant proposal for Natural Science and Engineering Research Council of Canada (NSERC) 2013-14
- Referee for Journals
- Reviewer for AMS Mathematical Review (40 Reviews)

Outreach Program:

- Ramanujan and Mathematics, APS College Roth (December 28, 2023)
- RMTS Programme, Dunguripali High School (December 26–30, 2023)
- Ramanujan and Mathematics (on the occasion of National Mathematics Day), NIST Berhampur (December 22, 2023)
- Ramanujan and Mathematics (on the occasion of National Mathematics Day), Berhampur University (December 22, 2023)
- Group actions and some applications, Teachers' Training Programme in Mathematics (November 2–5, 2023), NISER Bhubaneswar
- Modular forms and the number of representations of a natural number by certain quadratic forms, NCMAA 2022, GIET University, Gunupur (June 11-12, 2022)
- Sums of squares and modular forms (Webinar), GIET University, Gunupur (December 1, 2020)
- Supercongruences (Webinar), GM University Sambalpur (November 20, 2020)
- Representations of integers as sums of squares and modular forms (Webninar), Anchal College, Padampur (November 16, 2020)
- Faculty Development Program on Multidisplinary approach of Mathematics as engineering applications-2019, CVRCE, Bhubaneswar (December 23-28, 2019)
- Group Representations (4 lectures), Annual Foundation School-I, HRI, Prayagraj (May 6-June 1, 2019)

- Ramanujan and Mathematics (on the occasion of National Mathematics Day), EATM, Khordha (December 22, 2018)
- Ramanujan and Mathematics (on the occasion of National Mathematics Day), Regional Science Center, Bhubaneswar (December 22, 2018)
- Prime numbers, Orientation Program in Mathematics, Anchal College, Padampur (November 17, 2018)
- Prime Numbers, Orientation Program in Mathematics, Bandhu Ashram, Lankapada, Jagatsinghpur (November 11, 2018)
- Sum of Sets in Number Theory, Orientation Program in Mathematics, Larambha College, Larambha (September 29, 2018)
- Finite Group Representations (4 lectures), Refresher Course for College Teachers, KSOM, Calicut (September 6–9, 2018)
- Group Theory (24 Lectures), Training Program in Mathematics, NISER, Bhubaneswar (May-June 2018)
- Representations of integers as sums of squares and modular forms, UGC State level Seminar on "Recent trends in Mathematics and it's applications", B. B. Auto. Mahavidyala, Chandikhole (March 24, 2018)
- Symmetry in Sciences (4 lectures) at Refreshers Course in Basic Sciences, Sambalpur University (March 16–17, 2018)
- Group Theory (4 Lectures), Summer Outreach Program in Mathematics, NISER, Bhubaneswar (June 2017)
- Faculty Development Program on Computational Mathematical Methods and their application in enginneering -2016, CVRCE, Bhubaneswar (December 12-18, 2016)
- Group Theory (4 Lectures), Summer Outreach Program in Mathematics, NISER, Bhubaneswar (June 2016)
- Group Theory (4 Lectures), Annual Foundation School-I, NISER, Bhubaneswar (December 1-27, 2013)
- Speaker at Rural Mathematics Olympiad/ Rural Mathematics Talent Search/ Junior Mathematics Olympiad/ Regional Mathematics Olympiad Programme in Odisha organised by IMA, Bhubaneswar (2006, 2007, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018)
- Complex Analysis in Number Theory (4 lectures), Teacher's Enrichment Workshop on Complex Analysis, Vivekananda College, Burdwan (December 27-31, 2013)
- Symmetry (4 lectures), Workshop in Excitement in Physics (June 2013), North Orissa University, Baripada.
- Speaker at Sessions for Mathematics Olympiad Students, UCD, Dublin (2009, 2010)

- Interactive Mathematics Training Camp (2006, 2007), Regional Institute of Education, Bhubaneswar (sponsored by NBHM), organised by Institute of Mathematics and Applications, Bhubaneswar.

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