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 Indian Mathematics and Applications,
 Bhubaneswar, Odisha 751029.

Research Interests:

- Functional Analysis, Complex Analysis, Operator Theory: More specifically, operator theory on Hilbert space of analytic functions, Reproducing kernel Hilbert modules, Homogeneous operators, Subnormal operators, Hyponormal operators and Trace inequalities.

Date of Birth : 18/02/1992.

Gender : Female

Academic Qualification :

Degree	Year	Subject	Institute/University	% of marks
B.Sc.	2009-2012	Mathematics (Hons.)	Jadavpur University, Jadavpur, West Bengal.	84.5 %
M.Sc.	2012-2014	Mathematics	Jadavpur University, Jadavpur, West Bengal.	82 %
Ph.D	2021	Mathematics	Indian Institute of Science, Bangalore	NA

Ph.D thesis Title : Trace Estimate For The Determinant Operator And \mathbb{K} - Homogeneous Operators.

Thesis advisor : Prof. Gadadhar Misra.

Institute : Indian Institute of Science, Bangalore.

Date of thesis submission : 15th October, 2020.

Date of Defence : 1st February, 2021.

Work experience :

Positions held	Institute/University	From	To	Pay Scale
Research Associate (RA)	Indian Institute of Science, Bangalore	Oct 2020	Jul 2021	38000
Post Doctoral Fellow (PDF)	Harish chandra Research Institute, Prayagraj	Aug 2021	Feb 2022	47000
Post Doctoral Fellow (PDF)	Indian Institute of Technology Kanpur, Kanpur	Mar 2022	May 2024	47000
INSPIRE Faculty Fellow	Indian Statistical Institute Kolkata, Kolkata	May 2024	April 2026	125000

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant:

S. No	Name of award/ Rank	Awarding Agency	Year
1	NBHM Phd Scholarship	DAE	2015
2	(AIR 22 in CSIR NET, June 2014)	CSIR	2014
3	NBHM Post Doctoral Fellowship	DAE	2022
4	INSPIRE Faculty Fellowship	DST	2024

Publications :

1. S. Ghara, S. Kumar and P. Pramanick, \mathbb{K} -homogeneous tuple of operators on bounded symmetric domains, *Israel Journal of Mathematics* 247 (2022) 331-360.
2. G. Misra, P. Pramanick and K. B. Sinha, A trace inequality for commuting tuples of operators, *Integral Equations and Operator Theory* 94 (2022).
3. S. Chavan, S. Jain and P. Pramanick, von Neumann's inequality for the Hartogs triangle, *New York Journal of Mathematics* 28 (2022) 791-799.
4. S. Chavan, S. Ghara and P. Pramanick, Analyticity, rank one perturbations and the invariance of the left spectrum, *Acta Scientiarum Mathematicarum* 89 (2023), 559-571.
5. S. Chavan, S. Jain and P. Pramanick, Operator theory on generalized Hartogs triangles, *Research in the Mathematical Sciences* 10 (2023) no. 3, Paper No. 34.
6. S. Ghara, S. Kumar, G. Misra and P. Pramanick, Commuting Tuple of Multiplication Operators Homogeneous under the Unitary Group, *Journal of the London Mathematical Society* 109 (2024).
7. S. Jain and P. Pramanick, Toeplitz Operators on n-Dimensional Hartogs Triangles, *Journal of Operator Theory* (to appear) (2024).
8. S. Jain, S. Kumar, M. Mal and P. Pramanick, Brown-Halmos type characterization for the tetrablock, *Journal of Mathematical Analysis and Applications* (to appear) (2025).
9. S. Kumar, M. Mal and P. Pramanick, Cartan Isometries and Toeplitz Operators on Cartan domains, *Communicated*.
10. S. Jain, S. Kumar, M. Mal and P. Pramanick, Function Theory on Tetrablock: Realization, Interpolation, Extension and Toeplitz Corona Theorem, *Communicated*.
11. M. Engliš, S. Hazra and P. Pramanick, Complete Nevanlinna-Pick property of \mathbb{K} -Invariant Reproducing Kernels, *Communicated*.

Conferences and Workshops attended :

- **Application of Functional Analysis and Geometry of Banach Space**, on the occasion of Prof. TSSRK Rao's 60th Birthday, Indian Statistical Institute, Bangalore, September 22 - 24, 2016.
- **Operator Theory and Operator Algebras (OTOA)**, Indian Statistical Institute, Bangalore, December 13 - 22, 2016.
- **Operator Theory and Operator Algebras (OTOA)**, Indian Statistical Institute, Bangalore, December 13 - 19, 2018.
- **Conference on Functional Analysis**, Indian Institute of Technology, Bombay, October 12-15, 2019.
- **Hilbert Modules in Analytic Function Spaces**, Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, P.R. China, December 22-26, 2019.
- **Focus Program on Analytic Function Spaces and their Applications**, the Fields Institute for research in Mathematical Sciences, Canada, July 1 - December 31 (online).
- **Multivariable Operator Theory-A Hilbert Module Approach**, Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, P.R. China, December 8-12, 2025.

Talks given in Conferences:

- On "**Berger-Shaw theorem for commuting tuple of operators**" in the workshop "Symposium on Operator Theory", Indian Institute of Science, Bangalore February 20-22, 2019.
- On "**K-Homogeneous operators on type-I bounded symmetric domain**" in the "in-house Symposium", Indian Institute of Science, Bangalore March 28-29, 2019.
- On "**On the Douglas-Yan generalization of the Berger-Shaw theorem**", Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, P.R. China, December 22-26, 2019.
- On "**A trace inequality for commuting tuples of operators**", in the "Focus Program on Analytic Function Spaces and their Applications", the Fields Institute for research in Mathematical Sciences, Canada, July 1 - December 31, 2021 (online).
- On "**Operator Theory on Generalized Hartogs Triangles**" in the "37th Annual Conference of Ramanujan Mathematical Society", Sri Svasubramaniya Nadar College of Engineering, Chennai, December 5 - December 8, 2022.
- On "**Commuting tuple of Multiplication operators homogeneous under unitary group**" in the "34th International Workshop on Operator Theory and its Applications (IWOTA 2023)", University of Helsinki, Finland, July 31 - August 4, 2023.
- On "**Brown-Halmos Characterization, and Function Theory on the Tetrablock**", Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, P.R. China, December 8 - December 12, 2025.

Teaching Experience:

- Teaching assistant for the course 'Analysis and Linear Algebra I', Aug-Dec 2016, IISc.
- Teaching assistant for the course 'Introduction to Algebraic Topology', Aug-Dec 2017, IISc.
- Teaching assistant for the course 'Measure and Integration', Jan-April 2019, IISc.
- Teaching assistant for the course 'Analysis and Linear Algebra I', Aug-Dec 2019, IISc.
- Tutor for the course 'MA102A-Mathematics II', March-July 2022, IIT Kanpur.

- Tutor for the course ‘Mathematics I (MTH112)’, Dec 2022- Feb 2023, IIT Kanpur.
- Tutor for the course ‘MA101A-Mathematics I’, Aug-Dec 2023, IIT Kanpur.
- Tutor for the course ‘Analysis I’ for BStat, Aug-Dec 2024, ISI Kolkata.
- **Instructor** for the course ‘Advanced Functional Analysis’ for MStat and MMath, Jan-April 2025, ISI Kolkata.

Refereeing Work: Indian Journal of Pure and Applied Mathematics.