



Dr. Prasadini Mahapatra

Assistant Professor

Department of Mathematics

School of Engineering

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1. ABOUT

Dr. Prasadini Mahapatra is an Assistant Professor in the Department of Mathematics at Dayananda Sagar University, Bengaluru, with around five years of teaching experience in higher educational institutions. She holds both her Ph.D. and M.Sc. in Mathematics from the National Institute of Technology Rourkela. Her research interests include wavelet analysis, harmonic analysis, Fourier analysis, functional analysis, and signal processing, with a particular focus on wavelets, frames, and their applications. She has published research papers in reputed international journals and conferences, including SCI/SCIE and Scopus indexed journals. She has taught a wide range of undergraduate and postgraduate mathematics courses, with an emphasis on conceptual understanding, mathematical rigor, and application-oriented learning. She has also actively participated in faculty development programs, workshops, and conferences organized by reputed institutions, including IITs and NITs, supporting her continued academic and professional development.

2. RESEARCH INTERESTS

- Wavelet analysis
- Fourier analysis
- Functional analysis
- Signal Processing
- Image Processing

3. ACADEMIC QUALIFICATIONS

- Ph.D. in Mathematics—NIT Rourkela, 2024
- MSc. in Mathematics — NIT Rourkela, 2014
- BSc. in Mathematics — Sambalpur University, 2012

4. PROFESSIONAL EXPERIENCE

- Assistant Professor — Chinmaya Vishwa Vidyapeetham, deemed to be University Kerala
- Assistant Professor — IAR University, Gandhinagar, Gujarat
- Lecturer— Kalinga Institute of Social Science University, Bhubaneswar, S G Women's Govt. College Rourkela, Govt. Auto. College Rourkela.

5. RESEARCH HIGHLIGHTS

- Publications: 6 research publications in reputed international journals/conferences in the areas of wavelet analysis, harmonic analysis, and related mathematical applications.
- Awards/Recognitions: Awarded a Postgraduate Scholarship from the Institute of Mathematics and Applications (IMA), Bhubaneswar, Odisha.
- Academic/Conference Roles:
 1. Served as Research Coordinator.
 2. Served as Secretary of the Cultural Club.
- Reviewer/Editorial Activities: Reviewed 3 research papers for academic journals.

6. SELECTED PUBLICATIONS

1. P. Mahapatra and R. Mohapatra, "Characterization of Principal Shift-Invariant Spaces on Vilenkin Group", Georgian Mathematical Journal (2026)
2. P. Mahapatra, D. Singh., "Frames, Bessel sequences and Riesz bases on Vilenkin group", Annals of the "Alexandru Ioan Cuza" University of Ia'si (New Series). Mathematics (2026)
3. P. Mahapatra, D. Singh., "Generalized filters and Parseval frame wavelets on Cantor dyadic group," Mathematica (2026)
4. P. Mahapatra, D. Singh, A. C. Swain, "Wavelet sets, scaling sets and generalized scaling sets on Vilenkin group", Asian European Journal of Mathematics (2023).
5. S. Saxena, P. Mahapatra, A. Z. Rizvi, "Construction of wavelet using M-estimation and its Application in R-peak detection". REEDCON 2023.
6. P. Mahapatra, D. Singh, "Construction of MRA and non-MRA wavelet sets on Cantor Dyadic Group", Bulletin des Sciences Math'ematiques (2021).
7. P. Mahapatra, D. Singh, "Scaling sets and generalized scaling sets on Cantor dyadic group", International Journal of Wavelets, Multiresolution, and Information Processing (2020).

7. ACADEMIC PROFILES

- Google Scholar: <https://scholar.google.com/citations?user=fhfn6mkAAAAJ&hl=en>
- ORCID: <https://orcid.org/0000-0001-9964-4962>
- Scopus: [57215663463](https://orcid.org/57215663463)
- ResearchGate: https://www.researchgate.net/profile/Prasadini-Mahapatra?ev=hdr_xprf

8. CONTACT

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