



**DCT's**  
**Dhempe College of Arts and Science**  
**Miramar, Goa**  
**Department of Mathematics**  
**Department Activity under DBT Star Scheme**  
**Report**

**Presentation of Research Paper at National Conference on Mathematical Analysis and Applications (NCMAA 2025)**

**1. Introduction**

T.Y.B.Sc. Students Ms. Rani Bedadolkar and Mr. Vishant Borkar, accompanied by Mrs. Rashmi Naik from the Department of Mathematics, participated in the National Conference on Mathematical Analysis and Applications (NCMAA 2025) held at IIT (ISM), Dhanbad, from 4th to 6th September 2025.

**2. Paper Presented**

The team presented a research paper titled:

***“Comparative Study of Wavelet–ANN and Wavelet–ARIMA Models for Groundwater Level Forecasting.”***

This work was a collaborative effort by **Mrs. Rashmi Naik, Ms. Rani Bedadolkar, Mr. Maheshwar Parab, and Mr. Vishant Borkar**. The paper showcased innovative approaches in groundwater level forecasting, combining statistical and machine learning models. The presentation was well-received and generated meaningful discussions with eminent academicians and researchers.

**3. Funding Support through DBT Star Fund**

The participation of the faculty member and students was made possible through financial support from the **DBT Star Fund**. The fund covered expenses towards registration and travel. A detailed statement of expenditure has been enclosed for reference.

**4. Outcomes and Benefits**

- Provided students with valuable **exposure to national-level research** and academic networking.
- Enhanced the department's visibility by presenting collaborative research at a **prestigious IIT-hosted conference**.
- Strengthened research culture among undergraduate students by involving them in **paper presentation and scientific dialogue**.
- Encouraged interdisciplinary approaches, combining wavelet theory with machine learning (ANN, ARIMA) for practical applications.

## 5. Conclusion

The participation in NCMAA 2025 was a fruitful academic experience for both the faculty and students. The support extended by the **DBT Star Fund** is gratefully acknowledged, as it played a pivotal role in enabling this meaningful academic engagement.



**Expenditure Statement for Reimbursement under DBT Star Fund**

*(National Conference on Mathematical Analysis and Applications – NCMAA 2025, IIT (ISM), Dhanbad, September 04–06, 2025)*

<b>Sr. No.</b>	<b>Particulars</b>	<b>Amount (₹)</b>	<b>Pay To</b>
1	Registration Fee(Rashmi Naik)	5000	Mrs Rashmi Naik
2	Registration Fee(Students)	8000 (4000 per student)	Ms Rani Bedadolkar
3	Bus Fare(Local Travel)	2609	Mrs Rashmi Naik

