

Nityabinod Sundar Ray

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Links

LinkedIn: Nityabinod Sundar Ray

Skills

PROGRAMMING

MATLAB, Python

SOFTWARE

AutoCAD, ANSYS-Fluent Geo5, HEC-RAS,
HEC-HMS, SWMM, PCSWMM Arc-SWAT,
MS Office, Grapher

COMMUNICATION

Hindi, English, Odia

OTHERS

Effective Communication Skills,
Management Skills

Coursework

Open Channel Flow
Hydrology
Fluvial Hydraulics
Water Resources Management
Computational Fluid Dynamics
Transport of Water and Wastewater

Education

2023-2025
M.TECH IN CIVIL ENGINEERING (Water
Resource Engineering)
NIT Rourkela

2020-2023
B.TECH. IN
CIVIL ENGINEERING WITH HONS
Indira Gandhi Institute of Technology,
Sarang

2017-2020
DIPLOMA IN CIVIL ENGINEERING
Government Polytechnic, Berhampur

2016-2017
MATRICULATION
DAV Public School,
Berhampur

Work Experience

Aug 2025- June 2026 Ecometrix Consultants Pvt. Ltd

Associate Engineer (Designs)

Projects:

- **Bhubaneswar Stormwater Drainage Masterplan:** Coordinating with Team for Survey for entire BMC Area, Rainfall Analysis- IDF Preparation, Hydrologic Modelling with HEC-HMS and PCSWMM. Assisting IIT Roorkee Team for Designs Input Preparation. Design of Primary Drains within the city
- **Rourkela Stormwater Drainage Masterplan:** Developed a hydrologic model for the stormwater drainage system of Rourkela through micro-to macro-scale watershed modelling. Performed urban catchment delineation and GIS-based spatial analysis, incorporating field survey data to determine design parameters for the SWMM (Storm Water Management Model). Conducted hydrologic and hydraulic analyses in accordance with the CPHEEO Storm Water Drainage (SWD) Manual to evaluate and support the design of the urban drainage network.
- **Bank NAC Stormwater Drainage Project:** Bank NAC Stormwater Drainage Project: Contributed to the planning and design of the stormwater drainage network for the Bank NAC area by conducting hydrologic and hydraulic analyses, delineating catchments, and developing SWMM models. Performed GIS-based analysis, estimated runoff and drainage design parameters, and prepared designs in accordance with CPHEEO Storm Water Drainage (SWD) Manual guidelines to enhance urban flood management and drainage efficiency.

Academic Project

2022-23 Interpretation of Geotechnical Problems Using GEO5 Software

BTech Project

This project includes theoretical background of GEO5 software and its procedure and the comparison between working on problems by traditional method and by using the software.

2024-25 Higher Order Turbulence Statistics on Bimodal Sediment Beds

MTech Research Project

This project is about turbulence analysis on the Fluvial bed, tracking the erosion and deposition phenomena by analyzing the higher-order parameters

Publications

- Priyadarshini, A., Ray, N.S., Das, V.K. *et al.* Characterization of high-order turbulence in bimodal sediment beds in open channel flow. *J Earth Syst Sci* **135**, 67 (2026). <https://doi.org/10.1007/s12040-026-02758-8>

Conference/Workshop

27 DEC 23 - 2 JAN 24	SERB Sponsored Workshop (HMTER)	Participated
31 MAY - 4 JUN 2024	CAWRE-2024	Participated
5 - 9 NOV 2024	MRBM-2024	Participated
4 – 6 DEC 2024	9th IWIS and 2nd CITIS	Participated
18-20 Dec 2025	HYDRO-2025	Presented Paper

Leadership and Responsibilities

2021-23	Career Development Coordinator	IGIT Sarang
Served as Training and Placement Coordinator (Career Development Coordinator) for the Training and Placement Cell at IGIT Sarang during B.Tech, facilitating student-industry interactions, coordinating campus recruitment activities, and supporting career development initiatives.		