



## Subhabrata Rath, Ph.D.

**Designation** : Assistant Professor

**Department** : Department of Basic Sciences and Humanities  
(JOINED THE INSTITUTE IN JANUARY 2025)

**Contact** : 6371739705

**Email** : subhabrata.rath@silicon.ac.in

### RESEARCH INTERESTS

- ✓ Operation Research
- ✓ Swarm Intelligence
- ✓ Multi-Objective Optimization
- ✓ Fuzzy Metaheuristic Algorithms
- ✓ Job Scheduling Problems
- ✓ Feature Selection
- ✓ Disease Prediction

### Academic Qualifications

- ✓ PhD in Operation Research (Swarm Intelligence), National Institute of Technology Warangal. **Supervisor**- Prof. Debashis Dutta.
- ✓ M.Sc. (Applied Mathematics), National Institute of Technology Warangal

### Awards Received

- ✓ Awarded Best Innovative Paper award for the research work on "Job Scheduling on Computational Grids using Multi-Objective Fuzzy Particle Swarm Optimization", in the 5th International Conference on Soft-Computing: Theories and Applications (SoCTA-2020).
- ✓ Qualified GATE 2018 & 2019 in Mathematics.
- ✓ Qualified CSIR NET (LS), December 2018 in Mathematics.
- ✓ Qualified IIT JAM, 2014 in Mathematics.
- ✓ Selected for MTS (Mathematical Training and Talent Search) camp, 2013 in NIT Surat.

### Teaching Experience/Industrial Experience/Research Experience

- ✓ Temporary Faculty in the Department of Mathematics at NIT Kurukshetra

**JOURNAL ARTICLES & CONFERENCE PAPERS**

- [1]. **S. Rath**, & D. Dutta, "Bluefin Trevally Optimizer (BTO): A Metaheuristic Algorithm Using Fuzzy Logic Controller for Feature Selection Problem", International Journal of Computational Intelligence and Applications, 2024.
- [2]. **S. Rath**, & D. Dutta. "Picture Fuzzy Time Series Forecasting with a novel variant of Particle Swarm Optimization", SN Computer Science, Vol 5, 2024.
- [3]. D. Dutta, D., & **S. Rath**, "Innovative Hybrid Metaheuristic Algorithms: Exponential Mutation and Dual-Swarm Strategy for Hybrid Feature Selection Problem", International Journal of Information Technology, Vol 16, pp.77-89, 2024.
- [4]. **S. Rath**, & D. Dutta, "A hybrid swarm optimization with trapezoidal and pentagonal fuzzy numbers using benchmark functions", International Journal of Information Technology, Vol 15, pp.1-12, 2023.
- [5]. D. Dutta, D., & **S. Rath**, "Job scheduling on computational grids using multi-objective fuzzy particle swarm optimization", Soft Computing: Theories and Applications: Proceedings of SoCTA 2020, Vol 1, pp. 333-347, 2022.
- [6]. D. Dutta, D., & **S. Rath**, "Hybrid Particle Swarm Optimization for a Feature Selection Problem with Stability Analysis", Intelligent Computing & Optimization, Vol 569, pp. 991-1004, 2022.
- [7]. D. Dutta, D., & **S. Rath**, "Scheduling of jobs on computational grids by fuzzy particle swarm optimization algorithm using trapezoidal and pentagonal fuzzy numbers", Computational Sciences-Modelling, Computing and Soft Computing: Vol 1, pp. 175-185, 2021.

**ANY OTHER****Conferences attended**

- [1] Attended ORSI Camp in IIM Ahmedabad, from 15/12/2019 - 18/12/2019.
- [2] CSMCS 2020 (computational sciences-modelling computing and soft computing) in NIT Calicut, from 10/9/2020 - 12/9/2020
- [3] SoCTA 2020 (Soft Computing: Theories and Applications) in Virtual Mode in support with STEM - Research Society, India, from 25/12/2020 - 27/12/2020.
- [4] International Conference on Intelligent Computing & Optimization in Hua Hin, Thailand, from 27/10/2022 - 28/10/2022.
- [5] ORSI and ICBAI joint conference, IISc Bangalore, from 18/12/2023 - 20/12/2023.
- [6] Numerical Optimization in Engineering and Sciences (NOIEAS -2024), NIT Warangal, from 05/12/2024 - 07/12/2024.

## FDP and Workshops attended

- [1] Attended SOPM (Summer Outreach Program) in NISER, BBSR.
- [2] **Title-** Neural Network and CNN **Organizers-** Curriculum Development Centre Department, NITTTR, Chandigarh
- [3] **Title -** Two-Day Hands-on-Training on Solving Multi objective Optimization Problems Using Deterministic & Stochastic Algorithms.  
**Organizers** - Teaching Learning Centre, Coimbatore Institute of Technology
- [4] **Title -** Training Programme on Computational Techniques for AI and Data Science Applications  
**Organizers** - BanasthaliVidyapith (Under STUTI Scheme, DST, India)
- [5] **Title -** International Winter Training Course on Nature-Inspired Optimization Techniques and their Applications using MATLAB  
**Organizers** - Soft Computing Research Society, New Delhi & Electronics & ICT Academy IIT Roorkee
- [6] **Title -** Optimization & Statistical Models and Tools  
**Organizers** - Department of Mathematics, NIT JALANDHAR
- [7] **Title -** SCRS International Expert Lecture Series  
**Organizers** - Soft Computing Research Society (SCRS)
- [8] **Title -** Machine learning using Python  
**Organizers** - Soft Computing Research Society (SCRS)
- [9] **Title -** Application of Data Science and Soft Skill  
**Organizers** - Department of Mathematics, NIT Durgapur in Collaboration with ORSI Durgapur Chapter