

Name: Dr. Rita Banik
 Designation: Associate Professor
 Branch: Electrical Engineering



Educational Qualification(s):

Qualification(s)	University
B.E (Electrical Engineering)	Tripura University
M.Tech (Electrical Engineering)	Tripura University
Ph.D (Electrical Engineering)	NIT Agartala

Experience in years: 13.5 yrs

Academic : 13.5 yrs

Details:

Sl. No.	Organization	Position Held	Duration	
			From	To
1	SMU	Guest Faculty	August,2008	June,2009
2	ICFAI University Tripura	Asst. Professor	31.07.2009	12.06.2017
3	ICFAI University Tripura	Asst. Professor	06.03.2020	30.09.23
4	ICFAI University Tripura	Associate Professor	01.10.2023	Till date

Areas of Interest:

Hybrid Power System, Solar and wind energy Forecasting, Machine learning.

Projects :

- ❖ Renewable Energy Generation and Integration sustainability using Machine Learning
- ❖ Improvement of Power System Transient Stability with Static Var Compensator.
- ❖ Design of Microprocessor based temperature control system

Journals & Conferences

1. R. Banik, P. Das, S. Ray, A. Biswas, Wind power generation probabilistic modeling using ensemble learning techniques, Materials Today: Proceedings 26 (2020) 2157–2162, DOI: 10.1016/j.matpr.2020.02.464

2. R. Banik, S. Ray, P. Das, A. Biswas, Optimization of Hybrid Renewable Energy Systems using soft computing approaches, International Journal of Scientific & Technology Research, vol.9, Issue:03, March 2020.
3. R. Banik, P. Das, A Review on Architecture, Performance and Reliability of Hybrid Power System, Journal of The Institution of Engineers (India): Series B, 2020, DOI: 10.1007/s40031-020-00473-6
4. R. Banik, S. Ray, P. Das, A. Biswas, Prediction of electrical energy consumption based on machine learning technique, Electrical Engineering, 2020, DOI 10.1007/s00202-020-01126-z
5. Data Augmentation for Improved Brain Tumor Segmentation, IETE Journal of Research, 2021, <https://doi.org/10.1080/03772063.2021.1905562>
6. R. Banik, A. Biswas, Improving Solar PV Prediction Performance with RF-CatBoostEnsemble: A Robust and Complementary Approach, Renewable Energy Focus, 2023, <https://doi.org/10.1016/j.ref.2023.06.009>
7. Ankur Biswas, Rita Banik, Deep learning system for assessing diabetic retinopathy prevalence and risk level estimation, E3S Web of Conferences, 2023, <https://doi.org/10.1051/e3sconf/202343001292>
8. Ankur Biswas and R. Banik, "Estimating Risk Levels and Epidemiology of Diabetic Retinopathy using Transfer Learning," 2023 Third International Conference on Secure Cyber Computing and Communication (ICSCCC), Jalandhar, India, 2023, pp. 287-292, doi: 10.1109/ICSCCC58608.2023.10176908
9. Banik R., Das P., Ray S., Biswas A., An improved ANN model for prediction of solar radiation using machine learning approach, International Conference on Computer Communication and Internet of Things (ICCCIOT) 2020

Book Chapter

1. Banik R., Das P., Ray S., Biswas A. (2021) An Improved ANN Model for Prediction of Solar Radiation Using Machine Learning Approach. In: Mandal J., Mukhopadhyay S., Roy A. (eds) Applications of Internet of Things. Lecture Notes in Networks and Systems, vol 137. Springer, Singapore.
2. Rita Banik, Ankur Biswas, A. An Efficient Solar Energy Management Using IoT-Enabled Arduino-Based MPPT Techniques, Convergence of Cloud with AI for Big Data Analytics: Foundations and Innovation (Advances in Learning Analytics for Intelligent Cloud-IoT Systems), Chapter 10, 1st edition, Wiley-Scrivener.

Training & Workshop

1. Successfully completed one month training at West Bengal State Electricity Board 132/33/11KV, Bantala substation.
2. Attended AICTE approved FDP on 'Topics on Data Mining'
3. Workshop on 'Effective Implementation of Research proposals, Simulations and Reports'
4. Faculty Development Programme on 'Technical Writing using LATEX'
5. Workshop on 'Entrepreneurship and Business Plan'
6. 2 weeks FDP on "Internet of Things and Sensor Networks" at TIT Narsingarh, Tripura, 03-16 Jan, 2020
7. Two days online Faculty Development Program on "Trends and Applications in Machine Learning and Deep Learning" during September 4 - 5, 2020

8. AICTE-ATAL sponsored one week Faculty Development Program on "DATA SCIENCES" from 24th to 28th August, 2020 at TIT, Agartala
9. AICTE-AQIS Sponsored STTP on "Image Processing & Its Application" from september 7-12, 2020.
10. Faculty development program on "Data Sciences & Its Application in STEM" from 7-21 September, 2020
11. 5-day Online FDP on Universal Human Values for DEEKSHARAMBH organised by NIT Patna during 21-25 September 2020
12. TWO WEEK AICTE Sponsored ONLINE FDP on "Recent Trends in VLSI Design, Signal Processing & Optimization based on EDA tools" at Vaagdevi College of Engineering, Warangal, during 5th to 17th October 2020
13. AICTE-ATAL sponsored one week Faculty Development Program on "Energy Engineering" from 2020-11-23 to 2020-11-27 at National Institute of Technology Agartala.
14. AICTE-ATAL sponsored one week Faculty Development Program on "Green Technology & Sustainability Engineering" from 2020-12-8 to 2020-12-12 at National Institute of Technology Raipur.
15. One week AICTE Sponsored Short Term Training Programme(STTP) on "Artificial Intelligence and Machine Learning with Data Science", from 14th to 19th December, 2020 at Guru Nanak Dev Engineering College, Ludhiana
16. AICTE-ATAL sponsored one week Faculty Development Program on "'Sustainability Engineering'" from 2021-01-11 to 2021-01-15 at IIT Jammu.
17. AICTE sponsored Two weeks online Faculty Development Programme on "Artificial Intelligence and Ambient Intelligence (Phase II) from 15th to 27th february at Hindustan institute of technology & science
18. One Week Faculty Development Programme on "Recent Advancement in Machine Learning and Artificial Intelligence" held from 16/03/2021 to 20/03/2021 Organised By Rajasthan Technical University, Kota and Poornima College of Engineering, Jaipur
19. AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Machine Learning and its Application" from 2021-6-21 to 2021-6-25 at Dr Harisingh Gour University.
20. AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Soft Computing Techniques and their Applications in Electrical Engineering" from 2021-6-28 to 2021-7-2 at National Institute of Technology Patna.
21. Five day national level virtual faculty development program on "Research perspectives on data science and deep learning" from 12th July 2021 to 16th July 2021 organised by New Horizon college of engineering in association with VTU Belagavi and Computer Society of India
22. AICTE Sponsored One Week Short Term Training Program on "Next Generation Wireless Technologies: 5G and beyond" held from 12th July 2021 to 17th July 2021 organised by Indo Global College of Engineering
23. AICTE Sponsored One Week Short Term Training Program on "Data Science and Big Data Analytics" held from 26th July 2021 to 31st July 2021 organised by Indo Global College of Engineering
24. AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Artificial Intelligence and Machine learning"
25. Applications in Electrical Engineering from 09/08/2021 to 13/08/2021 at CVR College of Engineering.
26. FDP on "Hands on training on Innovative Tools and Techniques for Effective Teaching and Learning" from 23.08.2021 to 27.08.2021 organised by ICFAI University Tripura
27. FDP on "Artificial Intelligence and Machine learning" from 13.09.2021 to 17.09.2021 organised by ICFAI University Tripura
28. One Week Online AICTE-QIP Sponsored Short Term Course on "ISSUES AND CHALLENGES OF GRID CONNECTED RENEWABLE ENERGY SOURCES (ICGRE-22)" held during 21st-25th February, 2022 Organized by Department of Electrical Engineering, Jamia Millia Islamia, New Delhi

29. AICTE Sponsored 6days Short Term Training Program on "Machine Learning and Computer Vision"(Phase -I) held from 7th March to 12th March 2022 organized by Computer Science & Engineering Department, Tripura Institute of Technology, Agartala, Tripura
30. AICTE Sponsored 6 days Short Term Training Program on "Machine Learning and Computer Vision"(Phase-2) held from 21st March to 26th March 2022 organized by Computer Science & Engineering Department, Tripura Institute of Technology, Agartala, Tripura
31. 5 day online FDP on RESEARCH APPLICATIONS IN MACHINE LEARNING-2022 jointly organized by the Department of Information Technology of GMR Institute of Technology-Rajam and Department of Computer Science & Systems Engineering of Andhra University College of Engineering-Visakhapatnam, from 28th March to 1st April 2022
32. FIVE DAY ONLINE FACULTY DEVELOPMENT PROGRAM on Recent trends in Artificial and Machine learning and its applications, held on 11th-15th July,2022 organized by Department of Computer Science and Engineering, NSHM Institute of Engineering & Technology
33. Two weeks Faculty Development Programme on "BIOENGINEERING: A New Perspective towards Multidisciplinary Research" organised by department of Electronics and Communication Engineering, Don Bosco College of Engineering & Technology (DBCET), Assam Don Bosco University (ADBU) from 4th to 16th July, 2022
34. Five day FDP on "NextGen Computing:Blockchain and AI" organized by Department of Information Technology, Marathwada Mitra Mandal's College of Engineering, Karve Nagar, Pune in association with The Institution of Engineers (India), Pune Local Centre & SoftTech Data Securities held from 04th September 2023 to 08th September 2023.