



Dr. Deba Kumar Mahanta

Designation: Associate Professor

Date of joining: 03/10/2007

Qualification:

1996 B.E (Electrical Engineering)

Assam Engineering College, Guwahati

2013 M.Tech.

Assam Don Bosco University, Guwahati

2018 Ph.D.

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RESEARCH PROMOTION SCHEME

Sl No	Project Title	Sponsoring agency	Year	Involved as	Project amount
1	Transformer condition monitoring using optical sensors	All India council for technical education (AICTE)	2019	Principal Investigator	25,00,000.00
2	Transformer insulation liquid characterization	ASTU Collaborative research under TEQIP III	2019	Principal Investigator	3,00,000.00
3	Advanced Solar Water Heating System	ASTU Collaborative research under TEQIP III	2019	Principal Investigator	3,00,000.00

PUBLICATIONS:

1. Mahanta D. K. and Laskar S., "Investigation of Transformer Oil Breakdown using Optical Fiber as Sensor", IEEE Transactions on Dielectrics and Electrical Insulation Vol. 25, No. 1; February 2018, pp. 316-320.
2. Mahanta D. K. and Laskar S., "Water quantity based quality measurement of transformer oil using polymer optical fiber as sensor", IEEE Sensors Journal, Vol. 18, No. 4, February 15, 2018, pp. 1506-1512.
3. D. K. Mahanta, "Genetic Algorithm Approach for Placement Optimization of FBG Sensors for a Diagnostic System", International Journal of Electrical and Electronics Engineering, (ISSN: 2278-1676) Vol. 4, Issue 5, Jan 2013, pp 18-23.
4. D. K. Mahanta, "Design of Uniform Fiber Bragg Grating using Transfer matrix method", International Journal of Computational Engineering Research (ISSN: 2250-3005), Vol. 3, Issue. 5, May 2013, pp 8-14.
5. D. K. Mahanta, Laskar S., "Transformer Condition Monitoring using Fiber Optic Sensors: A Review", ADBU Journal of Engineering Technology (ISSN: 2348-7305), Vol. 4, pp 142 – 145.
6. D. K. Mahanta, Laskar S., "Electrical-insulating liquid: A review", Journal of Advanced Dielectrics, vol. 7, no. 4, pp. 1-9, 2017.
7. D.K Mahanta, Laskar S., "Transformer Oil Temperature Measurement Using Tungsten Filament as Sensor", International Journal of Electrical Machines and Drives, Vol. 3, no. 2, pp 17-20, 2017.

8. D. K. Mahanta and Laskar S., “*Power transformer oil-level measurement using multiple fiber optic sensors*”, International Conference on Smart Sensors and Application, ICSSA 2015, 26-28th May 2015. Kuala Lumpur, Malaysia.
9. D. K. Mahanta and Laskar S., “*Oil-level Measurement of Power Transformer using Optical Sensor*”, International Conference on Energy, Power and Environment (Towards Sustainable Growth), ICEPE 2015, 12-13th June 2015, NIT, Meghalaya.
10. D. K. Mahanta and Sarma B., “*Regeneration of Solid and Liquid Desiccant: A Review*”, IEEE International Conference on Power, Control, Signals & Instrumentation Engineering (ICPCSI) 2017, 21st and 22nd September 2017, Saveetha Eng. College, Chennai, Tamil Nadu.
11. D. K. Mahanta and Laskar S., “*Breakdown voltage based transformer oil analysis using optical fiber as sensor*”, IEEE International Conference on Microoptics, MOC2017, 19th to 22nd November 2017. Tokyo University, Japan.
12. D. K. Mahanta and Laskar S., “*Distance measurement using free space optics*”, International Conference on Microoptics, MOC2017, 19th to 22nd November 2017. Tokyo University, Japan.
13. D. K. Mahanta and Laskar S., “*Transformer Oil Quality Measurement Based on Temperature Rise Test*”, IEEE International Conference on Energy, Power and Environment 2018 (ICEPE-2018), 1st and 2nd June 2018, NIT Meghalaya, Shillong.
14. D. K. Mahanta and Handique A., “*Solar Automated Irrigation System*”, IEEE International Conference on Advances in Electrical, Electronics and System Engineering, (ICAEESE 2019), 2nd and 3rd November, 2019. Gauhati University, Guwahati.
15. D. K. Mahanta, “*Transformer Insulation Paper Moisture Measurement Using Optical Fiber Sensor*”, IEEE Region 10 Symposium (TENSYP2020), Dhaka, Bangladesh, 5-7 June 2020.
16. D. K. Mahanta, “*Green Transformer Oil: A Review*”, 20th IEEE International Conference on Environment and Electrical Engineering, Madrid, Spain, 9 -12 June 2020.
17. D. K. Mahanta, “*Mathematical Modeling of Flat Plate Solar Collector*”, IEEE PEDES 2020, Malaviya National Institute of Technology Jaipur, Rajasthan, India, 16th to 19th December 2020.
18. D. K. Mahanta, “*Transformer Dielectric Liquid: A Review*”, IEEE Conference by 2020 IEEE PES/IAS, Africa, 25th to 28th August 2020.
19. D. K. Mahanta and Rahman I., “*IoT Based Transformer oil Moisture Monitoring System*”, IEEE Conference DELCON 2022, New Delhi, 11th to 13th February 2022.
20. D. K. Mahanta and Rahman I., “*IoT Based Transformer oil Temperature Monitoring System*”, IEEE Conference ICSCDS 2022, Erode, India, 7th to 9th April 2022.
21. D. K. Mahanta and Das P., “*Feasibility Analysis of Standalone Solar-Wind Hybrid Energy System in Guwahati*”, International Conference on Renewable and Alternate Energy (ICRAE-2018), 4th to 6th December, 2018, Assam Science and Technology University, Guwahati, Assam, India.
22. D.K Mahanta, “*Present Power Scenario and Wind Energy Prospects in Assam*” International workshop on Wind Engineering, 23rd Feb. 2013, A.E.C, Guwahati, Assam. pp 8-12.
23. D. K. Mahanta and Laskar S., “*Moisture Measurement of Transformer Oil Using Optical Fiber as Sensor*”, International Workshop on Life Management of Transformers, TRAFOTECH 2016, 22nd to 23rd November 2016. New Delhi, India.
24. D. K Mahanta, “*Liquid Level Measurement using Fiber Optic Sensor*” National Conference on Emerging Global Trends in Engineering and Technology, on 7th and 8th March 2014. DBCET, Guwahati, Assam
25. D. K Mahanta, “*Micro Hybrid Power Plant*” Water and Energy Seminar, The Institute of Engineers (India), 22nd March 2014, IEI Assam State Centre, pp 53-55.
26. D. K Mahanta, “*Solar Power Optimization by Tilt angle variation of Solar PV Module at Guwahati*” National Seminar on Solar Energy Utilization- Opportunities and Challenges in NER, 4th April 2015, A.E.C, Guwahati, Assam. pp 38-41.
27. D. K Mahanta and Sarma B., “*Reactivation of silica gel using solar thermal system*” National Conference on Emerging Trends in Energy and Electrical Systems, 2019, 29th and 30th March 2019, Assam Engineering College, pp. 88-93.
28. D. K Mahanta and Das P., “*Design of Standalone Solar-Wind Hybrid Energy System*” National Conference on Emerging Trends in Energy and Electrical Systems, 2019, 29th and 30th March 2019, pp. 127-131.
29. D. K Mahanta and Handique A., “*Automated Solar Power Irrigation System: A Review*” National Conference on Emerging Trends in Energy and Electrical Systems, 2019, 29th and 30th March 2019, pp. 119-126.
30. D. K Mahanta and Deka M., “*Solar Water Heating System: A Review*” National Conference for Students on Advances in Mechanical Engineering”, 6th March 2020, pp. 57-58.