



# RESEARCH DIRECTORY

---



**GURU NANAK INSTITUTE OF TECHNOLOGY**

**157/F, Nilgunj Road, Sodepur, Panihati**

**Kolkata-700 114, INDIA**

**Phone: (91)-33-2523-3900**

**Telefax: 91-33-2563-7957 (General)**



**DEPARTMENT: EE****National Conferences**

- **Aveek Chattopadhyaya, “ECG Based Heart Disease Detection Method”,** 12th Inter-University Engineering Science & Technology, Academic Meet-2022, Forum of Scientists, Engineers & Technologists (FOSET), GNIT, Kolkata, 11th September, 2022.
- **Susovan Dutta, Barnali Kundu, Rikta Majumder, “GSM Based Smart Power Monitoring”,** 12th Inter-University Engineering Science & Technology, Academic Meet-2022, Forum of Scientists, Engineers & Technologists (FOSET), GNIT, Kolkata, 11th September, 2022.
- **Debasree Saha, Barnali Kundu, “Review of An efficient Scientific Calculator”,** 12th Inter-University Engineering Science & Technology, Academic Meet-2022, Forum of Scientists, Engineers & Technologists (FOSET), GNIT, Kolkata, 11th September, 2022.
- **Shyamal Kumar Roy, Suman Ghosh, Madhumita Chakraborty, Amit Debnath, Kaushik Maji, Sushovon Paul, “Smart Traffic System Using Arduino”,** 13th Inter-University Engineering Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.
- **Subhamoy Dey, Souvik Pal, Aniruddha Sengupta, Manoshi Das, Dr. Barnali Kundu’ “Automated Transmission Line Fault Detection Using Distance Locator”,** 13th Inter-University Engineering Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.
- **Tushar Ghosh, Sahil Mondal, Soumya Das, Amit Debnath, Susovan Dutta, “Home Automation Using Node-MCU Wifi Module”,** 13th Inter-University Engineering Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.





- **Aditi Maity, Diya Barui, Suman Ghosh, Barnali Kundu Sarkar, Shyamal Kumar Roy, Aveek Chattopadhyaya** ‘Optimal Placement of Phasor Measurement Unit for Complete Observability of the Power System’, 13th Inter-University Engineering Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.

### International Conferences

- **Aveek Chattopadhyaya**, “Continuous and Discrete Wavelet Transform Based Electrocardiogram Signal Analysis for Diagnosis of Arrhythmia”, AICTE Sponsored International Conference on Communication, Computing and Nano Microwave Technology (CCNMT-2022), July 8 – 9, 2022 at GNIT-Kolkata (Session Best Paper Award for Track 7).
- **Suman Ghosh, Shyamal Kumar Roy, Aveek Chattopadhyaya, Arnab Kumar Roy**, “Integration of FACTS Controllers to the Distribution Network for Loss Reduction and Power Quality Improvement”, International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.
- **Rikta Majumder**, “DTMF based home appliance control”, International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.
- **Rikta Majumder, Subhra Sen**, “Design of a Micro-Grid System which helps Hospitals increase resilience, cut costs and improve sustainability”, International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.
- **Madhumita Chakraborty, Barnali Kundu**, “A Brief Review on Battery Modelling and State of Charge Estimation of Battery”, International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.
- **Susovan Dutta, Bishaljit Paul, Barnali Kundu**, “Modelling Impact Analysis of EVCSL and Effect of Renewable Mix in Distribution Grid”, Fifth International Conference on Electrical,





Computer and Communication Technologies (ICECCT), Erode, India, 22-24 February 2023.  
Published in IEEE Digital Library, DOI: 10.1109/ICECCT56650.202310179760.

- **Barnali Kundu, Susovan Dutta, Debasree Saha, “Cloud Based Intelligent Accident Proof Helmet and Detect State of Intoxication”,** 3rd International Conference on Artificial Intelligence and Smart Energy (ICAIS 2023), JCT College of Engineering and Technology, 2-4, February 2023.

### International Journal

- **Aveek Chattopadhyaya,** “ANN-Based Statistical Computation for Remote End Fault Monitoring of the IEEE 14 Bus Microgrid Network”, IETE Journal of Research, Taylor & Francis, 07th March, 2023, pp. 1-15, DOI: 10.1080/03772063.2023.2182371.
- **Susovan Dutta, Barnali Kundu, Rikta Majumder,** “GSM Based Smart Power Monitoring”, AMERICAN JOURNAL OF ADVANCED COMPUTING, Volume 1, Issue 1, <https://doi.org/10.15864/ajac.21007>.

### DEPARTMENT: ECSE

### National Conference

- **Mrinmoy Dutta, Nabamita Paul, Santana Das, Deepa Saha, Somdutta Banerjee,** “Non invasive detection of diabetes” 12 th Inter- University Engineering Science; Technology, Academic Meet-2022, 11 th September, 2022, organised by Forum of Scientists, Engineers & Technologists (FOSET).

### International Conference

- **Bapita Roy, Suparna Maity, Santana Das, Nabamita Paul, Anisha Chowdhury, Hindol Bhowmick, Anirban Saha,** Design of an IoT based biomedical data integration system; by AICTE sponsored International conference on Communication, Computing and Nano-Microwave Technology (CCNMT 2022), 08-09 th July, 2022, ISBN: 978-93-5593-089-7







### International Journal

- Bapita Roy , Shilpita Hazra, &quot; Smart Economical Irrigation and Air Pollution Control and Monitoring System for Rural and Industrial Area&quot;, Pramana Research Journal Pramana Research Journal,30 th June 2022, 2249-2976, <https://www.pramanaresearch.org/VOL-12-ISSUE-6-2022/> DOI:16.10089.PRJ.2022.VI12I5.20.15004

**2021-22**

### DEPARTMENT: EE

### International Journal

- **Suman Ghosh, Chandan Kr. Chanda, J. K. Das, “Voltage Profile Management and Power Loss Minimization in a Real Valued Conventional Grid Connected Microgrid System with the Help of Optimally Placed PMUs”, Journal of The Institution of Engineers (India): Series B, 18th Oct 2021, SCI Indexed.**
- **Suman Ghosh, J. K. Das, Chandan Kr. Chanda, “Performance Analysis of Latency on Wide Area Monitoring And Control for A Smart Power Grid”, Lecture Notes in Electrical Engineering (LNEE). (Accepted) (Book Chapter).**
- **Debasree Saha, “Coordinated AC frequency versus DC voltage control in a PV-wind-battery based hybrid AC/DC microgrid”, International Transactions on Electrical Energy Systems, August, 2021) (Wiley, SCI indexed, Impact factor: 2.86).**
- **Debasree Saha, “Pyrolysis: An Evolution of Waste Management”, International Journal of Engineering Research & Technology (IJERT), Vol. 9, no. 11, pp. 98-101, July 2021. (ISSN: 2278-0181), NCETER - 2021 Conference Proceedings, (Scopus, Impact Factor - 7.86).**





- **Debasree Saha, “Review on Hybrid Inverter”, International Journal of Engineering Research & Technology (IJERT), Vol. 9, no. 11, pp. 126 -129, July 2021. (ISSN: 2278-0181), NCETER - 2021 Conference Proceedings, (Scopus, Impact Factor - 7.86)**
- **Debasree Saha, “Design of A Novel Power Boost Converter With Dual Coupled Inductors”, International Journal of Engineering Research & Technology (IJERT), Vol. 9, no. 11, pp. 94 - 97, July 2021. (ISSN: 2278-0181), NCETER - 2021 Conference Proceedings, (Scopus, Impact Factor - 7.86).**
- **Shreyash Singha, Sanju Garai, Arijit Ghosh, Niladri Dutta, Sayan Chakrobarty, Suman Ghosh, “Optimal Placement of PMUs in a Microgrid”, International Journal of Engineering Research & Technology (IJERT), Vol. 9, no. 11, pp. 194 - 196, July 2021. (ISSN: 2278-0181).**
- **Amrita Chanda , Sagar Bera, Susovan Dutta, “ A Brief Study of Designing A 10KWP GridConnected Photovolatic System using PVSYST”, Lecture Notes on Electrical Engineering (LNEE)-SCOPUS Indexed(Springer-Nature Book Series). (Accepted), March 2022.**
- **Pratap Hazra, Raj Kumar Saha, Subhajit Debnath, Debasree Saha, Priyanka Dutta“A DC-DC POWER BOOST PRS CONVERTER”, International Research Journal ofModernization in Engineering Technology and Science, Vol. 4, no. 5, pp. 2234 - 2240, May, 2022. (e-ISSN: 2582-5208), NCETER.**
- **Suman Ghosh, Chandan Kr. Chanda, J. K. Das, “Performance analysis of a grid connected microgrid system under fault condition”, Microsystem Technologies, Springer-Verlag GmbH Germany, April 2022, <https://doi.org/10.1007/s00542-022-05296-7>. (SCI indexed, Impact factor: 1.826).**

### International Conference

- **Suman Ghosh, Chandan Kr. Chanda, J. K. Das, “Reactive power control of a real valued DVC grid connected microgrid system with the help of optimally placed PMUs”, Fourth IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT 2021), Erode, Tamil Nadu, INDIA, 15-17<sup>th</sup> September 2021.**
- **Rikta Majumder,Dr Debasree Saha, Dr Papun Biswas, Dr Aveek Chattopadhyaya”Modeling, Simulation and FFT Based Dynamic Performance Analysis of Three Phase Asynchronous**





**Machine**”, International Conference on Education and Technology (IC-ET-22) 12th June 2022 Kolkata, India.

- **Amrita Chanda , Sagar Bera, Susovan Dutta, “A Brief Study of Designing A 5 KWp Grid Connected Photovoltaic System Using PVSYST**”, IEEE Techithon 2021.
- **Pratap Hazra, Raj Kumar Saha, Subhajit Debnath, Debasree Saha, Priyanka Dutta, “Design Of A DC – DC High Power Boost Converter”**, 4th International Conference on Energy, Power, and Environment (ICEPE 2022)”, 29 th April 2022 to 1 st May 2022, National Institute of Technology Meghalaya, Shillong.
- **Raj Kumar Saha, Pratap Hazra, Smriti Dutt, Suman Kumari, Poulami Das, Shilpa Dutta, Subhajit Debnath, Aveek Chattopadhyaya, Debasree Saha, “Design of a DC-DC-AC Power Boost Inverter”** , International Conference on Recent Advances in Engineering and Technology (ICRAET) in Siliguri, India during 18 May, 2022.
- **S. Datta, A. Chattopadhyaya, S. Chattopadhyay, A. Das, “Harmonic Distortion, inter-harmonic Group Magnitude and Discrete Wavelet Transform based Statistical Parameter Estimation for Line to Ground Fault Analysis in Microgrid System”**, Published in IET Digital Library, DOI: 10.1049/icp.2021.1087, pp. 177 – 184, July2021.
- **Sumangal Bhowmick, Aveek Chattopadhyaya, Jitendra Nath Bera, “Intelligent Assessment of Different Inverters Configuration in Grid Connected DC Microgrid”**, International Conference on Industrial Electronics, Mechatronics, Electrical & Mechanical Power, IEMPOWER 2021, Kolkata, India, 26-28 November 2021, pp. 29 (Book of Abstract).
- **Amrita Chanda , Sagar Bera, Susovan Dutta, “A Brief Study of Designing A 10 KWp Grid Connected Photovoltaic System Using PVSYST”**, ICACCES 2022, March

### National Conference

- **Debasree Saha, “A high voltage dc railway system”**, First Eastern Regional Conclave of Students’ Chapters of The Institution of Engineers (India) 2021-2022, 29<sup>th</sup>-30<sup>th</sup> Oct., 2021.
- **Sumangal Bhaumik, Aveek Chattopadhyaya, Monishankar Ghosh, Sourav Pal, Sourav Paul, Abhijit Mandal, “PSCAD RTDS based real time study of Symmetrical Fault for 50Km Overhead Transmission Line”**, First Eastern Regional Conclave of Students’ Chapters of the Institution of Engineers (India) 2021-2022, GNIT, Kolkata, 29-30 th October, 2021.



**2020-21****DEPARTMENT: EE****International Journal**

- **Shyamal Kumar Roy, Suman Ghosh**, "Modeling of Plasma Etching Reactors based on Numerical Study", International Journal of Engineering Research and Applications (IJERA), UGC Approved Journal, ISSN: 2248-9622, Vol. 10 - No. 10 (Oct. 2020), DOI: 10.9790/9622-1010020105 (Published).
- **Rikta Majumder**, "DTMF Based Home Appliance Control" Arabian Journal for Science and Engineering.ID: AJSE-D-20-05452, SCI indexed, (Communicated)-Oct 2020.
- **Debasree Saha**, Dipu Sarkar, Sagar Kudkelwar, "Evaporation rate based water cycle algorithm for directional over current relay coordination", Electrical component and system, Taylor and Francis, Revision submitted.,October,2020
- **S. Datta, A. Chattopadhyaya, A. Duary, S. Chattopadhyay, A. Das**, " Remote End Load Bus Fault Diagnosis in IEEE Standard 14 Bus Microgrid System Using S-Transform Based Skewness Extraction", Sustainable Energy, Grids and Networks.
- **Barnali Kundu**, "Cloud based Real-time Vibration and Temperature Monitoring System for Wind Turbine", AI and IOT in renewable energy, Publisher: Springer Nature, Singapore Series: Studies in Infrastructure and Control, 7th January, 2021. (Book Chapter) published by Springer Nature. <https://www.springer.com/gp/book/9789811610103>
- **Shyamal Kumar Roy, Suman Ghosh, Madhumita Chakraborty**, "Static Series Compensator and Static Transfer Switch for Voltage Dip Mitigation with Short Interruptions", International Journal of Enhanced Research in Science, Technology & Engineering ISSN: 2319-7463, Vol. 10 Issue 6, June-2021(UGC Indexed)







- Swapnadip Datta, Tuhin Sarkar, Pritam Maity, Swapnil Dutta Gupta, Uday Sankar Debbarma, **Suman Ghosh, Shyamal Kumar Roy**, "Low Cost Android Based Electrical Appliance Control", International Journal of Enhanced Research in Science, Technology & Engineering ISSN: 2319-7463, Vol. 10 Issue 6, June-2021(UGC Indexed)
- **Shyamal Kumar Roy, Suman Ghosh, Barnali Kundu**, "Neural Protective Relay for a Circuit Breaker", International Journal of Enhanced Research in Science, Technology & Engineering ISSN: 2319-7463, Vol. 10 Issue 6, June-2021(UGC Indexed).
- **Barnali Kundu**, Raunak Seal, Neha Gupta, "Cyber Vulnerabilities in Smart Grid: A Review", International Journal of Engineering Research & Technology (IJERT), vol. 9, no. 11, pp. 51-55, June, 2021 (ISSN: 2278-0181)
- Subhajit Dutta, Achinta Das, Ayan Nandi **Barnali Kundu** "AFFRO-BOT Autonomous Forest Fend Robot", International Journal of Engineering Research & Technology (IJERT), vol. 9, no. 11, pp. 169-174, June, 2021(ISSN: 2278-0181)

#### International Conference

- **S. Datta, A. Chattopadhyaya**, S. Chattopadhyay, A. Das, " Harmonic Distortion, inter-harmonic Group Magnitude and Discrete Wavelet Transform based Statistical Parameter Estimation for Line to Ground Fault Analysis in Microgrid System", *MFHS-2020*, Kolkata, 3-4 October, 2020.
- **Barnali Kundu**, Arghya Sarkar "Distributed Generators Curtailment for Congestion Mitigation" 7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON 2020), 27th - 29th November 2020, Department of Electrical Engineering, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India.
- **Barnali Kundu**, "Cloud-based Real-time Vibration and Temperature Monitoring System for Induction Motor, 3rd International Conference on Computational Advancement in Communication Circuit and System (ICCACCS 2020), Narula Institute of Technology, Kolkata 17th -19th December, 2020.
- **Suman Ghosh**, Avinash Shaw, **Aveek Chattopadhyaya, Barnali Kundu**, Chandan Kr. Chanda, J. K. Das , "FFT and PMU Based Fault Analysis in Double Circuit Transmission Line", International Conference on





Artificial Intelligence and Smart Systems (ICAIS 2021), JCT College of Engineering and Technology, Coimbatore, India, 25-27th March 2021. (IEEE Conference)

**DEPARTMENT: EE**

**International Conference**

- **J.K. Das, Somalina Chowdhury**, “IoT base Auto Selection of Utility and Tariff”, published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- **Rikta Majumder, Syead Nawas Sarif, Umapati Majhi**, “**LI-FI(Light Fidelity) Based High Data Rate Visible Light Communication For Data And Audio Transmission**”, published in **International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019)**, ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- **Barnali Kundu, Arghya Sarkar** “Neural Network based Maximum Power Point Tracking in Grid Interfaced Photovoltaic System” published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- **Priyanka Dutta, Madhumita Chakraborty**, “Automatic railway signal and gate controlling system using relay and LDR”, published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- **Madhumita Chakraborty, Priyanka Dutta**,” Power generation through footstep”, published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- **Debasree Saha, B. K. Saha Roy, P. N. Das**, “A Secure Relay Setting for Protection Coordination in Renewable Energy-Based Distribution system”, published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.





- Shyamal Kumar Roy, Amit Debnath, Pritam Chowdhury, “Design Mems Based Piezoelectric Micromotor & It's Applications”, published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- Shyamal Kumar Roy, Suman Ghosh, Amit Debnath, Pritam Chowdhury, "Numerical Study in a Plasma Etch Reactor", published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- Ritwik Ray Chaudhuri, Rishi Pradhan, Samprit Bandyopadhyay, Ronit Dutta, Suman Ghosh, "Design and Development of Real-Time and Low-Cost Arduino based Electronic Voting Machine (EVM)", published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- **Susovan Dutta**, Anshumita Banerjee , Amit Agarwal , Prashant Shaw “Smart Automatic Railway Gate Control based on IoT system” published in International Conference on Frontiers in Engineering, Management and Applied Science 2019 (FEMAS-2019), ISBN No: 978-93-5391-015-0, 26-27th Sep, 2019.
- **Priyanka Dutta**, “Single phase transformerless grid connected solar PV system with auto-synchroniser”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.
- **Priyanka Dutta**, “Arduino Based Parking Lot”,published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.
- **Debasree Saha**, “Solar cooker (Box type)”,published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.
- **Debasree Saha**, “Solar Car”,published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.





- **R. Majumder, D.Saha, J K Das, SusovanDutta, Barnali kundu**, “Adaptive Protection Schemes for Wide Area Network: A Review”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.
- **Debasree Saha**, “Advance Railway Signaling & Crossing System Using SCADA”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.
- **SumanGhosh**, “Low Cost Fingerprint Based Electronic Voting Machine”, published in International Congress on Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb 2020.
- **Susovan Dutta**, “Laboratory Prototype of a Smart Solar Air Cooler”, published in International Congress on Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb 2020.
- **PritamChowdhury**, “Assortment of different charging portal and charging schemes of various cars in EHV charging stations”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb 2020.
- **Shyamal Kumar Roy, Suman Ghosh**, “Neural Protective Relay”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb 2020.
- **Shyamal Kumar Roy, Suman Ghosh**, “Static series compensator and static transfer switch for voltage dip mitigation with short interruptions”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb 2020.
- **AmitDebnath**, “Automatic Street Lights Control Using LDR”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.







- **Amit Debnath**, “Bionic Glove: Universal Remote rehabilitation of the paralytics”, published in International Congress on Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb. 2020.
- **MadhumitaChakraborty**, “Green House And Modern Gardening Technique”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7-8<sup>th</sup> Feb. 2020.
- **MadhumitaChakraborty**, “Blood vessel segmentation of fundus images using image processing”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb. 2020.
- **PritamChowdhury**, “Load capacity management of different charging station located in urban area in Kolkata”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb. 2020.
- **BarnaliKundu**, “Self-synchronized ADALINE based Photovoltaic Incorporated Shunt Active Power Filter”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb. 2020.
- **BarnaliKundu**, “Automatic room light controller using Microcontroller and visitors counter”, published in International Congress on Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb. 2020.
- **R. Majumder**, “Automatic home lighting solution using human detection, sunlight intensity & room temperature sensor”, published in International Congress On Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb. 2020.
- **RiktaMajumder**, “Flame Seeker and Extinguishing Robot”, published in International Congress on Renewable Energy, 2020 (ICORE 2020), ISBN No: 978935396-201-2, 7<sup>th</sup>-8<sup>th</sup> Feb 2020.





- **Susovan Dutta**, “Development of a Low Cost Automated Fire Fighting Robot”, published in Forum of Scientists, Engineers & Technologists (FOSET 2020), 11th Inter University Engineering, Science & Technology Academic Meet – 2020 & Innovative Model Competition for a Sustainable Society, 15<sup>th</sup> March 2020.
- **Suman Ghosh, J K Das, Chandan Kr. Chanda**, “Design and VAR Control of a Grid Connected Microgrid System with the Help of PMUs”, 2nd International Conference on Energy Systems, Drives and Automations, ESDA 2019, ISBN 81-85824-46-2, Kolkata, 28th and 29th December, 2019.

#### International Journal

- **Suman Ghosh, J. K. Das, Chandan Kr. Chanda**, "A Unique Case Study on Real Valued Cost Analysis of a Small Solar Plant". Proceedings of ESDA2019, LNEE Book, Springer, ISBN 978-981-15-5089-8, Submitted on Mar 12, 2020 (Communicated).
- **Suman Ghosh, J. K. Das, Chandan Kr. Chanda**, "Reactive Power Control Of A Real Valued Dvc Grid Connected Microgrid System With The Help Of Optimally Placed Pmu", Journal of 'Electrical Engineering' Springer, ISSN-1432-0487, Submitted on May 1, 2020. (Communicated).

**2018-19**

#### **DEPARTMENT: EE**

#### National Seminar/Conference

- Sneha Sarkar, Sayoni Ghosh, Sayantan Saha, **Dr. J K Das, Susovan Dutta**, “Development of a low cost IOT sensors suite framework for remote sensing applications”, 10th Academic Meet 2019 organised by FOSET on 31st March, 2019.





- **Anindita Ganguly**, Sanjib Kumar Samanta, Roudri Samanta, Nilotpal Chakraborty, Neelakshi Ganguly and Aishik Panigrahi, “A Computational approach to broad Cardiac disorders in the light of Ayurveda” presented at FOSET, NSHM campus, 10th academic meet 2019.

### International Conference

- Sailesh Verma, Aniruddha Ghosh, **Anindita Ganguly**, “Analysis of time delayed nonlinear equations using HF functions” 19th-21st July, 2018 presented at International Conference on Mathematical Modelling and Scientific computing (ICMMSC 2018 at IIT Indore).
- **Anindita Ganguly**, Tathagata Roy Chowdhury, **Suman Kumar Ghosh**, Aishik Panigrahi, Nilotpal Chakraborty and Anirudhha Ghosh, “Unidentified input observer: comparative study through Block pulse function and Hybrid function” presented at CIPR-2019, IEST Shibpur on 19<sup>th</sup>-20<sup>th</sup> January.
- Nilotpal Chakraborty, **Anindita Ganguly**, Neelakshi Ganguly, “Solving Stochastic Differential equations by Hybrid Functions” presented at MSAST 2018, Indismart Hotel, Saltlake on 21-23 Dec 2018.

### International Journal

- **Suman Ghosh, Dr. J. K. Das, Prof (Dr) Chandan Kr. Chanda**, “Placement of phasor measurement unit for complete observability of isolated micro grid system”, Microsystems Technologies, Springer, vol 25, issue 4, March 2019. SCI Indexed.
- **Dr. J. K. Das et al**, “Power tracing & mapping of dynamic behaviour of a microgrid”, IE(I) Annual Technical Volume, April 2019. ISBN: 978 – 81-939709-4-2, SCOPUS Indexed.
- **Barnali Kundu**, S. Mondal, S. Roy, S. K. Giri, S. Pal “Modelling and Analysis of Photovoltaic Grid Interfaced System using P&O Algorithm based MPPT”, International Journal of Computer Sciences and Engineering, vol. 7, no. 18, pp. 226-230, May 2019.





- **Debasree Saha, B. K. Saha Roy, P. N. Das,** “ Online adaptive protection scheme for electrical distribution network with high penetration of renewable energy sources”, Journal of Engg. Research Vol. 8 No. (2) June 2019 pp. 242-258 (SCI indexed).
- August, 2017.

## STUDENT PUBLICATION

(From 2003 to July, 2023)

### DEPARTMENT: EE:

#### National Conference

- **SafflayaPorel, Sukanya Roy, Eshika Roy, Suparna Biswas, Sayan Roy Chaudhuri,** “ECG Based Heart Disease Detection Method”, 12th Inter-University Engineering Science & Technology, Academic Meet-2022, Forum of Scientists, Engineers & Technologists (FOSET), GNIT, Kolkata, 11th September, 2022.
- **Ramanuj Bhowmick, SoumikNandy,** “GSM Based Smart Power Monitoring”, 12th Inter-University Engineering Science & Technology, Academic Meet-2022, Forum of Scientists, Engineers & Technologists (FOSET), GNIT, Kolkata, 11th September, 2022.
- **Chandrima Ghosh, Sarnava Mallick, Neeraj Yadav,** “Review of An efficient Scientific Calculator”, 12th Inter-University Engineering Science & Technology, Academic Meet-2022, Forum of Scientists, Engineers & Technologists (FOSET), GNIT, Kolkata, 11th September, 2022.
- **Shyamal Kumar Roy, Suman Ghosh, Madhumita Chakraborty, Amit Debnath, Kaushik Maji, Sushovon Paul,** “Smart Traffic System Using Arduino”, 13th Inter-University Engineering Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.
- **Subhamoy Dey, Souvik Pal, Aniruddha Sengupta, Manoshi Das, Dr. Barnali Kundu’** “Automated Transmission Line Fault Detection Using Distance Locator”, 13th Inter-University Engineering







Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.

- **Tushar Ghosh, Sahil Mondal, Soumya Das, Amit Debnath, Susovan Dutta, “Home Automation Using Node-MCU Wifi Module”,** 13th Inter-University Engineering Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.
- **Aditi Maity, Diya Barui, Suman Ghosh, Barnali Kundu Sarkar, Shyamal Kumar Roy, Aveek Chattopadhyaya’ “Optimal Placement of Phasor Measurement Unit for Complete Observability of the Power System”,** 13th Inter-University Engineering Science & Technology Academic Meet-2023, Forum of Scientists, Engineers & Technologists (FOSET), Innovative Model Competition for a Sustainable Society, Sister Nivedita University, Kolkata, 23rd April 2023.

#### International Conference

- **Suparna Biswas, Saswati Rakshit, “Continuous and Discrete Wavelet Transform Based Electrocardiogram Signal Analysis for Diagnosis of Arrhythmia”,** AICTE Sponsored International Conference on Communication, Computing and Nano Microwave Technology (CCNMT-2022), July 8 – 9, 2022 at GNIT-Kolkata (Session Best Paper Award for Track 7).
- **Debkumar Singha, Ankur Pal, Debanjan Paul, Debaraj Dey, Pradipta Saha, “Integration of FACTS Controllers to the Distribution Network for Loss Reduction and Power Quality Improvement”,** International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.
- **Ramanuj Bhowmick, Tanveer Hussain, “DTMF based home appliance control”,** International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.
- **Prasenjit Ganguly, Nakibbindin, Ayan Chakraborty, “Design of a Micro-Grid System which helps Hospitals increase resilience, cut costs and improve sustainability”,** International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.





- **“A Brief Review on Battery Modelling and State of Charge Estimation of Battery”**, International Conference on Communication Computing Nano-Microwave Technology (CCNMT 2022), 8th-9th July, 2022, Kolkata, India.
- **Ramanuj Bhowmick, Subhajit Dutta, Vishal Roy, “Cloud Based Intelligent Accident Proof Helmet and Detect State of Intoxication”**, 3rd International Conference on Artificial Intelligence and Smart Energy (ICAIS 2023), JCT College of Engineering and Technology, 2-4, February 2023

#### International Journal

- **RamanujBhowmick, Soumik Nandy, “GSM Based Smart Power Monitoring”**, AMERICAN JOURNAL OF ADVANCED COMPUTING, Volume 1, Issue 1, <https://doi.org/10.15864/ajac.21007>.

**2021-22**

#### **DEPARTMENT: EE:**

#### International Journal

- **Meghna Sengupta, Arijit Das, Ramanuj Bhowmick, “Pyrolysis: An Evolution of Waste Management”**, International Journal of Engineering Research & Technology (IJERT), Vol. 9, no. 11, pp. 98-101, July 2021. (ISSN: 2278-0181), NCETER - 2021 Conference Proceedings, (Scopus, Impact Factor - 7.86)
- **Abhirup Bhowmick, Trinika Das, Sayan Singh, “Review on Hybrid Inverter”**, International Journal of Engineering Research & Technology (IJERT), Vol. 9, no. 11, pp. 126 -129, July 2021. (ISSN: 2278-0181), NCETER - 2021 Conference Proceedings, (Scopus, Impact Factor - 7.86)
- **Pratap Hazra, Raj Kumar Saha, Subhajit Debnath, “Design of A Novel Power Boost Converter With Dual Coupled Inductors”**, International Journal of Engineering Research & Technology (IJERT),





Vol. 9, no. 11, pp. 94 - 97, July 2021. (ISSN: 2278-0181), NCETER - 2021 Conference Proceedings, (Scopus, Impact Factor - 7.86).

- **Pratap Hazra Raj Kumar Saha , Subhajit Debnath , MD. Yusuf Yuhana , Shaoli Paul, “A high voltage dc railway system”,** First Eastern Regional Conclave of Students’ Chapters of The Institution of Engineers (India) 2021-2022, 29<sup>th</sup>-30<sup>th</sup> Oct., 2021.
- **Amrita Chanda, Sagar Bera, Susovan Dutta, “Design and Simulation of 5KWp Grid Connected Photovoltaic system Using PVSYST”,** Lecture Notes on Electrical Engineering (LNEE)-SCOPUS Indexed(Springer-Nature Book Series). (Accepted), March 2022.
- **Pratap Hazra, Raj Kumar Saha, Subhajit Debnath, Debasree Saha, Priyanka Dutta “A DC – DC POWER BOOST PRS CONVERTER”,** International Research Journal of Modernization in Engineering Technology and Science, Vol. 4, no. 5, pp. 2234 - 2240, May, 2022. (e-ISSN: 2582-5208), NCETER.
- **Amrita Chanda , Sagar Bera, Susovan Dutta, “A Brief Study of Designing A 10KWP Grid Connected Photovolatic System using PVSYST”,** Lecture Notes on Electrical Engineering(LNEE)-SCOPUS Indexed(Springer-Nature Book Series). (Accepted), March 2022.

### International Conference

- **Pratap Hazra, Raj Kumar Saha, Subhajit Debnath, Debasree Saha, Priyanka Dutta, “DesignOf A DC – DC High Power Boost Converter”,** 4th International Conference on Energy,Power, and Environment (ICEPE 2022)”, 29 th April 2022 – to 1 st May 2022, National Institute of Technology Meghalaya, Shillong.
- **Raj Kumar Saha, Pratap Hazra, Smriti Dutt, Suman Kumari, Poulami Das, Shilpa Dutta,Subhajit Debnath, Aveek Chattopadhyaya, Debasree Saha, “Design of a DC-DC-AC Power Boost Inverter” ,** International Conference on Recent Advances in Engineering andTechnology (ICRAET) in Siliguri, India during 18 May, 2022.
- **Amrita Chanda , Sagar Bera, Susovan Dutta, “A Brief Study of Designing A 5 KWp GridConnected Photovoltaic System Using PVSYST”,** IEEE Techithon 2021.





- **Amrita Chanda , Sagar Bera, Susovan Dutta, “A Brief Study of Designing A 10 KWp Grid Connected Photovoltaic System Using PVSYST”, ICACCES 2022, March**

• .

**2020-21**

**DEPARTMENT: EE**

**International Journal**

- **Subharshi Roy, Debanjan Chatterjee, “Cloud based Real-time Vibration and Temperature Monitoring System for Wind Turbine”, AI and IOT in renewable energy, Publisher: Springer Nature, Singapore Series: Studies in Infrastructure and Control, 7th January, 2021. (Book Chapter) published by Springer Nature. <https://www.springer.com/gp/book/9789811610103>**

**International Conference**

- **Rohan Sengupta, Sayak Chowdhury, Sarnendu Sarkar, Amartya Dutta Banik, “Power Efficient Mini Inverter”, International Conference on Frontiers in Engineering, Management and Applied Science (FEMAS 2021), Guru Nanak Institute of Technology, Kolkata, 28-29th January.**
- **Subharshi Roy, Debanjan Chatterjee, Bikram Das, “Cloud-based Real-time Vibration and Temperature Monitoring System for Induction Motor, 3rd International Conference on Computational Advancement in Communication Circuit and System (ICCACCS 2020), Narula Institute of Technology, Kolkata 17th -19th December, 2020.**





