ASADUR RAHMAN (Ph.D)

Assistant Professor (Grade-I), Electrical Engineering Department
Adjunct faculty, Centre for Energy & Environmental Research (CEER)
National Institute of Technology Srinagar,
Hazratbal, Srinagar – 190006, Jammu & Kashmir (India)
Contact: +91 9957497127 (M) **Email:** asadur@nitsri.ac.in / asadur2003@yahoo.co.in

EDUCATIONAL & ACADEMIC CREDENTIALS

Doctor of Philosophy (Ph.D.), Electrical Engineering - Power and Energy Systems, Aug' 2016
National Institute of Technology Silchar, Assam; CPI – 8.00

Master of Technology (M. Tech), Electrical Engineering - Power and Energy Systems, 2011
National Institute of Technology Silchar, Assam; CPI – 9.16 (**1st** position)

Bachelor of Technology (B. Tech), Electrical and Electronics Engineering, 2009
Biju Patnaik University of Technology, Orissa; CGPA-7.68

Title of Thesis / Dissertation

- **Ph.D.** on "Automatic Generation Control of Multi Area Power System under Conventional and Deregulated Environment Using Biogeography Based Optimized Three-degree-of-freedom (3DOF) Controllers"
- **M. Tech** Project on "Artificial Neural Network-based Improved Pitch Control of Variable Speed Wind Energy Generating System using DFIG"
- **B. Tech** Hardware Project on "Industrial Protection System"

Technical Skills
MATLAB Programming & Simulation, Homer Energy, PLC, SCADA.

EMPLOYMENT RECORD

- **Assistant Professor, Grade-I** at **National Institute of Technology Srinagar**, Teaching, Research and Administrative, (4th Aug 2022 to Till-date)
- **Assistant Professor, Grade-II** at **National Institute of Technology Srinagar**, Teaching, Research and Administrative, (Oct' 2018 to 3rd Aug 2022)
- **Assistant Professor (Contract)** at **National Institute of Technology Nagaland**, Teaching & Research, 3 years (Aug' 2015 to July' 2018)
- **Assistant Professor** at **GIMT Guwahati, Assam**, Teaching, Research and Administrative, 2 years (Aug' 2011 to July' 2013)

Research Interests:

- Power System Optimization (Restructuring) & Control (LFC/AVR).
- Electric Vehicle (EV) - Charging Infrastructure & Grid Integration.
- Solar Energy Technologies (Solar PV & PV-T), Micro-grid & Hybrid energy system.
- Decarbonized Energy, Climate Control & Net Zero Energy Building.
- Soft Computing Techniques (Evolutionary Algorithms, Fuzzy logic, ANN) and their applications.

Academic Accolades

- **1st** position in M. Tech – Power & Energy system specialization, NIT Silchar, 2011.
- **No backlogs** during the entire academic program.
- Qualified **GATE** (Electrical Engineering).
- Recipient of **Infosys Campus connect** program.
- **Vice-Chair**, IEEE Student Branch, NIT Silchar, 1.5 years, Organizing technical Events and Programs.
- **CSIR** Award (**1st prize**) for Project Model presentation at CSIR – IMMT (erstwhile RRL, Bhubaneswar).
- Won 2nd prize for Project Model Presentation at VIT University Vellore, Recipient of 2nd Prize in Group Discussion and 3rd Prize in Eloquence.
- Teaching Assistant (TA) during the period of M. Tech and Ph.D. studies at NIT Silchar.

Professional Accolades & Outreach Activities

- Appointed as the **Adjunct faculty** for the **Centre for Energy & Environmental Research (CEER)** established at NIT Srinagar, J&K as approved by the Board of Governors vide Order dated 03.01.2024.
- **Invited** to the **North East Renewable Energy & Electric Vehicle (NEREV-2024)** event held on 21-23 Jan' 2024, organised by the Federation of Industry & Commerce of North Eastern Region (FINER), Guwahati, Assam.
- **Memorandum of Understanding (MoU)** with S.A.P Automations India Pvt. Ltd. on the way to NET ZERO ENERGY for Design Building Physics as per Climatic Conditions, Use of Decarbonized heat exchange for Space Conditioning and Hybridization of Renewable Electricity and Renewable Heat.
  https://nitsri.ac.in/uploaded_files/MOU_NITS_and_SAP_on_01.03.2023_(Signed).pdf
- Selected & Invited to **ATOMEXPO International Forum** and the **BRICS community meeting** in Olympic Village, Sochi, **Russian Federation** held on 19-22 November 2022.
  https://drive.google.com/file/d/1KQS8vOaEpj_Z8y3uO-eTQsPh6u0PROEr/view?usp=sharing
- **Convener** (Organizing Committee) of 5th International Conference on Energy Systems, Drives and Automations (ESDA-2022), 17th – 18th Dec 2022, Kolkata, West Bengal, India.
- **2nd prize winner** of Hindi Quiz competition among faculty & staff members – Oct 2022.
- **Project Reviewer** for Kerala State Council for Science, Technology & Environment (KSCSTE) – June 2022.
- Establishing **Renewable Energy & Microgrid Laboratory (RENE & μgrid Lab)**
  - Software: Homer Energy, PV-SOL, T-SOL
  - Equipment: Pyranometer, Data-Logger, Grid-tied Solar PV emulator, 580 Wp Solar PV, PV-Thermal systems, Solar PV panels 105 Wp.
- **TPC, Publicity & Public Relation Chair** for 2nd IEEE NE-IECCE & 4th IEEE ICEPE-2022 at NIT Meghalaya.
- **Session Chair** and Technical committee member in various International conferences, including IEEE ICEPE (NIT Meghalaya, Apr-2022); Springer Intl. Conf. on SIS (VRSEC, Feb-2021).
- Awarded as "***Developer***" for BRICS *Youth Energy Outlook* – 2020 Russia.
- Delivered **Invited Lectures** in several Technical sessions, Workshops, STC on topic "Power system control, Solar energy, EV infrastructure and grid-integration, Soft-Computing, etc."
- Organized as "***Chair***", Special Track titled "Performance Evaluation of Electrical Systems" at IEEE IAS International Conference on ComPE-2021, held at NEHU Shillong, Meghalaya from 1st – 3rd Dec 2021.

- **Best paper/poster award** with cash prize at 05 International Conferences [Youth'25 India Rising 2024, Springer FICTA-2022, Youth'25 Envisioning India's Future 2022, IEEE-IAS ComPE 2021, IEEE-ICEPE 2015].
- **Coordinator** for design of Academic Curriculum (Scheme & Syllabus) for UG-2109 & PG-2020 Batch onwards, EE Dept., NIT Srinagar.
- Invited for **Exam paper setting** for Universities & Others in year 2020 & 2021.
- **External Examiner** for B. Tech (EE) 8th sem Major Project evaluation (Sept-2020) and B. Tech 2nd sem Principles of Electrical Engineering Laboratory examination (June 2022) at IOT Zakura, Kashmir University.
- **Supervision:**
  - ***Ph.D.*** : 02 (Awarded), 01 (Submission), 04 (Ongoing) Total: 07
  - ***M. Tech*** : 12 (guided), 02 (Ongoing) Total: 14
  - ***B. Tech*** : 18 (guided), 02 (Ongoing) Total: 20
- Reviewer for several reputed journals like **IEEE** Trans. on EC (TEC), **IET**-GTD, RPG, **Elsevier** RENE, IJEPES, **Wiley**-OCAM, ITEES, Iranian Journal of Fuzzy Systems (IJFS), and others.
- Selection Committee member (Subject Expert), NU-SET, Nagaland University, Dimapur, Nagaland.

Vision Statement:

- **Short Term Goal**
  - ***a) Teaching:*** Impart up-to-date technical knowledge and skills to produce well-qualified engineers.
  - ***b) Research:*** Design and develop application-oriented solutions, preferably identifying the local problems.
- **Long Term Goal**
  - ***a) Teaching:*** Creating a conducive atmosphere within the students to discover their own potential.
  - ***b) Research:*** To make this Institution a Centre of Excellence by applying technical expertise in solving real-life problems.

MEMBERSHIP & RESPONSIBILITIES

Professional Bodies Membership

❖ IEEE, USA	Member (M' 19)	95349054
❖ ISTE, India	Life Member	LM 83195
❖ Institution of Engineers, India	Member	M-1770521
❖ Solar Energy Society of India (SESI)	Life Member	LM/2406/2020
❖ Soft Computing Research Society	Life Member	020-08-26-1294

Administrative Responsibilities

- Admission In-Charge, JoSAA/CSAB 2026, Participating Institute (PI), NIT Srinagar (225).
- Associate Dean, Examinations, May' 2025 onwards.
- Convener, Special Committee, Smart Metering Implementation under RDSS scheme, REC, Govt. of India.
- Admission In-Charge, JoSAA/CSAB 2025, Participating Institute (PI), NIT Srinagar (225).
- Associate Dean Academics (UG), 16 April' 2025 to 22 May' 2025.
- Convener, Special Committee, PM Surya Ghar-Muft Bijli Yojna, MNRE, Govt. of India.
- Warden, Boys hostel, Nov' 2024 to Oct' 2025.
- Incharge – RTI & Grievance Cell, NIT Srinagar, 12-Feb-2019 to 2020.
- Institute Coordinator – NBA Criteria 3, Dec' 2019 – Aug' 2021.
- Institute Coordinator – NIRF Graduation Outcomes (GO), Sept' 2020 onwards.

- Coordinator – GATE Coaching EE Department, Dec' 2020 onwards.
- Training & Placement coordinator, GIMT Guwahati, 1 year, Training & placement activities.
- Faculty Advisor, NIT Nagaland, 2 years, handling all the academic activities.
- Vice-Chair, IEEE Student Branch, NIT Silchar, 1.5 year, Organizing technical Events and Programs.

Departmental Responsibilities

- NBA Coordinator, EED – 29th Sept 2022 – till date.
- Member, Departmental Postgraduate Committee (DPGC) – 06th Dec' 2022 – Jan' 2025.
- Incharge (Examinations) – EE Department, Nov' 2020 – Apr' 2023.
- Departmental purchase committee – Feb' 2020 – Mar' 2023.
- Lab Incharge – Electrical Energy System, Nov' 2019 onwards – till date.
- Coordinator - M. Tech Electrical Power & Energy systems (EPES), Nov' 2019 – May' 2025.
- Coordinator – EED UG Scheme & syllabus revision, June' 2019 (for 2 years).
- Faculty coordinator – EED Students Club, May' 2019 onwards.
- Member – Publicity & Printing committee to conduct STC/Workshops/etc., Mar' 2019 onwards.
- Lab Incharge – Basic Electrical Engineering, Nov' 2018 onwards – till date.

Member of Committees

- Member – LIRC, Apr' 2023 – Mar' 2025.
- Faculty Incharge - NBA criteria 3, Feb' 2019 (for 2 years).
- Member – Write-off committee, Nov' 2019.
- Organizing Member, Annual Techno-cultural event Ekarikthin' 17, NIT Nagaland, 31 Mar – 02 Apr' 2017.
- Committee Member, International Conference on ETNMST-2017, NIT Nagaland, 4-6 Jan' 2017.
- Academic Programme Implementation Committee (Member), NIT Nagaland, Aug' 2016.
- Annual Report preparation (Member), NAAC, NIT Nagaland, Nov' 2016.
- Annual Report preparation (Member), NIT Nagaland, June' 2016.
- Selection Committee member (Subject Expert), NU-SET, Nagaland University, Dimapur, Feb & Mar' 2016.
- External Examiner, GIMT-Tezpur (Gauhati University, Assam), May' 2013.

List of Courses / Modules developed:

S. No.	*Name and Code of the Course / Module*	*Programme*	*Developed on*
1.	EEL100 Basic Electrical Engineering	B. Tech (EE) 1st year	2020
2.	ELP100 Basic Electrical Engineering Lab	B. Tech (EE) 1st year	2020
3.	EET301 Power Systems-I	B. Tech (EE) 2nd year	2021
4.	EEL301 Power Systems I Lab	B. Tech (EE) 3rd year	2021
5.	EET052 Renewable Sources of Electrical Energy	B. Tech (EE) 4th year	2022
6.	EET40x Soft Computing Techniques	B.Tech 4th year (Open)	2026
7.	EEM 102 Power System Control	M. Tech (EPES) 1st & 2nd year	2020, 2024
8.	EEM 105 Renewable Sources of Energy		
9.	EEM 108 Soft Computing		
10.	EEM 201 Power System Simulation Lab		
11.	EEM 202 Advanced Power System Lab		

Research and Development (R&D) PROJECTS (Sponsored / Funded / Consultancy)

1. **Ongoing** **A. Rahman* (PI)**; ***Externally funded*** research project titled "*Performance Evaluation of Solar PV-Thermal technology for Efficient Electrical and Thermal Applications for Inhabitants of Kashmir Valley*" awarded by J&K Science Technology & Innovation Council (DST) for a period of **2.5 years w.e.f January' 2024** with a sanctioned amount of **INR 6.4 Lakhs**. [**w.e.f** Jan-2024 to July-2026]
2. **Completed** **A. Rahman* (PI)**; ***Externally funded*** R&D project titled "*An efficient and low-cost hot water supply to rural areas of Kashmir valley using solar PVT technology*" awarded on 7th November 2022 by the Ministry of Education (MoE) funded under the Swachhta Action Plan (SAP-2022) scheme for a period of 2.5 year w.e.f **July' 2023 to Mar' 2026**. Project cost is **INR 16.64 Lakhs**. [**w.e.f** July-2023 to Mar-2026]
3. **Completed** **A. Rahman* (PI)**, Aijaz Ahmad; ***Sponsored*** R&D project titled "*Implementation and Testing of Solar Rooftop Photovoltaic-Thermal (PV-T) PORT technology*" awarded by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Germany for a period of 1 (one) year w.e.f 17th March 2022. Project cost is 42,000 Euros equivalent to **INR 35,20,566/-** (Rupees thirty-five lakhs twenty thousand five hundred and sixty-six only) @INR 83.82/euro. [**w.e.f** 17-03-2022 to Dec-2024]
4. **Completed** S.J. Iqbal, **A. Rahman***, D.V. Siva; ***Consultancy*** project on "*Inspection of 20 kWp grid solar power plant established at Govt. Silk Factory Rajbagh under World Bank funded Jhelum Tawi Flood Recovery Project*" for M/s M.M. Shawl Engineers & Contractors Pvt. Ltd., Srinagar. [24-03-2022 to 09-06-2022].

PUBLICATIONS *Corresponding Author

Patents:

1. Inam Ul Haq, **Asadur Rahman**, S.M. Suhail Hussain*, "*Impact of Network Degradation on Load Frequency Control of Large Interconnected Power Systems"*, US Patent Docket No. 558685US dt. 18-06-2025 (***Filed***).
2. **A. Rahman***, M.A. Chishti, S. Ahmad, M.S. Syed, A.R. Thoker, D. Srilatha, R. Pooja, A. Ashraf, P.S.K. Yella, A. Reddy, P.K. Patel, A.P. Singh, M.R. Kottapalli, "*ARCHER: A System to Control Self-Landing Rocket Flight with Dual Propulsion"*, IPR Indian Patent Application No. 202511081185 CBR No. 44574 (***Published*** on 21-11-2025).
3. **A. Rahman***, S. Maurya, J.A. Kishore, B. Baswal, A. Kardam, A. Kacher, U. Ramzan, "*Method and System for Regulating the Solar Panel Tilt in Snowy Temperate Regions"*, IPR Indian Patent Application No. 202611023119 CBR No. 12378 dt. 26-02-2026 (***Filed***).

Journals:

1. Inam Ul Haq, S.M. Amrr, M. Zaery, **A. Rahman**, S.M.S. Hussain, M.A. Abido, "Fixed-Time ADRC for Enhanced Load Frequency Regulation of Interconnected Power System" ***IEEE*** Transactions on Industry Applications (Q1), 2026, DOI: https://doi.org/10.1109/TIA.2026.3678599 [**ISSN:** 1939-9367, **I.F**: 4.7]
2. Inam Ul Haq*, **A. Rahman**, S.M.S Hussain, "Resilient load frequency control of multi-area power systems with packet-loss mitigation over lossy communication links" ***IOP Publishing***, Engineering Research Express, Vol. 8, Issue 7, 2026, DOI: 10.1088/2631-8695/ae5603 [**ISSN:** 2631-8695, **I.F**: 1.6]
3. Uzma Ramzan, **A. Rahman***, S.J. Iqbal, "Energy studies and economics of floating solar PV (FSPV) system in the temperate region: A case study of DAL Lake, Kashmir, India" ***Elsevier*** *Renewable Energy*, Vol. 254, 7 June' 2025. DOI: https://doi.org/10.1016/j.renene.2025.123546 [**ISSN:** 1879-0682, **I.F**: 9.1]
4. Z. Farooq*, S.A. Lone, T.S. Ustun, **A. Rahman**, Ahmet Onen*, C. Ozansoy "Optimal control strategy for stability performance improvement of hybrid power systems with electric vehicle integration" ***Wiley*** *Energy Science & Engineering*, Vol. 13 (6), Mar' 2025, pp. 2772-2787.
DOI: https://doi.org/10.1002/ese3.70066 [**ISSN:** 2050-0505, **I.F**: 3.4]

5. Suriya Sharif, **A. Rahman***, "Penetration and control of grid-forming (GFM) inverter in LFC of an enhanced IEEE 9-Bus interconnected power system" ***Elsevier*** *Computers and Electrical Engineering*, Vol. 120, Part C, 9 Nov' 2024. DOI: https://doi.org/10.1016/j.compeleceng.2024.109837 [**ISSN:** 0045-7906, **I.F**: 4.9]
6. Zahid Farooq, Shameem Ahmad Lone, Farhana Fayaz, Masood Ibni Nazir, Asadur Rahman, Saleh Alyahya, "Robust Secondary Controller for Enhanced Frequency Regulation of Hybrid Integrated Power System" ***MDPI*** *World Electric Vehicle Journal*, Vol. 15(10), 26 Sept' 2024.
DOI: https://doi.org/10.3390/wevj15100435 [**ISSN:** 2032-6653, **I.F**: 2.6]
7. Inam Ul Haq, **A. Rahman***, S.M. Suhail Hussain, "Impact of Network Degradation on Load Frequency Control of Large Interconnected Power System" ***Elsevier*** *Computers and Electrical Engineering*, Vol. 118, Part A, 24 Jun' 2024. DOI: https://doi.org/10.1016/j.compeleceng.2024.109394 [**ISSN:** 0045-7906, **I.F**: 4.9]
8. Z. Farooq*, **A. Rahman**, S.A. Lone, "Frequency stabilization of hybrid power system using robust secondary controller" ***Wiley*** *Optimal Control, Applications and Methods*, Vol. 44 (6), 18th July' 2023 (Published), pp. 3306-3326. DOI: https://doi.org/10.1002/oca.3038 [**ISSN:** 1099-1514, **I.F**: 2.53]
9. D. Saha*, L.C. Saikia, **A. Rahman**, "Cascade controller based modeling of a four area thermal: gas AGC system with dependency of wind turbine generator and PEVs under restructured environment" ***Springer*** *Protection and Control of Modern Power Systems*, Vol. 7 (47), 21 Nov' 2022 (Published).
DOI: https://doi.org/10.1186/s41601-022-00266-7 [**ISSN:** 2367-0983, **I.F**: 11]
10. S. Safiullah, **A. Rahman***, S.A. Lone, SMS Hussain, TS Ustun*, "Novel COVID-19 Based Optimization Algorithm (C-19BOA) for Performance Improvement of Power Systems" ***MDPI*** *Sustainability*, Vol. 14(21), 14287, 1 Nov' 2022 (Published). DOI: https://doi.org/10.3390/su142114287 [**ISSN:** 2071-1050, **I.F**: 3.9]
11. Z. Farooq, S. Safiullah, **A. Rahman***, SMS Hussain, TS Ustun*, "Evaluating the Optimal Electric Vehicle Location for a Hybrid Energy System Controlled with Novel Active Disturbance Rejection Controller" ***MDPI*** *World Electric Vehicle Journal*, Vol. 13(10), 192, Oct' 2022 (Published).
DOI: https://doi.org/10.3390/wevj13100192 [**ISSN:** 2032-6653, **I.F**: 2.6]
12. S. Safiullah, **A. Rahman***, S.A. Lone, S.M. Suhail Hussain, T.S Ustun*, "Robust frequency-voltage stabilization scheme for multi-area power systems incorporated with EVs and renewable generations using AI based modified disturbance rejection controller" ***Elsevier*** *Energy Reports*, Vol. 8, Sept.' 2022 (Accepted) and Nov' 2022 (Published), pp. 12186-12202.
DOI: https://doi.org/10.1016/j.egyr.2022.08.272 [**ISSN:** 2352-4847, **I.F**: 5.2]
13. S. Safiullah, **A. Rahman***, S.A. Lone, "A 2nd order ADRC for Synchronized Frequency-Voltage mitigation of EV Integrated Power System" ***T&F IETE*** *Journal of Research*, 25th Aug 2022 (Accepted)
DOI: http://dx.doi.org/10.1080/03772063.2022 [**ISSN:** 0974-780X, **I.F**: 2.3]
14. S. Safiullah, **A. Rahman***, S.A. Lone, "A 2nd order Active Disturbance Rejection Controller for coordinated frequency-voltage control of deregulated hybrid power system with optimal electric-vehicle integration" ***Elsevier*** *Electrical Power System Research (EPSR)*, Vol. 210, 108129, 18th May 2022 (Accepted) and 7th June' 2022 (Published). DOI: https://doi.org/10.1016/j.epsr.2022.108129 [**ISSN:** 0378-7796, **I.F**: 3.9]
15. Z. Farooq, **A. Rahman***, S.A. Lone, "Multi-stage fractional-order controller for frequency mitigation of EV based hybrid Power System" ***T&F IETE*** *Journal of Research*, Vol. - (-), 29th Mar 2022 (Accepted) and 20th April' 2022 (Published). DOI: https://doi.org/10.1080/03772063.2022.2061609 [**ISSN:** 0974-780X, **I.F**: 2.3]
16. S. Safiullah, **A. Rahman***, "Performance Evaluation of Hybrid Power System Incorporating Electric-Vehicles" ***River Publishers*** *Distributed Generation & Alternative Energy Journal,* Vol. 37(4), pp. 1055–1082, 6th Feb' 2022 (Accepted) and 25th April' 2022 (Published).
DOI: https://doi.org/10.13052/dgaej2156-3306.3748 [**ISSN:** 2156-6550, **I.F**: 1.0]
17. Z. Farooq, **A. Rahman***, S.A. Lone, "Power generation control of restructured hybrid power system with FACTS and energy storage devices using optimal cascaded fractional-order controller" ***Wiley*** *Optimal Control, Applications and Methods*, Special Issue: Optimal Operational Controls for Power Grid, Vol. 43, Issue 3, pp. 757–786, 20th Dec 2021 (Accepted) and 25th Jan' 2022 (Published).
DOI: https://doi.org/10.1002/oca.2850 [**ISSN:** 1099-1514, **I.F**: 2.53]

18. Z. Farooq, **A. Rahman***, S.M. Hussain, T.S. Ustun*, "Power Generation Control of Renewable Energy Based Hybrid Deregulated Power System" ***MDPI*** *Energies*, Vol. 15(2), 517, 6th Jan' 2022 (Accepted) and 12th Jan' 2022 (Published). DOI: https://doi.org/10.3390/en15020517 [**ISSN:** 1996-1073, **I.F**: 3.2]
19. S. Safiullah, **A. Rahman***, S.A. Lone, "Optimal control of electrical vehicle incorporated hybrid power system with second order fractional-active disturbance rejection controller" ***Wiley*** *Optimal Control, Applications and Methods*, Special Issue: Optimal Design and Operation of Energy Systems, Vol. 44, Issue 2, pp. 905-934, 4th Nov' 2021 (Accepted) and 25th Nov' 2021 (Published).
DOI: https://doi.org/10.1002/oca.2826 [**ISSN:** 1099-1514, **I.F**: 2.53]
20. S. Safiullah, **A. Rahman***, S.A. Lone, "State-observer based IDD controller for concurrent frequency-voltage control of a hybrid power system with electric vehicle uncertainties" ***Wiley*** *International Transactions of Electrical Energy System*, Vol. 31 (11), 15th August' 2021 (Accepted) and 11th Oct' 2021 (Published).
DOI: https://doi.org/10.1002/2050-7038.13083 [**ISSN:** 2050-7038, **I.F**: 2.86]
21. Z. Farooq, **A. Rahman***, S.A. Lone, "System Dynamics and Control of EV incorporated Deregulated Power System using MBO optimized Cascaded ID-PD controller" ***Wiley*** *International Transactions of Electrical Energy System*, Vol. 31 (11), 29th Aug' 2021 (Accepted) and 15th Sept' 2021 (Published).
DOI: https://doi.org/10.1002/2050-7038.13100 [**ISSN:** 2050-7038, **I.F**: 2.86]
22. Z. Farooq, **A. Rahman***, S.A. Lone, "Load frequency control of multi-source electrical power system integrated with solar-thermal and electric vehicle" ***Wiley*** *International Transactions of Electrical Energy System*, Vol. 31 (7), 12th April' 2021 (Accepted) and 6th May' 2021 (Published).
DOI: https://doi.org/10.1002/2050-7038.12918 [**ISSN:** 2050-7038, **I.F**: 2.86]
23. **A. Rahman***, L. C. Saikia, N. Sinha. "Automatic generation control of an interconnected two-area hybrid thermal system considering dish-stirling solar thermal and wind turbine system" ***Elsevier*** *Renewable Energy*, Vol. 105, pp. 41–54, May 2017.
DOI: https://doi.org/10.1016/j.renene.2016.12.048 [**ISSN:** 0960-1481, **I.F**: 8.7]
24. **A. Rahman***, L. C. Saikia, N. Sinha. "Automatic Generation Control of an Unequal Four Area Thermal System Using Biogeography Based Optimised 3DOF-PID Controller" ***IET*** *Generation, Transmission & Distribution*, Vol. 10, Issue. 16, pp. 4118–4129, Dec 2016.
DOI: https://doi.org/10.1049/iet-gtd.2016.0528 [**ISSN:** 1751-8695, **I.F**: 2.5]
25. **A. Rahman***, L. C. Saikia, N. Sinha. "Maiden application of hybrid pattern search biogeography based optimisation technique in automatic generation control of a multi-area system incorporating interline power flow controller" ***IET*** *Generation, Transmission & Distribution*, Vol. 10, Issue. 7, pp. 1654–1662, 12 May 2016. DOI: https://doi.org/10.1049/iet-gtd.2015.0945 [**ISSN:** 1751-8695, **I.F**: 2.5]
26. **A. Rahman***, L. C. Saikia, N. Sinha. "AGC of dish-Stirling solar thermal integrated thermal system with biogeography based optimised three degree of freedom PID controller" ***IET*** *Renewable Power Generation*, Vol. 10, Issue. 8, pp. 1161-1170, 03 May 2016.
DOI: https://doi.org/10.1049/iet-rpg.2015.0474 [**ISSN:** 1752-1424, **I.F**: 2.6]
27. **A. Rahman***, L. C. Saikia, N. Sinha. "Load frequency control of a hydro-thermal system under deregulated environment using biogeography-based optimised three-degree-of-freedom integral-derivative controller" ***IET*** *Generation, Transmission & Distribution*, Vol. 9, Issue. 15, pp. 2284–2293, 16 November 2015.
DOI: https://doi.org/10.1049/iet-gtd.2015.0317 [**ISSN:** 1751-8695, **I.F**: 2.5]
28. Illyas, S. M. Tanweer, **A. Rahman**. "Optimal Placement of Distributed Generation on Radial Distribution System for Loss Minimisation and Improvement of Voltage Profile" *International Journal of Modern Engineering Research (IJMER)*, Vol. 3 (4), pp: 2296-2312, Aug 2013. [**I.F**: 1.353]

Conferences:

1. Inam ul Haq, **Asadur Rahman***, S.M. Suhail Hussain, "Fixed-Time Observer-Based ADRC for Robust Load Frequency Control in Multi-Area Power Systems", 3rd International Conference on Developments & Innovations (ICSDI 2026), Prince Sultan University, Riyadh, Kingdom of Saudi Arabia, 8-12 Feb 2026.

2. Suriya Sharif, **Asadur Rahman***, Abdullah Ahmad, "VSG-based Grid Forming Inverter Control for Solar PV and Electric Vehicles to Enhance the Frequency Stability in LFC Systems", IEEE 4th International Conference on Smart Technologies for Power, Energy and Control (STPEC 2025), NIT Goa, 10-13 Dec 2025.
3. Shaahid Mehmood, **Asadur Rahman***, Inam ul Haq, Abdullah Ahmad, "Enhancing LFC Systems Against Denial of Service Attacks: Detection and Resilience Strategies", IEEE 4th International Conference on Smart Technologies for Power, Energy and Control (STPEC 2025), NIT Goa, 10-13 Dec 2025.
4. Uzma Ramzan, **Asadur Rahman***, Sheikh Javed Iqbal, "Potential and Techno-economic feasibility of FSPV systems on different water bodies of Kashmir", *IEEE Silchar Subsection Conference* SILCON 2025, NIT Nagaland, 06-08 Nov 2025.
5. Ahraz Hassan Moon, **Asadur Rahman***, "Design and Performance Comparison of Solar PV & PV/T Systems with Enhanced System Efficiency", IEEE North-East India International Energy Conversion Conference and Exhibition (NE-IECCE) 2025, NIT Silchar, 4-6 July, 2025.
6. Mansha Ali, **Asadur Rahman***, Suriya Sharif, "Stability Assessment of an IBR-based LFC System using Grid-Forming (GFM) Inverter Control", IEEE North-East India International Energy Conversion Conference and Exhibition (NE-IECCE) 2025, NIT Silchar, 4-6 July, 2025.
7. Ahraz Hassan Moon, **Asadur Rahman***, Inam ul Haq, "Performance Evaluation of Solar PV and Hybrid PV/T Systems: A Step to Enhance System Efficiency", *39th Indian Engineering Congress*- Irresistible India, The Institution of Engineers (India), WB State centre, 22 Dec 2025.
8. M.N. Bhat, **A. Rahman***, Inam Ul Haq, "Detection and Mitigation of False Data Injection Attack (FDIA) on Load Frequency Control System", IEEE *21st India Council International Conference* (INDICON) 2024. IIT Kharagpur, 19-21 Dec 2024.
9. Showkeen Ahmad, **Asadur Rahman***, Ahraz Moon, "Performance Evaluation of Electrical Distribution System Implementing Revamped Distribution Sector Scheme (RDSS)", *IEEE Silchar Subsection Conference* - SILCON 2024, NIT Agartala, Nov 2024.
10. Moonisa Yousuf, **Asadur Rahman***, Suriya Sharif, "Control of a Solar Powered AC Microgrid with Grid Forming and Grid Feeding Converters", *IEEE Silchar Subsection Conference* - SILCON 2024, NIT Agartala, Nov 2024.
11. Inam Ul Haq, **A. Rahman**, M. Zaery, S.M. Amrr, S.M.S. Hussain, M.A. Abido, "Dual-Stage Disturbance Rejection Control Strategy for Improved LFC Performance of Interconnected Microgrid with Realistic Communication Delay", *IEEE* Industry Applications Society Annual Meeting (IAS), Phoenix AZ USA, 20-24 Oct 2024.
12. S. Sharif, **A. Rahman***, A. Ahmad, "Performance Analysis for LFC of an Enhanced IEEE 9-Bus Power System with GFL and GFM Inverter Control", *IEEE-IAS 4th International Conference on SEFET (Sustainable Energy & Future Electric Transportation)*, Hyderabad, 30 July – 3 Aug' 2024.
13. Inam Ul Haq, **A. Rahman***, S.M. Suhail Hussain, "Mitigation of Communication Time Delay for Enhanced LFC of Interconnected Microgrid Systems Using Cascaded PD-ADRC Controller", *IEEE-IAS 4th International Conference on SEFET (Sustainable Energy & Future Electric Transportation)*, Hyderabad, 30 July – 3 Aug' 2024.
14. Uzma Ramzan, **A. Rahman***, Sheikh Javed Iqbal, "Thermal Analysis of Solar Photovoltaic (PV) Panels", *IEEE-IAS 4th International Conference on SEFET (Sustainable Energy & Future Electric Transportation)*, Hyderabad, 30 July – 3 Aug' 2024.
15. **Asadur Rahman***, "Utilizing Decarbonized Energy for Sustainable Environment" *11th International Conference in the Series of Youth 2025* - India Rising, Jaipuria Institute of Management Jaipur, 15th – 16th Feb' 2024.
16. **Asadur Rahman***, Abhijit De, Arijit Ghosh, "Intervention of Decarbonized Space Heating/Cooling for Net Zero Energy Buildings" *Indian Institute of Chemical Engineers (IIChE) - CHEMCON 2023*, Heritage Institute of Technology, Kolkata, 27th – 30th Dec' 2023.

17. N.A. Ganie, Z.H. Rather, Z. Farooq, **A. Rahman***, "Economic feasibility of SPV integrated EV Charging Infrastructure for NIT Srinagar Institutional Campus in J&K, India" IEEE International Conference on Power, Instrumentation, Energy and Control (PIECON-2023), AMU Aligarh, pp. 1-6, 10th – 12th February 2023, 4th April 2023 (Published online).
DOI: https://doi.org/10.1109/PIECON56912.2023.10085893 **ISBN**: 979-8-3503-9976-9
18. Z. H. Rather, S. Safiullah, **A. Rahman***, S.A. Lone, "Technical Feasibility of EV Infrastructure with Renewable Power Integration: A Case Study at NIT Srinagar" Department of Mechanical Engineering, Malla Reddy College of Engineering and Technology, Hyderabad, India, Springer 4th International Conference on Intelligent Manufacturing & Energy Sustainability (ICIMES), June 24 - 25, 2022.
19. S. Safiullah, **A. Rahman***, S.A. Lone, "A Novel COVID-19 Based Optimization Algorithm (C-19BOA) for Multimodal Optimization Processes" Springer 10th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2022), NIT Mizoram, June 18 - 19, 2022.
20. Zahid Farooq*****, Sheikh Safiullah, **Asadur Rahman**, "Load frequency control of hybrid power system using modified disturbance rejection controller", *IEEE 4th International Conference on Energy, Power and Environment (ICEPE-2022)*, NIT Meghalaya, Shillong, pp. 1-6, 29th April – 1st May 2022, 20th June 2022 (Published online). **DOI:** https://doi.org/10.1109/ICEPE55035.2022.9798040 **ISBN**: 978-1-6654-7124-4
21. Sheikh Safiullah*****, **Asadur Rahman**, Zahid Farooq, "Techno-economic feasibility of electric vehicles for power system operations" *9th International Conference in the Series of Youth 2025 on Envisioning India's Future*, Jaipur, 17-19 Feb 2022.
22. Sheikh Safiullah, **A. Rahman***, Mohd. Asim Aftab, S.M. Suhail Hussain, "Performance study of ADRC and PID for concurrent Frequency-Voltage Control of Electric Vehicle Incorporated Hybrid Power System", *IEEE Intl. Conf. on Power Electronics, Smart Grid, and Renewable Energy (PESGRE)*, GRIET Hyderabad, 2-5 Jan 2022, 25th Feb 2022 (Published online).
DOI: https://doi.org/10.1109/PESGRE52268.2022.9715937 **ISBN**: 978-1-6654-4837-6
23. Zahid Farooq, **A. Rahman***, S.A. Lone, "Fuzzy and MBO optimized Load Frequency Control of hybrid Power System", *IEEE 18th India Council International Conference INDICON*, IIT Guwahati, pp. 1-6, 19-21 Dec' 2021, 1st Feb 2022 (Published online).
ISSN: 2325-9418 [**DOI:** https://doi.org/10.1109/INDICON52576.2021.9691624], **ISBN**: 978-1-6654-4175-9
24. Malik Suhaib Aijaz, **A. Rahman***, Sheikh Safiullah, "Optimal Control of a Two-Area Hybrid Microgrid System Incorporating Electric Vehicles", *IEEE-IAS International Conference on Computational Performance Evaluation (ComPE-2021)*, NEHU Shillong, pp. 716-721, 1-3 Dec' 2021, 12th April 2022 (Published online). **DOI:** https://doi.org/10.1109/ComPE53109.2021.9752415 **ISBN:** 978-1-6654-3656-4
25. **A. Rahman***, L.C. Saikia, Y. Sharma "AGC of Hybrid Power System with Grey Wolf Optimizer Based Conventional Secondary" *IEEE Intl. Conference on Sustainable Energy and Future Electric Transportation SeFeT-2021*, Hyderabad, India, pp. 1-6, 21-23 Jan' 2021, 16th Mar 2021 (Published online).
DOI: https://doi.org/10.1109/SeFet48154.2021.9375685 **ISBN**: 978-1-7281-5681-1
26. **A. Rahman***, L.C. Saikia, Y. Sharma "AGC of Hybrid Solar-Hydro-Thermal System with GWO Based Conventional Secondary Controllers" *Springer 1st Intl. conference on Emerging Global Trends in Engineering and Technology EGTET -2020*, ADBU, Guwahati Assam, 06-07 Mar' 2020.
27. **A. Rahman**, J.P. Mishra "ANN based Improved Pitch Controller for Variable Speed Wind Energy System Using DFIG" *2nd Intl. Conf. on Energy System, Drives & Automations ESDA-2019,* Kolkata, 28 – 29 Dec' 2019.
28. A. Singh, **A. Rahman** "Arduino Controlled Dual Axis Solar PV Tracking System" *2nd National Power Engineering Research Scholars Conference* (NPERSC), ID-RE008, IIT Madras, Chennai, 24 - 25 Feb' 2018.
29. **A. Rahman**, S. Sahu, L.C. Saikia, P. Dash. "AGC of a Multi-Area Thermal-CCGT System Using Cuckoo Search Optimized Classical Controllers" *IEEE Intl. Conf. on Energy, Power and Environment: Towards Sustainable Growth (ICEPE)*, NIT Meghalaya, pp. 1-6, 12 – 13 June' 2015, 14th July 2016 (Published online).
DOI: https://doi.org/10.1109/EPETSG.2015.7510099 **e-ISBN:** 978-1-4673-6503-1

30. J.P. Mishra, D. Hore, **A. Rahman** "Fuzzy Logic based improved Active & Reactive power control operation of DFIG for wind power generation." *IEEE 8th International Conference on Power Electronics and ECCE Asia (ICPE & ECCE)*, Korea, pp. 654-661, May 30 – June 3' 2011.
[**DOI:** https://doi.org/10.1109/ICPE.2011.5944631] **e-ISBN:** 978-1-61284-957-7

Book:

1. S. Tanweer, **A. Rahman**, 'Power System Analysis by Distributed Generation', ***LAP Lambert Academic Publishing***, *Germany*, 2014. [**ISBN:** 978-3-659-49828-2]

Book Chapter:

1. Z. H. Rather, S. Safiullah, **A. Rahman***, S.A. Lone, "Technical Feasibility of EV Infrastructure with Renewable Power Integration: A Case Study at NIT Srinagar" ***Springer Nature Singapore,*** *Series Title*: *Smart Innovation, Systems and Technologies (SIST), Book Title*: Intelligent Manufacturing and Energy Sustainability, Vol. 334, Pages 441-449, 21st June' 2023 (Publication date). **Online ISBN:** 978-981-19-8497-6
2. Sheikh Safiullah*, **Asadur Rahman**, Shameem Ahmad Lone, "A Novel COVID-19-Based Optimization Algorithm (C-19BOA) for Multimodal Optimization Processes" ***Springer Nature Singapore,*** *Series Title*: *Smart Innovation, Systems and Technologies (SIST), Book Title*: Evolution in Computational Intelligence: FICTA 2022, Vol. 326, pages 211-222, 26th April' 2023 (Publication date).
DOI: https://doi.org/10.1007/978-981-19-7513-4_19 **Online ISBN:** 978-981-19-7513-4
3. Sheikh Safiullah*, **Asadur Rahman**, Zahid Farooq, "Techno-economic feasibility of electric vehicles for power system operations" ***Bloomsbury*** Publishing India Pvt. Ltd. New Delhi, *Book Title*: Envisioning India's Future, pages 102-111, 2022. [**ISBN:** 978-93-54358-06-7]
4. **A. Rahman***, L.C. Saikia, Y. Sharma, "AGC of Hybrid Solar-Hydro-Thermal System with GWO Based Conventional Secondary Controllers" ***Springer Nature Singapore,*** *Series Title*: Lecture Notes in Electrical Engineering (LNEE), *Book Title*: Emerging Technologies for Smart Cities, Vol. 765, pages 85-95, 12th June' 2021 (Publication date). [**ISBN:** 978-3-659-49828-2]

EVENTS Organised

CONFERENCE:

- National Conference on "Innovations in Science & Technology (IST-2024)" during 28-29 Nov' 2024 at Srinagar, J&K.
- Special Session on "Performance Evaluation of Electrical Systems" in IEEE-IAS International Conference on Computational Performance Evaluation (ComPE)-2021 at NEHU, Shillong, Meghalaya held on 1-3 Dec' 2021. [IEEE Conference ID – 53109]

WORKSHOP / SEMINAR / TRAINING / STC:

- One-week Workshop & Exhibition on '*Solar Energy Technology & Applications (SETA-2025)'* organized by NIT Srinagar, sponsored by Bureau of Indian Standards (BIS) under the aegis of PM Surya Ghar: Muft Bijli Yojana, 10th – 14th Nov' 2025. [**Convener**]
- One-day seminar on "*NET ZERO & Decarbonized Building*" jointly organized by EE Dept. and Mechanical Engg. Dept., NIT Srinagar, 2nd Mar' 2023. **[Coordinator]**
- One-day seminar on "*Development of Electrical Power Industry* - changes in the legislation and the consequences" on the eve of Engineer's day, 15th September 2022. **[Coordinator]**
- One-week Workshop on '*Patent Filing'* jointly organized by EE Dept. and Civil Engg. Dept., NIT Srinagar, 20-24 June' 2022. [**Coordinator**]

- One-day "Safety Awareness Workshop" and Acclamation Ceremony for Field Workers & Electrical Engineers of KPDCL by EED in collaboration with IIED Centre, NIT Srinagar, 2nd April 2022. [**Coordinator**]
- One-week e-Workshop on '*Power System Control - A Smart Approach'* by EED, NIT Srinagar, 11-15 Dec' 2020. [**Convener**]
- One-week e-Workshop on '*Smart Power & Energy System*' by EED, NIT Srinagar, 30th Oct – 3rd Nov' 2020. [**Convener**]
- One week TEQIP – III sponsored online Short Term Course (STC) on Energy and It's Applications, organized by Chemical Engg. Department, NIT Srinagar, 8-12 Sept.' 2020. [**Coordinator**]
- One week TEQIP – III sponsored online FDP on Soft Computing Techniques (SCT-2020) organized by EE Department, NIT Srinagar, 25 – 30 July' 2020. [**Convener**]
- *Special Lecture under Twinning Activity* by Prof. Debapriya Das (EED, IIT Kharagpur) on 1st July' 2019 at NIT Srinagar. [**Coordinator**]
- One week TEQIP – III sponsored Short Term Course on "Renewable Energy in Science, Engineering & Technology (RESET-2019)" by EE Dept., NIT Srinagar, 1–5 July' 2019. [**Coordinator**]
- One week TEQIP – III sponsored Workshop on "Power Electronics: Applications in Renewable Energy Systems" by EE Department, NIT Srinagar, 22-26 April' 2019. [**Convener**]
- One-Day Workshop on "Writing Magic with Latex", NIT Nagaland, May' 2016.
- Workshop on "Internet of Things" by EEE dept., NIT Nagaland in collaboration with National Instruments, July' 2016.
- IEEE Authorship Workshop – 2015, IEEE Kolkata section, Feb' 2015.
- Industrial visit to 1.5 MW bio-gas plant, Cachar (Assam), Jan' 2015.
- Expert Lecture on "Effect of Distributed Generation power penetration on distribution networks" by Prof. Debapriya Das, IIT Kharagpur at EE dept. NIT Silchar, Dec' 2014.
- Product Demonstration & Installation of "Solar-Thermal, Solar-PV and Wind Power Technologies" by Ecosense Sustainable Solutions Pvt. Ltd., New Delhi at NIT Silchar, Dec' 2014.

EVENTS Attended

TRAININGS:

- AICTE approved QIP on Hydroelectric Power Development, IIT Guwahati, Dec' 2011.
- Business Skill Development Program under MSME, Orissa, 2009.
- Industrial DRIVES Course at IGIAT, Visakhapatnam, 23rd June-5th July' 2008.
- PLC & SCADA Course at IGIAT, Visakhapatnam, 5th June -5th July' 2008.
- Industrial Training in Load Dispatch Centre at OPTCL, Bhubaneswar, 22nd May – 28th June' 2007.
- Many more

WORKSHOP / SEMINAR / STC:

- ***Participated*** in the Research Webinar "*Ethical Issues In Peer Review"* organized by John Wiley & Sons on 11th May' 2021.
- ***Participated*** in the IEI Technical Webinar on the theme "*Renewable Energy Projects - Management and Challenges*" organized by The Institution of Engineers (India) under the aegis of Electrical Engineering Division on 03/11/2020.
- ***Attended*** SCRS Expert Lecture Series on "*Machine Learning Using Python*" organized by Soft Computing Research Society, New Delhi from August 24th – 28th, 2020.
- **Participated** in the International Symposium on "*Energy and Sustainable Development: A Gandhian Approach*" organized by IIT Patna and Universitas Alburgensis on 7th Aug' 2020.
- Many more.

EXTRA-CURRICULAR ACTIVITIES

- Completed First–Aid course with ST. John Ambulance, Orissa Centre.
- Completed "Business skill development programme" under MSME, Orissa centre.
- Participated in several Social Work Programs.
- Event Organizer for several School and College Annual Functions.

Hobbies: Couplets, Solving Puzzles, Travelling.

Languages Known: English, Hindi, Assamese, Bengali, Urdu, Oriya.

Permanent Address: Opposite Central Namghar, P.O. Duliajan, District Dibrugarh, Assam 786602

References: Available on Request.

Date: 28-04-2026 **(डॉ. असदुर रहमान / Dr. Asadur Rahman)**