

Resume

Dr. Asim Datta
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Mizoram University

(A Central University Established by Parliament Act No.8 of 2000 (25.4.2000))

(NAAC Accredited Grade 'A' University)

❖ **Academic Qualifications:**

Sl. No.	Examination/ Degree	Board/University / Institution	Subject	Year
1	Secondary (Madhyamik)	Tripura Board of Secondary Education	N/A	1993
2	Higher Secondary (10 +2)		Science Stream	1995
1	B. E.	Tripura Engineering college (Presently, National Institute of Technology-Agartala)	Electrical Engineering	1999
2	M. Tech.	University of Calcutta	Electrical Engineering	2001
3	Ph.D.	Indian Institute of Engineering Science and Technology (IEST), Shibpur	Engineering	2015

❖ **Total Experience (Industry and Teaching): 17 years +**

Sl. No.	Organization / Institution	Position held	Nature of duties / work	Date of joining	Date of leaving
1	Mizoram University	Associate Professor (Presently, HOD also)	Teaching and research	01/03/2016	NA
2	National Institute of Technology- Meghalaya	Assistant Professor	Teaching and research	16/07/2012	29/02/2016
3	Sikkim Manipal Institute of Technology (SMIT)	Reader / Associate Professor	Teaching and research	28/08/2006	14/07/2012
4	Sikkim Manipal Institute of Technology (SMIT)	Lecturer/ Assistant Professor	Teaching and research	29.08.2001	27.08.2006

❖ **Subject taught in courses/programmes:**

B. Tech. (in SMIT, NIT-Meghalaya, MZU), M. Tech. (in SMIT, NIT-Meghalaya, MZU),

Ph.D (in NIT-Meghalaya, MZU).

❖ **Area of Research Interest**

Renewable Energy Sources, Embedded Systems

❖ **Research Publication**

A. Reviewed Journal Publications

- 1) **Asim Datta**, Debasree Saha, Amitava Ray, and Priyanath Das, “*Evaluation of anti-islanding techniques for renewable energy powered distributed generators using analytic network process (ANP)*”, *IET Renewable Power Generation*, vol. 10, no.9, pp. 1245 – 1254, 2016.
- 2) D. Saha, **A. Datta**, P. Das, “Optimal coordination of directional overcurrent relays in power systems using Symbiotic Organism Search (SOS) optimization technique”, *IET Generation, Transmission & Distribution*, vol. 10, no. 11, pp. 2681 - 2688, 2016.
- 3) Debasree Saha, **Asim Datta**, Biman Kumar Saha Roy, Priyanath Das, “A comparative study on the computation of directional overcurrent relay coordination in power systems using PSO and TLBO based optimization,” *Engineering Computations(Emerald)*, vol. 33, no. 2, 2016.
- 4) **Asim Datta**, Debasree Saha, Amitava Ray, and Priyanath Das, "Anti-islanding selection for grid-connected solar photovoltaic system applications: A MCDM based distance approach", *Solar Energy (Elsevier)*, vol. 110, pp. 519-532, 2014.
- 5) **Asim Datta**, Dipankar Mukherjee, and Hiranmay Saha, "A dsPIC based novel digital sinusoidal pulse width modulation technique for voltage source inverter applications", *Microprocessors and Microsystems (Elsevier)*, vol. 38, pp. 649–658, 2014.
- 6) **A. Datta**, G. Bhattacharya, D. Mukherjee, and H. Saha, "An efficient technique for controlling power flow in a single-stage grid-connected photovoltaic system", *Scientia Iranica Transactions D*, vol. 21, no. 3, pp. 885-897, 2014. (SCI)
- 7) **A. Datta**, G. Bhattacharya, D. Mukherjee, and H. Saha, "Modeling and simulation based performance study of a single-stage transformerless grid-connected PV system in Indian ambient conditions", *International Journal of Ambient Energy (Taylor & Frances)*, vol.37, no.2, pp.172-183, 2016.

- 8) **A. Datta**, A . Ray, D. Mukherjee, and H. Saha, "Selection of islanding detection methods based on multi-criteria decision analysis for grid-connected photovoltaic system applications", *Sustainable Energy Technologies and Assessments (Elsevier)*, vol. 7, pp. 111-122, Sep. 2014.
- 9) **A. Datta**, G. Bhattacharya, D. Mukherjee, and H. Saha, "Towards constant load voltage in Indian grid connected PV system using dsPIC controlled power conditioning unit", *Procedia Technology (Elsevier)*, vol. 4, pp. 661-665, 2012.
- 10) **A. Datta**, A. Ray, G. Bhattacharya, and H. Saha, "Green energy selection based on multi-criteria analysis", *International Journal of Energy Sector Management (Emerald)*, vol. 5, no. 2, pp. 271-286, Aug. 2011.
- 11) **A. Datta**, G. Bhattacharya, and H. Saha, "An efficient method for maintaining constant AC voltage using dsPIC30F2020 controller", *Journal of Electrical & Electronics Engineering*, vol. 3, no. 1, pp. 60-64, May 2010.

B. Conference

- 1) Rishiraj Sarker, Debaparna Sengupta, Susanta Kumar Bhattacharya, and **Asim Datta** , "An implicit approach to minimize reactive power of a 765kV interconnected bus system in India", *Springer International Conference in Communication, Devices and Networking (ICCDN 2017)* , Majhitar, Sikkim, during 3-4th June, 2017.
- 2) Indrajit Koley, Partha Sarathee Bhowmik, **Asim Datta** , "Load Frequency Control in a Hybrid Thermal-Wind-Photovoltaic Power Generation System", in *Proc. 4th IEEE International Conference On Power, Control and Embedded Systems, ICPCES 2017*), MNNIT, Allahabad, 9-11 March, 2017. **ISBN**: 978-1-5090-4426-9.
- 3) Asim Datta, Sourav Konar, L. Joydeep Singha, Ksh Millaner Singh, Aldrin Lalfakzuala, "**A study on load frequency control for a hybrid power plant**", in *Proc. IEEE Second International Conference on Electrical, Computer and Communication Technologies (ICECCT)*, Coimbatore, 22-24 Feb. 2017. **ISBN**: 978-1-5090-3239-6.
- 4) **Asim Datta**, Rishiraj Sarker, Sanjay Debbarma , and Amit Kumar, "Validation of an Inverter Topology for Transformerless Grid-Connected Photovoltaic System", *Springer International Conference on Emerging Trends and Advances in Electrical Engineering and Renewable Energy (ETAEEERE-2016)*, Sikkim, 17-18 December, 2016.

- 5) Sanjoy Debbarma, L.C Saikia, Nidul Sinha and B. Kar, **Asim Datta**, “Fractional order two degree of freedom control for AGC of an interconnected multi-source power system”, in *Proc. 2016 IEEE Conference on Industrial Technology (ICIT 2016)*, Taipei, Taiwan, March 14-17, 2016, **ISBN: 978-1-4673-8075-1**.
- 6) Debasree Saha, **Asim Datta**, Biman Kumar Saha Roy, Priyanath Das, “Optimal Coordination of DOCR in interconnected Power Systems,” in *Proc. IEEE 2nd International Conference on Control, Instrumentation, Energy and Communication 2016 (CIEC16)*, University of Calcutta, Kolkata, January 28-30, 2016. **ISBN: 978-1-5090-0035-7**.
- 7) **Asim Datta**, Krishanu Bhattacharjee, Sanjoy Debbarma, Biswajit Kar, “Load Frequency Control of a Renewable Energy Sources based Hybrid System,” in *Proc. 2015 IEEE Conference on System, Process & Control (ICSPC 2015)*, Kuala Lumpur, Malaysia, 18-20 December 2015. **ISBN: 978-1-4673-7655-6**.
- 8) Sanjoy Debbarma, Manash Bhattacharya, Brijesh Kumar Meena and **Asim Datta**, “Frequency control of autonomous hybrid power system using smart controllable load”, in *Proc. IEEE International Conference on Robotics, Automation, Control and Embedded Systems, RACE2015*, Chennai Feb. 18-21, 2015. **ISBN: 978-81-925974-3-0**.
- 9) **Asim Datta**, Indrajit Koley, Arup Das, “Frequency deviation control of a thermal and hydro area connected system”, in *Proc. Michael Faraday IET International Summit 2015*, Kolkata, 12-13 Sept. 2015. **ISBN: 978-1-78561-186-5**.
- 10) **Asim Datta**, Sanjoy Debbarma, Dipankar Mukherjee, and Hiranmay Saha, “A dsPIC based efficient single-stage grid-connected photovoltaic system”, in *Proc. TENCON 2014 - 2014 IEEE Region 10 Conference*, Bangkok, Oct. 22-25, 2014. [ISSN : 2159-3442, ISBN: 978-1-4799-4076-9]
- 11) **A. Datta**, G. Bhattacharya, D. Mukherjee, and H. Saha, “Ground leakage current elimination in a transformerless unipolar modulation based single phase grid-connected photovoltaic system”, in *Proc. 5th IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC 2013)*, Hong Kong, Dec. 8-11, 2013. **ISBN: 978-1-4799-2522-3, ISSN: 2157-4839**.
- 12) **A. Datta**, G. Bhattacharya, D. Mukherjee, and H. Saha, “Towards stable grid voltage through load sharing in an Indian grid connected PV system”, in *Proc. 26th European*

Photovoltaic Solar Energy Conference (26th EU PVSEC), Hamburg, Germany, Sep. 5-9, 2011, pp. 4205-4210. [ISBN: 3-936338-27-2]

- 13) B. Rai and A. Datta, "PIC based high accuracy real time display system", in *the National Conference on Emerging trends and recent advances in Electrical Engineering and Renewable Energy, NCEEERE 2008*, Sikkim, Dec. 23-24, 2008.
- 14) A. Datta, and S. Sengupta, "Protection from buffer overflow with external hardware in an embedded system", in *Proc. AMSE International Conference, MS'07, Kolkata, Dec. 03-05, 2007*, pp.689-694.
- 15) A. Datta, and S. Sengupta, "Digital signal processing (DSP) algorithms in a renewable energy system for efficient utility interaction", in *Proc. International Conference on Communication & Power Systems, ICCPS'06*, Chennai, Dec. 14-16, 2006, pp.421-426.
- 16) A. Datta, and S. Sengupta, "An advanced approach to substation automation and integration with distributed digital signal processing", in *Proc. International Conference on Communication & Power Systems, ICCPS'06*, Chennai, Dec. 14-16, 2006, pp.345-349.
- 17) Asim Datta, and S. Sengupta, "A DSP based system approach for enhanced efficiency in substation SCADA, automation and integration", in *Proc. IEE International Conference on Energy System and Power Electronics, 'PEITSICON- 2005'*, Kolkata during Jan. 28-29, 2005 .
- 18) A. Datta, and S. Sengupta, "Digital signal processing (DSP) in relaying and related information in a power system: A review", in *Proc. International Conference on Computers, Controls and Communications, "INCON - CCC-2004"*, Chennai, during Aug. 20-22, 2004.

❖ **Book chapters published:**

- i. Chapter titled "**Validation of an Inverter Topology for Transformerless Grid-Connected Photovoltaic System**" (pages494-503) in the book "Advances in Smart Grid and Renewable Energy", Springer Singapore, 2017, Print ISBN 978-981-10-4285-0, Online ISBN 978-981-10-4286-7.
- ii. Chapter titled "**An Implicit Approach to Minimize the Reactive Power of a 765 kV Interconnected Bus System in India**", (Pages 151-157) in the book. 'Advances in Communication, Devices and Networking', Springer, Singapore, Print ISBN 978-981-10-7900-9, Online ISBN 978-981-10-7901-6.

- iii. Chapter titled "**Modelling of Grid-Connected Wind Turbine Systems,**" for the book 'Clean Generators - Advances in Modelling of Hydro and Wind Generators', IntechOpen. UK, ISBN 978-953-51-7591-9 (Communicated).

❖ **Research projects**

- i. **Title:** *Development of Improved Unipolar Modulation based Inverter for Transformerless Grid-Connected Photovoltaic Systems*, **Amount:** Rs. 19.56 Lakh, **Agency:** DeitY, New Delhi, **Role:** Principal Investigator
- ii. **Title:** *Development of a dsPIC based efficient algorithm for simultaneous active power sharing and reactive power compensation in a grid-connected photovoltaic system*, **Amount:** Rs. 7.1 Lakh, **Agency:** CPRI, Bangalore, **Role:** Principal Investigator. (On-going)
- iii. **Title:** *Development of Solid State Transformer based Efficient Power Conditioning Unit for Photovoltaic System for Hybrid AC/DC Microgrid Applications*, **Agency:** Department Of Science & Technology, **Amount:** Rs. 9.782 Lakhs , **Period:** 36 months, **Role:** Principal Investigator

❖ **Awards/Prizes won:**

- i. Emerald Literati Network Award for excellence-2012 (Conferred by Emerald Group Publishing, United Kingdom).
- ii. ISTE-SAYED SAJID ALI NATIONAL AWARD -2017 - for Outstanding Research work in the field of Renewable Energy (Conferred by the Indian Society for Technical Education (ISTE)).

❖ **Membership of Professional Bodies**

ISTE (Life member), IACSIT (Life member), IET (Member 2013, 2014, 2015), IEEE (Member 2011, 2014, 2015, 2017), The *Institution of Engineers (India)* IE(I)-Life member, International Associations of Engineers (IAENG)-Life member.

❖ **Workshops/short term courses attended:**

More than 20 weeks

❖ **Conferences/Workshops/short term courses organized/team-worked:**

- i. Training program on Printed Circuit Board (PCB) Design & Fabrication during Nov. 27-28, 2015.
- ii. International Conference on Energy, Power and Environment (ICEPE 2015) at NIT-Meghalaya, Shillong, during 12-13th June 2015.

- iii. Workshop 'Recent Advances on Power, Control & Energy (RAPCE2014)' during 25-26 April, 2014 at NIT Meghalaya, Shillong.
- iv. Training-Cum-Workshop on, 'Microcontroller Based Embedded Systems', in SMIT, Sikkim in association with ARDENT COLLABORATIONS- Kolkata, June 10 - July 9, 2008.
- v. National Conference on Emerging Trends and Advances in Electrical Engineering and Renewable Energy, SMIT, Sikkim, 22-24, December, 2008.

❖ **Invited talk/Expert Lecturer/Session Chair, etc. in:**

ICEPE 2015, ETAEERE-2016, Workshop in ATTC-2008, Refresher Courses/Workshops at Mizoram University, Workshops/Short Term courses at NIT-Meghalaya, etc.

❖ **Guest Lectureship in:**

- a. Advanced Technical Training Centre(ATTC), Bardhng, East-Sikkim (2008)
- b. North Eastern Hill University (NEHU), Shillong (2012).

❖ **Distinguished Administrative Responsibilities:**

- ✓ Serving as Head of the Department (HOD), Dept. of Electrical Engineering (EE), Mizoram University (MZU), from 29.03.2016 to till date.
- ✓ Co-chairman, Ph.D Admission Committee 2018-19, Dept. of EE, MZU
- ✓ Chairman, M. Tech. Admission Committee 2018-19, Dept. of EE, MZU
- ✓ Nodal Teacher under Ek Bharat Shrestha Bharat in respect of Mizoram University (MZU), from 27/06/2017 to till date.

❖ **M. Tech. students undergone project (Completed):**

1. Bikash Rai, 2. Imraj Hazarika

❖ **Ph.D. Scholars under supervision:**

1. Debaparna Sengupta, 2. Rajesh Kumhar

-Sd-

(Asim Datta)