Name: Dr. Soma Biswas

Department: Electrical Engineering

Contact Nos.: 7439215236/9433059945

Qualifications: BE/ME/PhD

Designation: Associate Professor

VIDWAN ID: 187827

Experience (Teaching / Research / Industry, in years): Teaching: 17+ years

Date of Joining at the Present Institution: 02/09/2020

Examinations Cleared: GATE -2003 (Rank 903)

Qualifications Summary (Reverse chronological order):

Degree	Institute	From – To	Subjects
PhD	Jadavpur University	2015	Title: Power Quality Issue Aided Optimal Placement of Distributed Generations
ME	B .E. College (D.U.)	2001-2003	Power Systems
BE	B .E. College (D.U.)	1995-2000	Electrical Engineering

Experience Summary (In chronological order):

Designation	Organization	Date From – Date To
Lecturer	SIT, Siliguri	03.03.2003-23.07.2004
Lecturer and Assistant Professor	JISCE, Kalyani	01.08.2004-11.07.2016
Associate Professor	AOT. Hooghly	12.08.2016-22.01.2020
Associate Professor	BCREC, Durgapur	02.09.2021-continuing

Specialization/Research Interest:

Power Quality, Distributed Generations, Smart Grid, Optimisation Techniques, Machine Learning

Awards & Recognitions
Best paper/ scholarship/Position in university exam / awards while at industry/ other organizations etc.

1. **Topper** and received **Silver** certificate in the NPTEL certification course on '**Introduction to Machine Learning**' in the year 2021 (Jan-April).
2. **Topper** and obtained **GOLD+ ELITE** certificate from NPTEL online course "**Introduction to IOT**" for scoring 99% in the year 2019 (Jan-April).

Courses taught:

B.Tech (Specify the name of the subject/s (Theory first and then practical):
Theory: Power System I, Power System II, Electric Machine I, Electric Machine II, Power System III , Circuit Theory & Network, Basic Electrical Engineering, Electrical Measurement, Computer Aided Power System Analysis
Practical: Power System I Lab, Power System II Lab, Electric Machine I Lab, Electric Machine II Lab, Circuit Theory & Network Lab, Basic Electrical Engineering Lab, Electrical Measurement Lab

M.Tech:
Power System Operation & Control, EHVAC Power Transmission, Optimisation Techniques, Generalised theory of Electric Machines, Power System Transients

Online Mode of Teaching:

The Faculty member needs to specify the online teaching/ assessment method adopted. (Link to any faculty created resources for Lecture notes / PPT/ Video Lecture etc. in Google Drive / Weblink etc)

https://drive.google.com/drive/folders/1xZUdwApGEGZiDvFTGU9IKDiNfXw8LvGB

Publications:

Journal:

1. S. Biswas, S.K. Goswami, & A. Chatterjee, 'Optimal DG Placement in Shunt Capacitor Compensated Distribution Systems Considering Voltage Sag and Harmonics Distortions', IET Generation Distribution & Transmission- vol.8, no. 5, pp.783-797, May 2014, ISSN 1751-8687. DOI: 10.1049/iet-gtd.2013.0423
2. S. Biswas, S.K. Goswami, & A. Chatterjee, 'A study of the factors influencing the optimal size and site of DG', Jr. of Clean Energy Tech.vol.-2, no.-1, pp.28-33, Jan-2014, ISSN: 1793-821X. http://dx.doi.org/10.7763/jocet.2014.v2.85
3. S. Biswas, A. Chatterjee & S. K. Goswami, 'An artificial bee colony-least square algorithm for solving harmonic estimation problems', Applied Soft Computing (Elsevier Pub.) Vol.13, no. 5, Pp. 2343-2355, May, 2013, ISSN: 1568-4946. https://doi.org/10.1016/j.asoc.2012.12.006
4. S. Biswas, S. K. Goswami, & A. Chatterjee, 'Optimum distributed generation placement with voltage sag effect minimization', Energy Conversion and Management (Elsevier Pub.) 53 (2012) 163–174, ISSN:0196-8904. DOI: 10.1016/j.enconman.2011.08.020

5. S. Biswas, S.K. Goswami, 'Genetic Algorithm based Optimal Placement of Distributed Generation Reducing Loss and Improving Voltage Sag Performance', ACEEE Int. J. on Electrical and Power Engineering, Vol. 02, No. 01, Feb 2011. DOI: 02.AEE.2010.01.63

Conference:

1. **S. Biswas, S.K. Goswami, '**Study of Harmonics Contribution by Various Types of Loads in a Low Voltage Distribution System and Reduction of Harmonics', IEEE APSIT 2021. 8th-10th August, 2021, will be published in IEEE Digital library very soon.

2. S. Biswas, S.K Goswami & D.Bhattacharya, 'Optimal Placement of DG in an Unbalanced radial Distribution System Considering Load Variation', IEEE TENSYMP, June 7-9, 2019, Kolkata, India. **DOI:** 10.1109/TENSYMP46218.2019.8971226
3. D. Bhattacharya & S. Biswas, 'Impacts of Distributed Generations on Voltage Stability', CALCON, 2017, Calcutta university, IEEE Proceedings , pp-105-108, ISBN: 978- 1-5386-3745-6/17. **DOI:** 10.1109/CALCON.2017.8280705
4. D. Roy, S. Biswas, 'Sitting of Distributed Generation using Bio-geography based optimization', IJIRSET, vol-4, issue-3, 2015, pp 122- 126, ISSN (online)2319- 8753 ISSN(Print)2347- 6710.
5. D. Roy, S. Biswas, 'Performance Analysis of various Optimization Techniques in deciding the optimal location of DG', IJIRSET, vol-4, issue-3, 2015, pp 45- 49, ISSN (online)2319-8753 ISSN(Print)2347- 6710.
6. S. Biswas, A. Chatterjee & S. K. Goswami, 'An Artificial Bee Colony based Optimal Placement and Sizing of Distributed Generation', Ciec-14, Jan. 31-Feb. 2- 2014, Calcutta University, IEEE Catalog No.: CFP1497V-DVD, pp.411-415, ISBN: 978-1- 4799-2043-3. **DOI:** 10.1109/CIEC.2014.6959109
7. T. Samanta, Z.D.Das, L. Roy, & S. Biswas, 'Electricity Generation from PV-Wind Hybrid System', ICONCE-2014, Jan. 16- 17, 2014, JISCE, Kalyani, pp. 252-255, 978-1-4799-3338-9/14/$31.00 ©2014 IEEE, ISBN 978-1-4799- 3340-2 CD-ROM ISBN 978-1-4799-3338- 9 PRINT ISBN 978- 1-4799-3339-6.
8. S. Biswas, S. K. Goswami, & S. Mitra, 'Reduction of Harmonics Distortion with Optimal Siting and Sizing of DG', IC3A-2013 11th -12th Jan.- 2013, JISCE, ISBN-13: 978-1-25-906393-0 ISBN-10: 1- 25-906393-3.
9. S. Chakraborti, K. Mukherjee and S. Biswas, 'A New Method of Voltage Sag Assessment in Radial Distribution Systems', ESPIO, JISCE, 19th August, 2011.
10. Soma Biswas, S.K. Goswami, 'Placement of Distributed Generation Considering Power Loss and Voltage Dip Performance', ICPCES, 28th Nov.-1 st Dec, 2010, NIT□Allahabad, ISBN:978-1- 4244-8541-3.
11. Soma Biswas, S.K. Goswami, 'Optimal Allocation of Distributed Generation Minimizing Loss and Voltage Sag Problem-Using Genetic Algorithm', ICMOC-2010, NIT Durgapur, October 28-30, 2010, American Institute of Physics, pp. 421-426, American Institute of Physics-978- 0-7354- 0854- 8/10/$30.
12. Soma Biswas, S.K. Goswami, 'Distributed Generation Placement for Voltage Sag and Power Loss Minimization', ICSE-2010 DSI, Bangalore 21st -23rd April, 2010.

Book:

Name of the author/s **(Make bold font for own name)**, "Title of the Book", Name of the Publisher, Year of Publication, ISBN Number (Print / Online)

NIL

Book Chapter:

Name of the author /s **(Make bold font for own name)** "Title of the Chapter", "Page no. of the Chapter", "Title of the Book", "Name of the Publisher", Year of Publication. ISBN Number (Print / Online)

1. Jayanta Kumar Biswas, Arpan Kumar, **Soma Biswas**, Maulin P. Shah, Susana Rodriguez Couto, "Win Win Wastewater phycoremediation: couple carbon sequestration and heavy metal removal"(An Integration of Phycomediation Process in Wastewater Treatment, Science Direct), 2022, pp 529-548, DOI: https://doi.org/10.1016/B978-0-12-823499-0.00031-6.
2. Two chapters have been published in 'Integrated• Innovations+' which is a compilation of the some of the best innovations by the Mission 10Xians from across the country in the year 2010.

Supervision of Ph.D/M.Tech / B.Tech Projects:

For Ph.D

1. **Name of the student, Name of the supervisor, " Title of the thesis", Year , Name of the university (completed)**
2. **Name of the student, Name of the supervisor, " Title of the thesis", Year, Name of the university (Registered)**

NIL

Projects:

1. **Name of the student/s (with university roll number), Name of the supervisor, " Title of the Project / thesis" , Year (only final year 8th Sem Project for B.Tech and Thesis for M.Tech)**

Research Supervision: Details of M.Tech Thesis Awarded			
Name of the student	**Registration No.**	**Title of thesis**	**Year**
Swagata Protihar	161690410004	Optimal placement of distributed Generation considering loss and bus voltage limit	2018
Arindam Banerjee	141230410010 of 2014-2015	Study of Radial Distribution System	2016
Debangshu Biswas	131230410030 of 2013-2014	Load flow analysis in a radial distribution system	2015
Debjit Roy	131230410031 of 2013-2014	Optimal DG placement in a radial distribution system	2015
Rajat Pramanik	121230410040 of 2012-2013	Load Flow solution in radial distribution system and Capacitor placement	2014
Priyadarshi Chakraborty	111230410006 of 2011-2012	Power Quality Disturbances Simulation and Classification using Fuzzy Logic	2013
Sukratu Chakraborty	09123410053 of 2009-2010	An analytical Method for assessment of Voltage Sag due to Symmetrical & Unsymmetrical Faults in Radial Distribution System by MATLAB	2011

UG Level
Automated Railway Level Crossing Operation at Unmanned Area Using Infrared Sensor
Four Quadrant Operation & Speed Control of DC Motor
100 Watt Inverter
Remote Speed Control of DC motor using PWM Technique
Wireless Power Transmission-A next Generation Power Transmission System
Fault Analysis of Simple AC Transmission Line Through PSCAD Software
Power System Stability
Programmable Logic Controller

Invited Lectures:

Topic of the lecture	Name of the event	Organized by	Date
Solving Linear and non Linear algebraic equation with MATLAB Simulation	AICTE Sponsored online Short term Training Programme (STTP) on Simulation with MATLAB – From Device to Circuit-Phase III	Dept. Of BSH, JISCE, Kalyani	21st Sept 2021
Solving harmonic Estimation Problem Using MATLAB Simulation	AICTE Sponsored online Short term Training Programme (STTP) on Simulation with MATLAB – From Device to Circuit-Phase II	Dept. Of BSH, JISCE, Kalyani	3rd Sept,2021
Solving Linear and non Linear algebraic equation with MATLAB Simulation	AICTE Sponsored online Short term Training Programme (STTP) on Simulation with MATLAB – From Device to Circuit-Ph-I	Dept. Of BSH, JISCE, Kalyani	10th August 2021
Protection of Power System Equipments	Three Week Summer Training and Workshop in Power Protection and Stability	Department of EE, JISCE	22nd May, 2021
Computer Aided Power System Analysis	Two Week Summer Training on Power System	Department of EE, JISCE	8th-14th June, 2020
Solving DG Placement Problem using Genetic Algorithm	National Level Workshop on 'Evolutionary Optimization Techniques'	Department of EE, Heritage Institute of Technology (HIT)	8th July, 2016
Role of Power Electronics in Improvement of Power Factor	National Seminar on 'Power Electronics & Drives'	Department of EE, JISCE	13th May, 2016

Participation in seminar/conference/symposium/workshop/discussion meeting

Name of the event	Duration	Year	Organized by
APSIT 2021 (IEEE International conference)	3 days (8th-10th August 2021)	2021	Siksha 'O' Anusandhan Deemed to be University

			Bhubaneswar, Odisha
Conducting Interview to Select PhD Scholars (Discussion Meeting)	1day (16th May 2021)	2021	Swami Vivekananda University – Barrackpore, WB
Trends of Modern Communication Engineering Systems (Webinar)	3days (18th Sept 20th Sept. 2020)	2020	BCREC
Nominated as Expert in the selection committee of a walk-in-interview meeting for the appointment of Assistant Engineer (Civil)- & Assistant Engineer (Electrical)-[purely contractual basis] of the University of Gour Banga, Malda	1 day	2019	University of Gour Banga, Malda
External Examiner of laboratory examination of Applied Physics department of C.U.	1 day	2016-2017	Applied Physics department of C.U
External Examiner of M. Tech Exam. at Kalyani Govt. Engineering College	1 day	2016	EE Department, Kalyani Govt. Engineering College
Attended almost 7 international conferences and 17 national seminars			

Participation in faculty development programmes

Skill Development

Name of the faculty development programmes	Online / Face-to-face	From Date – To Date	Duration	Year	Organized by
FDP on Universal Human Value (UHV)	Online	25th to 29th Oct 2021	5 days	2021	AICTE
Modern Applications of Artificial Intelligence and Machine Learning in Hardware and Software	Online	14th-18th Sept 2021	5 days	2021	BCREC
NPTEL online certification course on " Introduction to Machine Learning"	Online	Jan-Apr, 2021	12 weeks	2021	IIT, Chennai
Modern Trends of Research in Electrical Engineering and Its Impact on Society and Future Aspects	Online	05.07.2021-10.07.2021	6 days	2021	Dept. Of EE, NIT, Agarpara
International FDP on Emerging Trends in Sensors, Security and Smart Automation Systems (ETSSSASS)	Online	8th-12th July, 2020	5days	2020	B. P. Poddar Institute of Management and Technology

NPTEL online certification course on " Introduction to IOT"	Online	Jan-Apr, 2019	12 weeks	2019	IIT, Kharagpur
Short Term Course on 'Introduction to Design of Algorithms'	Online	25th -30th May, 2015	6 days	2015	IIT, Kharagpur, remote centre at JISCE,
Short Term Course on PSCAD	Face to face	24th -25th August, 2010	2days	2010	Jadavpur University, Kolkata
Training on Mi-Power	Face to Face	22June-24 June, 2010	3 days	2010	JISCE, Kalyani
Short Term Course on 'Data Mining and Data Warehousing' ,	Face to Face	24th March to 27th March, 2009	4 days	2009	BESU, Shibpur Howrah
Short Term Course on 'Advances in Application for Renewable Energy Sources'	Face to Face	Feb. 27, to March 03, 2006	5 days	2006	Jadavpur University, Kolkata

Teaching Development

Name of the faculty development programmes	Online / Face-to-face	From Date – To Date	Duration	Year	Organized by
'Faculty Development on Advanced Pedagogy Training'	Face to Face	16th -21st June, 2016	5days	2016	NITTR at JISCE, Kalyani.
'Faculty Development on Pedagogy Training	Face to Face	16th -21th June, 2014	5 days	2014	NITTR at JISCE, Kalyani.
Advanced Pedagogy Training Program	Face to Face	from 8th - 11th April, 2011	4 days	2011	Wipro Mission-10X, at NIT, Agarpara, Kolkata
Workshop on High Impact Teaching Skills	Face to Face	8 th -12th February, 2010,	5days	2010	Wipro Mission 10X, at GNIT, Sodepur, Kolkata

Organization of events (Dr. B. C. Roy Engineering College)

Name of the event	Date	Year
FDP on Modern Trends in Electrical Engineering	20th-24th Dec, 2020	2020

Participation in administrative committees (selected)

Name of the post (Convener/Joint Convenor/Member secretary/Co-ordinator etc.),	Name of the committee	year
NBA (EE) Coordinator	continuing	
Resource Person and conference Chair	National Conference NCETER-2021	2021
External Experts	BOS, Swami Vivekananda University - Barrackpore	2021 and continuing
Co-Convener	Anti-ragging Committee	2017-2019
Hostel Warden		2017-2019

Project Ideas Submitted to Govt. Agencies/ On-going Projects / Research Ideas under preparation & execution

A proposal has been sent to AICTE-INAE DVP scheme in 2020.

Membership of professional bodies: IEEE, IETE, IEI, CSI, MGMI etc.

Member of IEEE, Researchgate, Googlescholar, ACADEMIA

Papers Presented:

1. A paper entitled 'Study of Harmonics Contribution by Various Types of Loads in a Low Voltage Distribution System and Reduction of Harmonics' was presented at International Conference on **APSIT 2021**, held during August 8th -10th, **2021**, at Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar, Odisha (ONLINE).

2. A paper entitled 'An Artificial Bee Colony based Optimal Placement and Sizing of Distributed Generation' was presented at International Conference on CIEC-14, held during Jan. 31st -Feb. 2nd, 2014, at Calcutta University.

3. A paper entitled 'Electricity Generation from PV-Wind Hybrid System', was presented at International Conference on ICONCE-14, held during Jan. 16th -17th, 2014, at JISCE, Klayani.
4. A paper entitled 'A study of the factors influencing the optimal size and site of DG' was presented at International Conference on **ICEEA-2013**, held during 24th -25th August, 2013, at **Singapore.**
5. A paper entitled 'Reduction of Harmonics Distortion with Optimal Siting and Sizing of DG' was presented at International Conference on IC3A-2013, held during Jan. 11th -12th, 2013, at JISCE, Klayani.
6. A paper entitled 'A New Method of Voltage Sag Assessment in Radial Distribution Systems' was presented at National Conference on ESPIO, held on 19th August, 2011, at JISCE, Klayani.
7. A paper entitled 'Optimal Allocation of Distributed Generation Minimizing Loss and Voltage Sag Problem-Using Genetic Algorithm' was presented at International Conference on ICMOC-2010, held during Oct. 28th -30th, 2010, at NIT, Durgapur.
8. A paper entitled 'Distributed Generation Placement for Voltage Sag and Power Loss Minimization' was presented at International Conference on ICSE-2010, held during 21st -23rd April, 2010, at DSI, Bangalore.