

**Associate Professor**

Department of Electrical Engineering  
Indian Institute of Technology (Indian School of  
Mines), Dhanbad, Jharkhand, India, Pin- 826 004

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## Area of Interest

Power System Operation and Control, Application of Optimization Techniques, Power Quality Issues

## Education

**Indian Institute of Technology (ISM) Dhanbad**

*Doctor of Philosophy (Ph.D.) in Electrical Engineering* (Awarded in March 2016)

Title: Load Following Performance Evaluation of Power Systems with Emphasis on Distributed Generation

**Indian Institute of Technology, Delhi**

*Master of Technology (M.Tech.) in Energy Studies* (Passed in May 2005)

Title: Voltage Stability Assessment of Power System using ANN

**Birla Institute of Technology (BIT), Mesra, Ranchi**

*Bachelor of Engineering (B.E.) in Electrical and Electronics Engineering* (Passed in May 2003)

## Working Experience

***Present*****Indian Institute of Technology (ISM), Dhanbad**

*Associate Professor, Electrical Engineering Department* (from 13.04.2022 to Till date)

***Past*****Indian Institute of Technology (ISM), Dhanbad**

*Assistant Professor, Electrical Engineering Department* (from 07.12.2010 to 12.04.2022)

**North Eastern Regional Institute of Science & Technology (NERIST)**

(Deemed University, Under MHRD, GoI), Itanagar, Arunachal Pradesh

*Assistant Professor, Electrical Engineering Department* (from 31.07.2006 to 06.12.2010))

**University of Petroleum & Energy Studies (UPES)**

(Deemed University), Dehradun, Uttarakhand

*Lecturer, College of Engineering* (from 05.06.2005 to 27.06.2006)

## Courses Taught

ECC 11102: Basic Electrical Engineering (B.Tech Course) {Theory}

EEC 13113: Signals and Systems (B.Tech Course) {Theory}

EEC 14111: Electrical Measurements (B.Tech Course) {Theory}

EEC 15116: Power System-I (B.Tech Course) {Theory}

EEC 16115: Power System-II (B.Tech Course) {Theory}

EER 16101: Applied Electrical Engineering (B.Tech Course) {Theory}

EEC 501: Power System Analysis (M.Tech Course) {Theory}

EEC 512: Soft Computing Techniques (M.Tech Course) {Theory}

EEC 311: Power System Analysis & Control (B.Tech Course) {Theory}

NEEC 502: Power System Analysis (M.Tech Course) {Theory}

EEC 12201: Electrical Technology Practical (B.Tech Course) {Lab.}

EEC 16214: Control System-II Practical (B.Tech Course) {Lab.}

NEEC 518 : Advance Simulation Lab (M.Tech Course) {Lab}

NEEC 502: Advance Power System Lab (M.Tech Course) {Lab}

### Post Graduate Student Supervision

Sl. No.	Name & Admission No.	Status	Year
1	Ms. Samiksha Salgotia (22MT0350)	Completed	2024
2	Ms. Nidhi Kumari (20MT0244)	Completed	2022
3	Mr. Roushan (20MT0338)	Completed	2022
4	Mr. Shivanshu Kumar Shiv (19MT0372)	Completed	2021
5	Mr. Sabyasachi Dey (18KT0003)	Completed	2021
6	Mr. Sanjib Sarkar (18KT0005)	Completed	2021
7	Mr. Sanjeev Kumar (18MT0359)	Completed	2021
8	Mr. Naveen Swarup (18MT0210)	Completed	2020
9	Mr. Subhash Kumar (17KT000276)	Completed	2020
10	Ms. Puja Kumari (17KT000285)	Completed	2020
11	Ms. Piya Roy (17KT000222)	Completed	2020
12	Mr. Narayan Malakar (17KT000210)	Completed	2020
13	Mr. V. S. Chandel (17KT000198)	Completed	2020
14	Mr Biplab Nayak (17KT000209)	Completed	2020
15	Mr. Suraj Prakash (17MT001653)	Completed	2019
16	Ms. Vidushi Gupta (17MT001556)	Completed	2019
17	Ms. S. Bhattacharya (17MT001511)	Completed	2019
18	Mr. Akshay Anand (17MT001933)	Completed	2019
19	Mr. Raviranjana Sahay (17MT001787)	Completed	2019
20	Mr. Amit Kumar Singh (16KT000080)	Completed	2019
21	Mr. Debabrata Mondal (16KT000093)	Completed	2019
22	Mr. Priyanshu Kumar (16MT000971)	Completed	2018
23	Ms. Anamika (16MT000983)	Completed	2018
24	Ms. Basundhara (16MT000992)	Completed	2018
25	Mr. Pankaj Kumar Sah (16MT001183)	Completed	2018
26	Ms. Shweta Kumari (16MT001208)	Completed	2018
27	Mr. Sudeep Kumar (16MT001331)	Completed	2018
28	Mr. Hrishikesh M. K. (15MT000132)	Completed	2017
29	Mr. Sukanta Nag (15MT000366)	Completed	2017
30	Ms. Shweta Kumari (15MT000423)	Completed	2017
31	Ms. Kumari Rishilata (15MT000481)	Completed	2017
32	Mr. Ravi Kumar (15MT000681)	Completed	2017
33	Ms. Shilpa Gupta (14MT000015)	Completed	2016
34	Ms. Kumari Prerna (14MT000023)	Completed	2016
35	Ms. Komal Kumari (14MT000105)	Completed	2016
36	Ms. Sandhya Kumari (14MT000137)	Completed	2016
37	Ms. Asha Rani (14MT0000146)	Completed	2016
38	Mr. Nandla Nagarjuna (2013MT0081)	Completed	2015
39	Ms. Shubhlakshmi (2013MT0295)	Completed	2015
40	Mr. Deepak Kumar (2013MT0363)	Completed	2015
41	Ms. Ruchi Yadav (2012MT0067)	Completed	2014
42	Ms. Akanksha Sinha (2012MT0222)	Completed	2014

### Ph.D. Student Supervision

Sl. No.	Name of Candidate	Registration No. with date	Status of work done	Sole or Joint
1	Mr. Akshay Kumar	16DR0058 (15.02.2016)	Awarded	Sole
2	Ms. Sandhya Kumari	16DR000226 (01.08.2016)	Awarded	Sole
3	Mr. Korra Cheena	16DP000036 (21.06.2016)	Awarded	Joint (as Co-guide)
4	Mr. Saubhagya Ranjan Biswal	17DR000293 (17.03.2017)	Awarded	Sole
5	Mr. P. K. Barik	17DP000227 (23.03.2017)	Awarded	Joint (as Principle Guide)
6	Mr. Sumeet Sahay	17DP000228 (23.03.2017)	Undergoing	Sole
7	Mr. Suryakant Kumar	21DR0200 (11.08.2021)	Undergoing	Joint (as Principle Guide)
8	Mr. Satadal Bhowmik	22DR0214 (21.12.2022)	Undergoing	Sole
9	Mr. Sujeet Kumar Shah	23DR0180 (14.07.2023)	Undergoing	Sole
10	Mr. Manoj Debnath	24DR0177 (03.07.2024)	Undergoing	Sole

### Details of Research Work and Funding from External Agencies

Sl. No.	Name of PI/Co-PI etc.	Sponsoring Authority	Topic/ Field	Sanctioned Amount (Rs.)	Status
1	Gauri Shankar (PI)/Mrinal Sen (Co-PI)/Tapas Kumar (Co-PI)	BDTD-DST, GoI	Design and development of prototype of bronchoscopy	16,68,842/-	Ongoing
2	Gauri Shankar (as PI)	TEQIP-II under minor research project (MRP) scheme	Modeling, simulation and control of a 1 kW photovoltaic system for standalone application	2,00,000/-	Completed
3	Gauri Shankar (as PI)	ISM Dhanbad (under FRS Scheme) (Internal)	Study of self-excited induction generator for renewable energy application	3,00,000/-	Completed

### Professional Recognition/ Award/ Prize/ Certificate/Fellowship Received

Sl. No.	Name of Award	Awarding Agency	Year
1	GATE Fellowship	MHRD	2003-2005
2	Two Months Summer Research Fellow Programme	IIT Delhi	2012
3	Indian National Academy of Engineering (INAE) Teachers Mentoring Fellowship	INAE, New Delhi	2013

4	Outstanding Reviewer Award	International Journal of Electrical Energy and Power System (Elsevier)	2017
5	Outstanding Reviewer Award	Journal of Modern Power Systems and Clean Energy (Springer)	2018

### Details of Organisation/Participation of National/International Seminars

Sl. No.	Organised/Participated	Duration	Topic	Held at
1	Convener/Program Chair	28 Feb-2 <sup>nd</sup> March 2025	2025 IEEE 1st International Conference on Smart and Sustainable Developments in Electrical Engineering (SSDEE-2025)	IIT(ISM)
2	Member, International Organizing Committee	November 18-20, 2021	3rd International Conference on Energy and Power (ICEP2021)	Chiang Mai, Thailand
3	Organized as <b>Convener</b> (Funded by DST & MNRE, GoI)	September 24-25, 2010	National Seminar on “Renewable Energy Technology: Issues & Prospects (RETIP-2010)”	NERIST, Itanagar, A.P.
4	Member, Organizing committee	February 9-11, 2018	3 <sup>rd</sup> International Conference Microwave and Photonics (ICMAP)	IIT(ISM)
5	Member, Organizing committee	October 10-12, 2018	International Seminar on Mineral Processing Technology (MPT)-2018 organized by FME Deptt., IIT(ISM)	IIT(ISM)
6	Participated	March 12-16, 2018	Workshop Soft computing techniques Applied in distributed generation (SCTADG-2018)	NIT Arunachal
7	Participated	March 3-5, 2018	3 <sup>rd</sup> IEEE International Conference on “Recent Advances in Information Technology (RAIT-2016)	ISM Dhanbad
8	Participated	December 28-29, 2012	1 <sup>st</sup> IEEE International Conference on “Power and Energy in NERIST (ICPEN-2012)”	NERIST, Itanagar, A.P.
9	Participated	March 15-17, 2012	1 <sup>st</sup> IEEE International Conference on “Recent Advances in Information Technology (RAIT-2012)	ISM Dhanbad

### Consultancy Work Undertaken

Sl. No.	Sponsoring Authority	Nature of Work	Date of Sanction	Total value	Completed/ Ongoing
1	Dhanbad Municipal Corporation	Testing of Street Light	24.07.2017/	Rs. 20, 532/-	Completed
2	Dhanbad Municipal Corporation		16.03.2019	Rs. 70,000/-	Completed
3	Dhanbad Municipal Corporation		16.03.2019	Rs. 100,000/-	Completed

### Patents filed/granted with details

- 1) K.C. Jana, Gauri Shankar, V. L. Srinivas, K.R. Khan, S. Kumar, R. K. Saket, “A System for Voltage Stabilization Control with Hybrid Renewable Power Sources in DC Microgrid” Indian Patent (Complete) Application No. 202431073196 dated 27.09.2024

## Publication Details

Types of Research Papers	Nos.
International SCI / SCI-Expanded Journals ( <b>Indexed in Thomson Reuters</b> )	<b>26</b>
International Conferences	<b>47</b>
National Conferences/Seminars	<b>08</b>
Book Chapters	<b>06</b>
<b>Total Research Papers</b>	<b>87</b>

## Invited Lectures

- ❖ Delivered an expert lecture in EDP on “Preventive Maintenance and Electrical Safety in Mines (PMESM)” held on 20-24 January, 2025 at IIT(ISM) Dhanbad.
- ❖ Delivered an expert lecture in ATAL FDP on “Electric Vehicle (EV) Technologies” held on 28 June-2 July, 2021 at Government Engineering College, Bhuj, Gujrat.
- ❖ Delivered an expert lecture in the AICTE sponsored short term training programme on “Smart Micro Grid and its Future Trends 2021” held on 14-19 June, 2021 at Lendi Institute of Engineering and Technology, Vizianagaram.
- ❖ Delivered an expert lecture in the Workshop on “Innovations for Sustainable Energy Systems (ISES) 2019” held on 21 September, 2019 at BIT Sindri.
- ❖ Delivered an expert lecture in the Short term course on “Soft computing techniques Applied in distributed generation (SCTADG-2018)” held at NIT Arunachal Pradesh 12-16 March, 2018.

## Served as Reviewer/Examiner

### *Journals*

- ❖ IEEE Transaction on Cybernetics
- ❖ IEEE Transactions on Power Systems
- ❖ IEEE Transaction on Industrial Informatics
- ❖ IEEE Transactions on Sustainable Energy
- ❖ IEEE Access
- ❖ International Journal of Electrical Power Energy System (Elsevier)
- ❖ Modern Power Systems and Clean Energy (Springer)
- ❖ Electric Power Components and Systems Journal (Taylor & Francis)
- ❖ International Transactions of Electrical Energy Systems (Wiley)
- ❖ IET Generation Transmission & Distribution
- ❖ IET Renewable Power Generation

### *Conferences*

- ❖ IEEE PEDES, IEEE INDICON, NPSC, RETIP, IEEE ICNGIS, IEECON, ICETSGAI4.0, GUCON, ICPS, CoMSO, etc.

### *Ph.D./M.Tech. Thesis*

- ❖ External examiner for Master’s and Doctoral Thesis of BIT Sindri, Gujrat Technical University, University of Petroleum & Energy Studies (Dehradun), NIT Jamshedpur, LPU India, NIT Surathkal.

## Served as Guest Editor

- ❖ Special Issue "Planning, Operation and Control of Renewable Energy Sources and Energy Storage Devices Assisted Hybrid Power System" Energies Journal, MDPI, 2021-22.

## Professional Body Memberships

- ❖ Member, IEEE
- ❖ Member, IEEE Power & Energy Society
- ❖ Life Member, Indian Society for Technical Education (ISTE), India
- ❖ Life Member, The Institution of Electronics and Telecommunication Engineers (IETE), India
- ❖ Associate Member, The Institution of Engineers (IE), India.
- ❖ Member, International Association of Engineers (IAENG), Hong Kong.

## Administrative Responsibilities

### *Institute Level*

- ❖ **Head of the Centre** for Renewable Energy (28.02.2025 to till date)
- ❖ **Convener**, SRIJAN (2023)
- ❖ **Faculty-in-charge**, International Relations and Alumni Affairs (21.10.2023 to till date)
- ❖ **Associate Dean**, International Relations and Alumni Affairs ((10.04.2023 to 20.10.2023)
- ❖ **Chairperson**, International Relations Cell (16.04.2019 to 09.04.2023)
- ❖ **Member**, Selection Committee of Staff Nurse and JTS (Medical), 2021
- ❖ **Member**, Selection Committee of Junior Technician, Assistant/Deputy Registrar, Junior Assistant and Superintendent (Hospitality/Security), JT(Library), JTS (MIS), 2021
- ❖ **Member**, Departmental Promotion Committee (Group D to B Employee) (Sept. 2020 to till date)
- ❖ **Coordinating Warden**, International Hostel (29.06.2020 to till date)
- ❖ **Hostel Warden**, Jasper Hostel (01.10.2018 to 28.06.2020)
- ❖ **Internship Coordinator**, Institution's Innovation Council (IIC) 2.0 under CIE, IIT(ISM) (27.08.2019 to till date)
- ❖ **Member**, Dean Advisory Council (09.09.2019 to till date)
- ❖ **Member**, Centre for Societal Mission (11.05.2017 to 23.05.2021)
- ❖ **Member**, Central Research Facility (11.09.2018 to till date)
- ❖ **Member**, Selection Committee of SAIRC Coordinators (from 2019 to till date)
- ❖ **Member**, Departmental Post Graduate Committee (DPGC) (27.12.2018 to till date)
- ❖ **In-charge**, International Relation Web Portal
- ❖ **Treasurer & Member**, Organizing Committee of III & BASANT (from 2019 to till date).
- ❖ **Treasurer & Member**, ISMAA (February, 2019 to till date)
- ❖ **Faculty Coordinator**, NBA of Electrical Engineering Department (from 2020 to till date)
- ❖ **Member**, Core-Committee, Central Research Facility (CRF) (from 14.09.2018 to till date)
- ❖ **Member**, Departmental Faculty Screening Committee (DFSC) (01.12.2021 to till date & 12.07.2018 to 30.11.2020)
- ❖ **Member**, Scrutiny Committee TA/STA Application Forms for the Year 2019 and 2020
- ❖ **Member**, GATE-JAM 2020 Committee.
- ❖ **Member**, Selection Interview Board of Post Doc Fellow of Mathematics Department, 2020
- ❖ **Represented** IIT(ISM) in annual meeting of Shastri Indo-Canadian Institute (SICI) held during 29-30, April 2019 at New Delhi.
- ❖ **Official Visit** to Universities of Bangladesh 14-29 December 2019.
- ❖ **Institute Representative (IR)** in IIT JEE Advance Exam for the year 2019, 2020 and 2021
- ❖ **Treasurer & Member**, Organizing Committee of III & BASANT 2019.
- ❖ **Coordinator**, Medical Camp held at Health Centre, IIT(ISM) Dhanbad on 16.09.2018
- ❖ **Co-coordinator**, Skill Development Programme on "Computer Awareness Programme" under Unnat Bharat Abhiyan from 25.06.2019-29.06.2019 at IIT(ISM).
- ❖ **Treasurer & Member**, Organizing Committee of CONCETTO 2018.
- ❖ **Member**, Organizing Committee of III, IMC & BASANT for the year 2017, 2015, 2014 and 2013.
- ❖ **Member**, Organizing Committee of CONCETTO 2016 and 2013.
- ❖ **Tabulator** for the academic session 2012-13 and 2016-17



- ❖ **Observer**, Hyderabad Centre in 2016 and for Kolkata Centre in 2014 for conducting IIT(ISM) M.Sc./M.Sc.Tech./ M.Tech./ JRF Entrance Exam.

#### Departmental Level

- ❖ Faculty-in-Charge, Control System Laboratory (since 04.05.2011 to 2023)
- ❖ Faculty-in-Charge, Simulation Laboratory (since 04.05.2011 to till date)
- ❖ Faculty-in-Charge, Departmental Library (since 2012 to till date)
- ❖ Faculty Coordinator, NBA of Electrical Engineering Department (from 2020 to till date)
- ❖ Member, Departmental Post Graduate Committee (DPGC) (27.12.2018 to till date)
- ❖ Member, Departmental Faculty Screening Committee (DFSC) (12.07.2018 to 31.11.2020 & 01.12.2021 to till date)
- ❖ Faculty Coordinator of Visit of Final Year Students to SIEMEN's lab at BIT Sindri, April 2019.
- ❖ Faculty Advisor for the 1st Year Electrical Student in the Year 2013-14
- ❖ Faculty Instructor, 1st year B. E. (common), Afghanistan for winter and summer semesters, 2014-2015 from Electrical Engineering Department.
- ❖ Faculty Instructor, 1st year B. E. (Petroleum Engineering), Sudan Students for winter semester, 2017-2018 from Electrical Engineering Department.

#### Details of extra-curricular activities

- ❖ Cultural Secretary, Scolomin Club (2015-2024)
- ❖ Participated in Inter IIT sports meet held at IIT Madras in 2017
- ❖ Guided an undergraduate student (B.Tech. (Electrical Engineering)) from Kalinga Institute of Technology, Odisha, for one month under summer internship in 2017.
- ❖ Guided an undergraduate student (B.Tech. (Electrical Engineering)) from Manipal Institute of Technology, Manipal Karnataka, for one month under summer internship in 2015.

#### Personal Information

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|------------------|----------------------------------|
| ❖ Fathers's Name | : Late Dwarika Prasad            |
| ❖ Mother's Name  | : Smti. Anuradha Devi            |
| ❖ Date of Birth  | : 15 <sup>th</sup> January, 1983 |
| ❖ Gender         | : Male                           |
| ❖ Place of Birth | : Patna, Bihar                   |
| ❖ Marital Status | : Married                        |
| ❖ Nationality    | : Indian                         |

**(Dr. Gauri Shankar)**