DR. ASHISH KUMAR SINHA

ASSOCIATE PROFESSOR, DEPT. OF ELECTRICAL ENGINEERING

ashishkumarsinha1990@gmail.com

ORCID: https://orcid.org/0000-0002-6716-7361 | **PUBLONS: AHC-6952-2022**

LINKEDIN: https://www.linkedin.com/in/dr-ashish-kumar-sinha-514ba453/

Department of Electrical Engineering, Bengal College of Engineering & Technology,

SSB Sarani, Durgapur, West Bengal, India. Pin-713212

PROFILE SUMMARY

- **Area of Specialization:** Electrical Machines & Drives
- **Research Area:** Condition Monitoring of Electrical Machines & Drives, Artificial Intelligence, Machine Learning, Applied Statistics
- **Current Research Interest:** Condition Monitoring of Electrical Machines & Drives, Artificial Intelligence, Machine Learning, Electric & Hybrid vehicles and Magnetic Levitation

WORK EXPERIENCE

Associate Professor (Electrical Engineering)
BCET, Durgapur
January 2019 – Present (3 Years & 6 Months)

- Joined in the rank of Assistant Professor and subsequently promoted to Associate Professor in August 2019.
- Subjects taught at undergraduate level: Electrical Machines, Electrical and Electronic Measurements, Power Systems, Circuit Theory, Electric Drives, Sensors and Transducers

Vocational Trainee
Damodar Valley Corporation, India.
December 2010 – January 2011 (2 Months)

- Public Relations, Transmission, Hydel power generation and Consumer Load Dispatch at Damodar Valley Corporation, Maithan, a statutory body under Ministry of Power, Government of India

EDUCATION

Doctorate: Ph.D. (Engineering) in Electrical Engineering
Indian Institute of Technology (Indian School of Mines) Dhanbad.
Specialization: Electrical Machines and Drives.
Dissertation Topic: Wavelet Transform and ANN Based Fault Diagnosis Scheme for Simultaneous Detection of Broken Rotor Bars and Bearing Damages in Squirrel Cage Induction Motor.
July 2013 – December 2018

Graduation: B.Tech in Electrical Engineering (CGPA: 8.35)
Birbhum Institute of Engineering and Technology, Suri, West Bengal
University: MAKAUT (erstwhile WBUT)
August 2008 – June 2012

Higher Secondary: Science (80.4%)
Vikas Vidyaniketan, Visakhapatnam
Board/Council: Central Board of Secondary Education
June 2006 – July 2008

Secondary: Science (85%)
St. Patrick's Higher Secondary School, Asansol
Board/Council: Council for Indian School Certificate Examination
June 2006

ACADEMIC & ADMINISTRATIVE RESPONSIBILITIES

- President, Industry Innovation Council (IIC) BCET, an initiative of AICTE and MHRD
- Student Mentor (EE Batch of 2019-2023)
- Laboratory In-Charge:
  - Electrical Machines Laboratory
  - Electric Drives Laboratory
- Prepared University question papers for Undergraduate Courses:
  - Electrical Machines I
  - Electrical Machines II
  - Electric Drives
  - Sensors & Transducers papers
- Member of the departmental team for extension of Departmental accreditation by the National Board of Accreditation (NBA), An Initiative of MHRD, Government of India

SPONSORED AND R&D PROJECTS

TITLE: Up gradation of power electronics laboratory
DURATION: 2 Years
SCHEME: Modernization and Removal of Obsolescence (MODROB)
SANCTIONING AUTHORITY: All India Council for Technical Education (AICTE)
ROLE: Coordinator / Principal Investigator (P.I.)
STATUS: On-going
AMOUNT: 265490/-

LIST OF PUBLICATIONS

JOURNALS

- **A. K. Sinha**, A. S. Hati, M. Benbouzid, P. Chakrabarti, "ANN-Based Pattern Recognition for Induction Motor Broken Rotor Bar Monitoring under Supply Frequency Regulation." *Machines*, vol. 9, no. 5, pp. 87, **2021**. DOI: https://doi.org/10.3390/machines9050087 (INDEXING: SCI, Impact Factor: 2.428, Q2)

- **A. K. Sinha**, S. Das, and T. K. Chatterjee, "Empirical relation for broken bar determination in SCIM," *COMPEL - The International Journal of Computation and Mathematics In Electrical And Electronic Engineering*, vol. 37, no. 1, pp. 242-265, **2018**. DOI: https://doi.org/10.1108/COMPEL-11-2016-515 (INDEXING: SCIE, Impact Factor: 0.755, Q4)

- **A. K. Sinha**, S. Das, and T. K. Chatterjee, "Wavelet transform based ball bearing fault detection scheme for heavy duty mining electrical motors under supply frequency regulation using MCSA," *International Journal of Technology*, vol. 9, no. 1, pp. 170-180, **2018**. DOI: https://doi.org/10.14716/ijtech.v9i1.1507 (INDEXING: ESCI, Impact Factor: 1.375, Q4)

- I. Pandit, **A. K. Sinha**, P. Kumar, A. S. Hati, "Partial discharge in solid insulating materials, causes, effects and factors of dependence –a comparative investigation," *International Journal of Engineering Research in Electrical and Electronic Engineering (IJEREEE)*, vol. 4, no. 3, pp. 190-196, **2018**. DOI: 01.1617/vol5/iss3/pid79301 (INDEXING: SCOPUS)

- **A. K. Sinha**, S. Das, and T. K. Chatterjee, "A case study of bearing fault monitoring techniques for induction motors," *Journal of Mines, Metals And Fuels*, vol. 64, no. 5 & 6, pp. 249-255, **2016**. (INDEXING: SCOPUS, Impact Factor: 0.123, Q4)

- P. Kumar, **A. K. Sinha** and T. K. Chatterjee, "An assessment of vibration monitoring as an effective tool for induction motor condition monitoring and fault diagnosis: a brief review," *International Journal of Control Theory and Applications*, vol. 9, no. 41, pp. 407-416, **2016**. (INDEXING: SCOPUS, Impact Factor: 0.156)

CONFERENCES

- **A. K. Sinha**, Prince, P. Kumar and A. S. Hati, "ANN Based Fault Detection Scheme for Bearing Condition Monitoring in SRIMs using FFT, DWT and Bandpass Filters," *In 2020 International Conference on Power, Instrumentation, Control and Computing (PICC)*, Thrissur, India, **2020**, pp. 1-6, DOI: 10.1109/PICC51425.2020.9362486

- M. Kumar, S. Das, and **A. K. Sinha**, 2018, March. "Sensorless speed control of brushless doubly-fed reluctance machine for pump storage and wind power application," *In IEEE IEEMA Engineer Infinite Conference (eTechNxT)*, New Delhi, India, **2018**, pp. 1-6. DOI: 10.1109/ETECHNXT.2018.8385316

- **A. K. Sinha**, S. Das, and T. K. Chatterjee, "A case study of bearing fault monitoring techniques for induction motors," *in Proceedings of 2nd National Conference on Mining Equipment: New Technologies, Challenges & Applications (MENTCA)*, Dhanbad, India, **2015**, pp. 371-377.

PROFESSIONAL WORKSHOPS, SEMINARS AND CONFERENCES ATTENDED

- One day workshop on Internet of Things (IoT) Technology organized by Ardent Computech Pvt. Ltd. (An ISO 9001:2015 Company) in **February 2021**.
- 6th Biennial International Conference on Emerging Trends in Engineering, Science and Technology (ICETEST), Organized by Government Engineering College, Thrissur, Kerala in **December 2020**.
- Attended the launch of IIC 2.0 and MIC Annual Innovation Festival at AICTE Headquarters, New Delhi, as President of Institute Innovation Council, BCET Durgapur in **September 2019**.
- Recent Trends and Applications of Artificial Intelligence in Engineering, One day Seminar organized by the Department of EE/EEE, BCET Durgapur in **April 2019**.
- International Conference on Advances And Practices In Electrical Engineering (ICAPE), Organized by KDK College of Engineering, Nagpur in Association with The Institute of Engineers (I), Nagpur Local Centre, Nagpur in **March 2018**.
- Explosion protection for electrical equipment in mines and other hazardous areas, Organized by Department of Mining Machinery Engineering, IIT (ISM) Dhanbad in **January 2018**.
- Introductory Training on EDEM, Organized by Department of Civil Engineering, IIT (ISM) Dhanbad in **October 2017**.

- International Conference on Intelligent Circuits and Systems (ICICS), Organized by School of Electronics and Electrical Engineering, Lovely Professional University, Punjab in **November 2016**.
- 2nd National Conference on Mining Equipment: New Technologies, Challenges and Applications (MENTCA), Organized by Department of Mining Machinery Engineering, IIT (ISM) Dhanbad in **October 2015**.
- Professional Skills Development Programme on Measurement, Control and Simulation through LabVIEW Software, Organized by Department of Mining Machinery Engineering, IIT (ISM) Dhanbad in **June 2015**.
- Professional Skills Development Programme on Matlab and Simulink for Engineering Applications, Organized by Department of Electrical Engineering, IIT (ISM) Dhanbad in **August 2013**.

MEMBERSHIP OF PREFESSIONAL BODIES

Member IEEE (2022-2023)
Membership No. 94252745

SOFTWARE PROFICIENCY

- MATLAB
- LabVIEW
- PSpice
- C Programming
- MS Office
- PLC Programming
- 8051 µ-Controller Programming
- AutoCAD

ACHIEVEMENTS & AWARDS

- Nominated for **INDIVIDUAL ACHIEVEMENT AND NATIONAL DEVELOPMENT** in the category for educational excellence by **GLOBAL HEALTH AND EDUCATION FOUNDATION** in the year **2019**.
- Recognized for the **Best Project Award** for the B.Tech final year project entitled *"Production of Electric Voltage from Mechanical Displacement for Automatic Speed Control of Motor Using Magnetic Amplifier & L.V.D.T."* in the year **2012**.
- Secured an All-India Rank of 893 in All India Level English Proficiency and General Knowledge Test organized by Central Institute for Proficiency in English Language (CIPEL) in the year 2000.
- Senior Research Fellowship (July 2015 – July 2018)
  Indian Institute of Technology (Indian School of Mines) Dhanbad
- Junior Research Fellowship (July 2013- June 2015)
  Indian Institute of Technology (Indian School of Mines) Dhanbad.
- Graduate Aptitude Test in Engineering (GATE),
  Qualified (2013)
  All India Rank: 12499

PERSONAL DETAILS

DATE OF BIRTH: 16th August 1990
LINGUISTIC ABILITIES: English, Hindi, Bengali
HOBBIES: Travelling, Sports, Cooking, Music