

Name: Dr. BIJOY LAXMI KOLEY

Department: Electrical Engineering

Contact Nos.: 8637390158, 9434959946

Qualifications: PhD

Designation: Assistant Professor

VIDWAN ID: 185467

Experience (Teaching / Research / Industry, in years): 19 years

Date of Joining at the Present Institution: 9.01.2009

Qualifications Summary (Reverse chronological order):

Degree	Institute	From - To	Subjects
PhD	Jadavpur University	2012-2015	Biomedical Instrumentation
M.Tech	DAV, Indore	2000-2002	Instrumentation
B.E.	NIT Rourkela	1996-2000	AEIE
H.S.	W.B.C.H.S.E	1996	Science
10 th	W.B.S.E	1994	General subject

Experience Summary (In chronological order):

Assistant Professor (III)	B.C.R.E .C.	01.01.2020 to till date
Assistant Professor (II)	B.C.R.E.C	9.01.2009 to 30.12.2019
Lecturer	UIT, Burdwan	29.08.2008 to 8.01.2009
Senior Lecturer	HIT, Haldia	3.12.2006 to 19.08.2008
Lecturer	HIT, Haldia	3.12.2001 to 2.12.2006

Specialization/Research Interest: Biomedical signal processing, measurement, Instrumentation, pattern recognition

Courses taught:

B.Tech: Sensors and Transducers, Electrical Measurement & Instrumentation, Microprocessor & Microcontroller, Biomedical Instrumentation, Remote control & Telemetry, Industrial Instrumentation, Electronic Measurement & Instrumentation, Analog Electronics, Analytical Instrumentation, Nonconventional Energy sources, Non-destructive testing.



Lab: Sensors & Transducers, Electrical Measurement & Instrumentation Lab, Electronic Measurement & Instrumentation Lab, Microprocessor & Microcontroller , Remote Control & Telemetry, Basic Electronics, Analog Electronics.

Online Mode of Teaching:
PPT, Google form, Word document

Publications:

Journal:

- [1] **B. Koley** and D. Dey; “An ensemble system for automatic sleep stage classification using single channel EEG” *Computers in Biology and Medicine*, Elsevier, Volume 42, Issue 12, December 2012, pp. 1186 – 1195.
- [2] **B. Koley** and D. Dey; “Automatic detection of sleep apnea and hypopnea events from single channel measurement of respiration signal employing ensemble binary SVM classifiers” *Measurement*, Elsevier, Volume 46, Issue 7, August 2013, pp. 2082 – 2092.
- [3] **B. Koley** and D. Dey; “Real-Time Adaptive Apnea and Hypopnea Event Detection Methodology for Portable Sleep Apnea Monitoring Devices” *IEEE Transaction on Biomedical Engineering*, Volume 60, Issue, 12, December 2013, pp. 3354-3363.
- [4] **B. Koley** and D. Dey; “On-Line Detection of Apnea/Hypopnea Events Using SpO₂ Signal: A Rule-Based Approach Employing Binary Classifier Models” *IEEE Journal of Biomedical and Health Informatics*, Volume, 18, Issue, 1, January 2014.
- [5] **B.koley**, “Apnea-Hypopnea Event Detection using Wireless Sensor and Smartphone”, *BCREC Engineering Science & Transaction*, vol.2, issue 1, 2021.
- [6] **B.Koley**, “Real-Time Fuzzy System For Apnea Hypopnea Events Detection” *International Journal Of Creative Research Thoughts (IJCRT)*, Volume 9, Issue 10, pp.b761-b769, October 2021. **ISSN:2320-2882**

Conference:

- [1] **B. Koley** and D. Dey, “Detection of Characteristic waves of sleep EEG by continuous wavelet transform,” *National conference on Computing and Communication Systems (NCCCS)*, Durgapur, 21-22 November 2012, pp. 1-5.
- [2] **B. Koley** and D. Dey; “Automated detection of apnea and hypopnea events”, *Proc. Third International Conference on Emerging Applications of Information Technology (EAIT)*, Kolkata, India, Nov 30-Dec 1 2012, pp. 85-88.
- [3] **B. Koley** and D. Dey; “Selection of features for detection of Obstructive sleep apnea events”, *IEEE India Conference INDICON*, Kochi, 7-9 December, 2012, pp. 991-996.
- [4] **B. Koley** and D. Dey, “Adaptive classification system for real-time detection of apnea and hypopnea events,” in *IEEE, EMBS Conference, Point-of-care Healthcare Technologies (POCHT)*, January 2013, pp. 42-45.

- [5] **B. Koley** and D. Dey, "Classification of sleep apnea using cross wavelet transform," Proc. IEEE 1st International conference on Condition Assessment Techniques in Electrical System (CATCON), Kolkata, 6-8 December 2013, pp. 275-280.
- [6] **B.Koley**, "An Electrical Equivalent Model of the Pulmonary Ventilatory System", 2nd International Conference on Smart Electronics and Communication ICOSEC 2021, 7-9, October 2021.

Supervision of B.Tech Projects:

1. Sneha Chatterjee (12005517002), "Arduino Base Heart Rate Monitoring With The Help Of Pulse Sensor", 2021
2. Dipika Choudhury(12005516025), Ayesha Sultana (12005516028), Kamudi Bakshi(12005516022), Kumar Prashant (12005516021), "Wearable bands to Detect Object for Blinds", 2020.
3. Karan Gupta (12005514007), Vishal Burnwal (12005514018), B.Koley, "Foot Gait Analysis", 2018
4. Parikshit Suman (12000512032), Anshuman Kumar (12000512005), Saddam Husain(12000512024), B.Koley, "Temperature and pressure monitoring system using Mirocontroller", 2016
5. Abhilasha Kumari (12000511003), Afrin Saba (12000511005), Arti Kumari (12000511010), B.Koley, "Sleep Apnea monitoring system weith time and frequency domain signal processing", 2015
6. Abhinoba Mukherjee (12000510001), Nipa Dhara (12000511068), Farhan Alam (12000510010), B. Koley, "Signal Conditioning of Respiratory Signal", 2014.

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

Participation in faculty development programmes

1. Two-week ISTE Workshop on Signals & Systems , Face-to-face, 2nd to 12th January, 2014, IIT KGP.
2. Technical Workshop On Recent Trends In Machine Intelligence, Data Mining and Soft Computing Techniques And Its Impact On Research And Development, 23rd and 24th Nov. 2013
3. One day webinar on "R & D opportunities in the country-A case study on Microwave tubes , organized by R& D cell, DR. B.C. Roy Engineering College, 31 January, 2021.
4. One day webinar on "How to write effective research paper" organized by R&D cell and Dr. B. C. Roy Engineering College, April 16, 2021.

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

1. Organ donation camp

Participation in administrative committees (selected)

NSS officer 2019 to 2020

Departmental Examcell co-ordinator 2019 to till date

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