

# **Dr. Jayendra Kumar**

## **EDUCATION**

Indian institute of technology Roorkee, Roorkee, India, 2019

Doctor of Philosophy (Education – Image processing)

Dissertation Title: " **feature extraction and classification of radio-graphic weld images** "

Dissertation Chair: Dr. R S Anand, Ph.D., Dr S P Srivastav electrical engineering department IIT Roorkee

National institute of technology Jamshedpur, Jamshedpur, India 2009

Master of Technology (Education – Power electronics)

Thesis Advisor: Prof. A. Choubey, Dr. S.S. Prasad

Nagpur University, Nagpur, Maharashtra, India 1995

Bachelor of Technology (Electronics Engineering)

## **TEACHING EXPERIENCE**

### **National institute of technology Jamshedpur, Jamshedpur, India**

Assistant Professor of Education (1999 to Present)

Teaching Activity: VLSI, Basic Electronics, Digital Electronics, Embedded systems, Microprocessor and Microcontroller, Machine learning .

Research Activity: Authored three chapters, presented Several Journal and conference papers, and served as Principal Researcher on ten research projects and as Advising Specialist on two other projects.

Departmental Service: Advised students, recruited prospective students, chaired Curriculum Committee, served on two other committees, and mentored private colleagues.

University Service: Served as Asst. Warden for 6 years, NIT Jamshedpur, served on Corporate Education Committee, and spearheaded alumni awareness campaign.

## **HIGHLIGHTS OF WORK EXPERIENCE**

### **National institute of technology Jamshedpur, Jamshedpur, India**

- Asst. Warden from 06 Jan 2005 to 23 Jul 2009, NIT Jamshedpur
- Warden from 23 Jul 2009 to 03 Aug 2010, NIT Jamshedpur
- Faculty In-Charge Student activities from 01 Jul 2006 to 30 Jun 2011, NIT Jamshedpur
- Warden from 24 Aug 2017 to 06 Jul 2018, NIT Jamshedpur.

## **SERVICE**

### **Service to the University**

- Accreditation Task Force Member

- Warden and assistant warden member
- Sports and authority member
- Institute faculty recruitment member
- FIC telephone member

### Service to the Department

- Academic coordinator
- Faculty advisor for PG and Ph.D. students
- Mentoring Program, Developer and Manager
- Student Advising - Undeclared Majors

### Service to the Community

- Consulted on installation and operation of numerous computer training centers in public and private schools, community centers, and corporate training sites.
- Delivered lectures on self-help techniques for corporate job seekers.
- Co-ordinator for NSF
- Supervised community-based programs for employment development, focusing on job skills and training.

## PUBLICATIONS

### *Book Chapters*

- Wireless Protocol Wi-Fi Son, Bluetooth, Jiggby, Z-Wave, Wi-Fi. (Publisher: Springer, ISBN No. 2367-3370, year -2018)
- Microcontroller Based Safety and Surveillance System. (Publisher: Springer, ISBN No. 1876-1100, year -2019)
- Encryption and Authentication of Data using the IPSEC Protocol. (Publisher: Springer, ISBN No. 1876-1100, year -2019)

### *Research publications: journals*

	Name of Author(s)	Title of Chapter & Book	Name of Publisher	Year of Publication
1.	J. Kumar, Gollu A. Naid	Wireless Protocol Wi-Fi Son, Bluetooth, Jiggby, Z-Wave, Wi-Fi	Lecture notes in network and systems, Springer	2018
2.	Jayendra Kumar, P. Arvind, Gollu A. Naidu, Anumeha	IoT Protocols Applications And Importance in Intelligent HOME and Data Computing	Multimedia Big Data Computing for IoT Application: Concept Paradigm, Springer	Under processed
3.	Arvind R. Yadav, R.S.Anand, M.L.Dewal, Sangeeta Gupta, Jayendra	Comparision of feature extraction techniquesfor classificationof hardwood species	International journal of computational system engineering, Inderscience	2018

	Kumar			
4.	Anumeha, K.B.Yadav,S. Agarwal, Jayendra kumar	Economic operation of power wheeling under derugalated enviroment using soft computing	journal of engineering and applied science, Medwell	2018

### *Conference Papers*

S.No.	Authors	Title of Paper	Name of confrence	publisher
1.	Jayendra Kumar, Srinath Mishra, A. Hansda, R. Kumar	Modified Sliding Window Algorithm For Weather Forecasting	TIAR 2016, Chennai, 15- 16 July 2016	IEEE
2.	J. Kumar, S. Mishra, A. Hansda, R. Mahto	Design of Automated Irrigation System Based on Field Sensing and Forecasting	International Journal of Computer Application, July 2016	IJCA
3.	K. Pegraj, J. Kumar	Design and Implementation of Low Power Inexact Floating Point Adder	International Journal of Computer Application, June 2017	IJCA
4.	G. A. Naidu, Jayendra Kumar, G. Vishnu, P. Raja Ramesh	6 LowPAN Border Router Implementation for IoT Device Using Rasberry Pi	ICIoTCT-2018, MNIT Jaipur March 26-27 2018,.	Elsevier
5.	Jayendra Kumar, Paidi Raja Ramesh	Low Cost Energy Efficient Smart Security System with Information Stamping for IOT Networks	IOT-SIU 2018,BIAS, Bhimtal UK 23-24 Feb 2018.	IEEE
6.	J. Kumar, A.R. Yadav, R.S. Anand, M.L. Dewal, S. Gupta	Binary Gabor Pattern Feature Extraction Techniques for Hard Wood Species Classification	RAIT 2018, IIT Dhanbad, 15-17 March 2018.	IEEE
7.	J. Kumar, Anumeha, P.R. Ramesh, G.A. Naidu	Design and Analysis of Priority Encoder Using Reversable Logic	PICET 2018, Vadodara, 16-17 Feb 2018.	Migrahill
8.	J. Kumar, S.P. Srivastava, R.S. Anand, P. Arvind, S. Bhardwaj, A. Thakur	GLCM and ANN Based Approach for Classification of Radiographic Weld Images	13th ICIIIS-2018, IIT Roper, 1-2 Dec 2018.	IEEE
9.	S.R. Krishna, S. Kumar, J. Kumar	Portable Text to Speech Device for Visual Impaired Using Rasberri Pi	IETET 2019, ADGIT New Delhi, 18-19 April	JETIR

		and Webcam	2019.	
10.	S. Kumar, A. Kumar, J. Kumar	Real Time Monitoring Security System Integrated With Rasberri Pi and E-mail Communication Link	CONFLUENCE 2019, Amity University, Noida, 10-11 Jan 2019. .(Accepted and Presented)	IEEE
11.	J. Kumar, N. Gupta, A. Kumari,, S. Kumari	Automatic Plant Watering and Monitoring System using Node MCU	CONFLUENCE 2019, Amity University, Noida, 10-11 Jan 2019. .(Accepted and Presented)	IEEE
12.	J. Kumar, D.K. Pandey, R. Raj, M. Kumar	Encryption and Authentication of Data using the IPSEC Protocol	MCCS 2019, BSNL, Ranchi, 11-12 May 2019. . (Accepted and Presented)	IETE
13.	J. Kumar, S.V.S. Gautam Reddy, P.N.V. Krishna, G. Anjan Kumar	Microcontroller Based Safety and Surveillance System	MCCS 2019, BSNL, Ranchi, 11-12 May 2019. .(Accepted and Presented)	IETE

## HONORS AND AWARDS

### School Awards

- MHRD Scholarship
- PI Team Innoreva
- QIP Program award

### Professional Awards

- PI Society of electronics and communication engineering

## RESEARCH ACTIVITY

### Research Topics

- Digital image processing,
- pattern recognition,
- embedded systems and Machine learning
- Sensor-Based Training
- Scenario-Based Training
- Technology in Education
- Not-distractive testing

### Guidance of Ph.D. and M.Tech.

- Ph.D. : Supervising 4
- M.Tech. :15

## TEACHING ACTIVITY

### Courses Taught

- VLSI Technologies ,Image processing
- Image processing
- Digital Electronics
- Basic Electronics
- Embedded Systems and networking
- Microprocessor and microcontroller
- Research Methods
- Technology in Education
- Educational Statistics

### Courses Developed

- Current issues in sensor technologies
- Machine learning
- Technology in Education
- Corporate Training Philosophy

### Evaluation Results

- Consistently received student evaluation in top ratings.
- Chosen as an instructional model for implementing new techniques and strategies.
- Designated as Master Teacher.

### SHORT-TERM COURSES/WORKS SHOPS/FDP ORGANIZED

- Work shop on **Wearable devices ( WWD-2020), December 14-18, 2020**, Department of Electronics and Communication Engineering National Institute of Technology, Jamshedpur in collaboration with AICTE Training And Learning (ATAL) Academy, Kolkata.

- FDP on **Sensor Technology 1<sup>st</sup> October to 5<sup>th</sup> October 2020 (co-ordinator)**, Organized by: Department of Electronics and Communication Engineering National Institute of Technology Jamshedpur in collaboration with AICTE Training and Learning (ATAL) Academy, Guwahati.

#### **NATIONAL/INTERNATIONAL CONFERENCES COUNDECTED**

- National Conference on Electronics, Communication and Computation-2020, 5-6 September, 2020 NIT Jamshedpur, Jharkhand, India

#### **NATIONAL/INTERNATIONAL CONFERENCES ATTENDED**

#### **MEMBERSHIPS**

##### **Professional Affiliations**

- Member of IEEE with annual subscription