

# Dr. R J Kavitha

Assistant Professor

Department of Electronics & Communication Engineering

University College of Engineering Panruti



Panruti - 607 106



+91-9791773395



rjkeceautpc@gmail.com

## PROFILE

More than 20 years experienced and committed Engineering Professor with a solid record in both teaching and administration. Commitment to research and demonstrated over a lengthy tenure in academic roles. Influences strong communication skills to nurture meaningful and trusting associations with students, colleagues, and administrators. Student-centric instructor and good academic facilitator.

## PUBLICATIONS

INTERNATIONAL JOURNALS	:20
NATIONAL JOURNALS	:5
INTERNATIONAL CONFERENCE	:5
NATIONAL CONFERENCE	:4
BOOKS	:2
PATENTS	:1
COUNTRIES VISITED	:4

## GUIDANCE

PH.D.	:5 (ONGOING)
M.E.	:2
B.E.	:50

## EXPERIENCE

- **ASSISTANT PROFESSOR OF ECE**—24-08-2009 - PRESENT  
UNIVERSITY COLLEGE OF ENGINEERING PANRUTI  
Teaching at Under Graduation Level with additional and administrative responsibilities  
**Additional Responsibility:**
  - Head of the Department from Aug 2009 to Oct 2015
  - Edu Sat Coordinator from Sep 2012 to June 2014
  - Placement Officer from Sep 2012 to June 2014
  - Women Empowerment Cell Coordinator from Apr 2016 to till date
- **ASSISTANT PROFESSOR & HOD**— 08-06-2009—22-08-2009  
SURYA COLLEGE OF ENGINEERING & TECHNOLOGY, VIKIRAVANDI  
Teaching at Under Graduation & Post Graduation Level with additional and administrative responsibilities
- **ASSISTANT PROFESSOR & HOD** – 02-05-2008 – 05-06-2009  
KRISHNASAMY COLLEGE OF ENGINEERING & TECHNOLOGY, CUDDALORE  
Teaching at Under Graduation & Post Graduation Level with additional and administrative responsibilities
- **LECTURER & HOD** – 28-06-2007 – 01-05-2008 & 05-06-2001 – 01-08-2005  
KRISHNASAMY COLLEGE OF ENGINEERING & TECHNOLOGY, CUDDALORE  
Teaching at Under Graduation and administrative responsibilities

## EDUCATION

- **PH.D.**—2011- 2017 INFORMATION AND COMMUNICATION ENGINEERING  
ANNA UNIVERSITY CHENNAI
- **M.E.** – 2005 – 2007 OPTICAL COMMUNICATION  
ANNA UNIVERSITY – AC COLLEGE OF ENGG & TECH, KARAIKUDI
- **B.E.** – 1994 - 1998 ELECTRONICS & COMMUNICATION ENGINEERING  
ANNA UNIVERSITY – AC COLLEGE OF ENGG & TECH, KARAIKUDI

### **Membership of Scientific and Professional Societies:**

Associate Member (UACEE) in the Institute of Research Engineers and Doctors

### **BOOK:**

Analysis of Inverter Topologies, LAP Lambert Academic publications,  
ISBN: 978-3-659-69568-1

### **Book Chapters:**

- **Kavitha, RJ et al.,** " Industrial Internet of Things (IoT) With Cloud TeleophthalmologyBased Age –Related Macular Degeneration (AMD) Disease Predication Model" in the Title "Smart Sensors for IndustrialIoT Challenges, Solutions and Applications", Springer, ISBN: 978-3-030-52623-8, pp. 161-172, 2021
- **Kavitha, RJ & Saravanan K K** "Doctors assistive system using augmented reality for critical analysis, in the Title "Recent Challenges in Science, Engineering and Technology, Krishna Publication, ISBN: 978-81-947388-5-5, pp.41-48, 2021,

### **LIST OF PUBLICATIONS**

#### **Journals**

- **Kavitha, RJ & Elizabeth Caroline, B** 2015, 'PROXUM: An Energy and privacy aware data aggregation in HWSN', International Journal of Advances in Natural and Applied Sciences, vol .9, no.6, pp. 316-322.
- **Kavitha, RJ &Elizabeth Caroline, B** 2016, 'Hybrid Energy-Efficient Transmission Protocol for HWSN', Journal of Circuits and Systems, vol. 7, no. 6, p. 897.
- **Kavitha, RJ & Elizabeth Caroline, B** 2016, 'Hybrid Transmission Technique with Security in HWSN', Asian Journal of Information Technology, vol. 15, no. 4, pp. 651-660.
- **Kavitha,RJ &Elizabeth Caroline, B** 2016, 'Hybrid Firefly and Identity-Based Ring Signcryption Scheme Based Secure Data Aggregation for Clustered Heterogeneous Wireless Sensor Network', Transylvanian Review, vol. 24, no. 7, pp. 841-851.
- **Kavitha, RJ &Elizabeth Caroline, B** 2017, 'Secured Reliable Data Transmission on Multi Hop Wireless Sensor Networks', Journal of Cluster Computing,
- **Kavitha, RJ &Elizabeth Caroline, B** 2017, 'UCCS-WBSN: ultrasonic carrier communication with security in wireless body sensor networks' Perspectives emCiencia da Informacao, v.22, spl.2, p.13-23.
- **Kavitha, RJ &Salem Jeyaseelan WR**, 2018 'Dynamic Data Delivery and Terrific Transfer in Wireless Sensor Networks', International Journal of Applied Mathematics & Information Sciences, Vol. 12, No.1, (1-7).

- **Kavitha, RJ & N. Satheesh WR, 2018** ‘Secured Wireless Sensor Network Framework to Support Guaranteed Successful Data Transmission’, International Journal of Applied Mathematics & Information Sciences, Vol. 12, No.1, (1-7).
- **Kavitha, RJ & N.Thamaraikannan,R.Arunprakashkamalraj Subramanian WR, 2019** ‘Energy Efficient Hybrid Optimization based K-means Clustering and Load balancing using Optimized Ad-hoc on-demand Distance vector Routing for WSN’, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN:2278-3075,Volume 8,
- **Kavitha, RJ &K.K Saravanan** Digital brain:Model-based framework for dependable electroencephalogram sensing and actuation in internet of things system International Journal of Reconfigurable and Embedded Systems(IJRES) ISSN:2089-4864,Volume 10,No. 3,November 2021.
- **Kavitha, RJ &R.P Narmadha, N. Sengottaiyan** “Deep Transfer Learning Based Rice Plant Disease Detection” Intelligent Automation & Soft Computing , Volume 31, No. 2, PP. 1257-1271, 22 September 2021.
- **Kavitha, RJ et al** “ A Fuzzy content recommendation System using Similarity Analysis , Content Ranking and Clustering” Journal of Intelligent & Fuzzy Systems, Volume 41, No. 6, PP. 6429-6441, 2021.

#### **Patent:**

- A Patent titled “ IOT Based Farming Using Machine Learning “ filed by **Kavitha, RJ et al**

#### **International Conferences:**

- **Kavitha, RJ &Elizabeth Caroline, B** 2015, ‘Subsidiary CH with Cooperative Modulation Diversity Applied to HWSN’, Proceedings of the IEEE International conference on Communications and Signal Processing, pp. 1281-1285.
- **Kavitha, RJ &Elizabeth Caroline, B** 2015, ‘Hybrid Cryptographic Technique for Heterogeneous Wireless Sensor Networks’ Proceedings of the IEEE International conference on Communications and Signal Processing, pp. 1016-1020.
- **Kavitha, RJ**, 2018, ‘EECMS: Energy-Efficient Clustering Mechanism and Security Based Wireless Sensor Networks’ Proceedings of International Conference on Recent Developments in Engineering.
- **Kavitha, RJ**, 2018, ‘Coal Mine Safety Monitoring System Based on Internet of Things’ Proceedings of International Conference and Drastic Innovations in Energy Thrive.
- **Kavitha, RJ**, 2018, ‘BSN-Care: A Secure IOT-Based Modern HealthCare System Using Body Sensor Networks’, Proceedings of International Conference and Drastic Innovations in Energy Thrive.

#### **National Conferences:**

- Attended a National Conference on “Technological Innovations in Electrical Systems” and presented a paper titled “Secure Routing Protocol for Message Authentication in Wireless Sensor Network” organized by Department of Electrical & Electronics Engineering, PET Engineering College, Vallioor on March 21<sup>th</sup> and 22<sup>nd</sup>, 2007.
- Attended a National Conference on “Advanced Communication Techniques” and Presented a Paper Titled “Secure Routing Protocol for Message Authentication in Wireless Sensor Network” organized by Department of Electronics and Communication Engineering, A.C. College of Engineering and Technology, Karaikudi on 29<sup>th</sup> & 30<sup>th</sup> March 2007.
- Presented a technical paper titled “Co-Operative Clustering Protocol to Increase Network Lifetime in Wireless Sensor Network” organized by Department of Information Technology, SNS College Of Technology, Coimbatore in the conference on “Networks, intelligence & Computing Systems” (NCNICS’14) held on 14<sup>th</sup> & 15<sup>th</sup> March 2014.
- Participated in the Conference on “Recent Trends In Information And Communication Engineering” and presented a paper titled “Energy -Aware Sensor Node Based On Received Signal Strength Indication In Wireless Sensor Networks” organized by Department Of Electronics And Communication Engineering, P.T.LeeChengalvaraya Naicker College Of Engineering And Technology held on 21<sup>st</sup> March 2014.
- Attended a National Conference on “Research Trends In Electronics And Communication” (RTEC’14) and presented a paper titled “Energy -Aware Sensor Node Based On Received Signal Strength Indication In Wireless Sensor Networks” organized by Department Of Electronics And Communication Engineering St.Joseph College Of Engineering, Chennai held on 21<sup>st</sup> March 2014.
- Presented a paper titled “Design of Intrusion Detection System in Wireless Sensor Network with Energy Efficiency” in the Conference of “Communication, Signal Processing, And Ic Design (Nccspid’14)” conducted by Department of Electronics and Communication Engineering, Adithya Institute of Technology from 28<sup>th</sup> to 29<sup>th</sup> March 2014.
- Attended a National Conference on “Innovative Research on VLSI Design, Embedded System & Networks” and presented a paper titled “Co-Operative Clustering Protocol to Increase Network Life Time” organized by Department of Electronics and Communication Engineering, Jay Shriram Group of Institutions, Tirupur from 27<sup>th</sup> to 28<sup>th</sup> March 2014.
- Attended a National Conference on “Innovative Research on VLSI Design, Embedded System & Networks” and presented a paper titled “Power Saving in Mobile Tower Using Green Radio Technology” organized by Department of Electronics and Communication Engineering, Jay Shriram Group of Institutions, Tirupur held on 27<sup>th</sup> & 28<sup>th</sup> March 2014.
- Attended a National Conference on “Innovative Research on VLSI Design, Embedded System & Networks” and presented a paper & Won the Best paper award for the title “A Real Time Structure Free Data Aggregation by Dynamic Routing In WSN” organized by Department of Electronics and Communication Engineering, Jay Shriram Group of Institutions, Tirupur held on 27<sup>th</sup> & 28<sup>th</sup> March 2014.
- Participated in the National Conference on “Communication, Signal Processing, and Ic Design” (NCCSPID’14) and presented a paper titled “Design of Intrusion Detection System in Wireless Sensor Network with Energy Efficiency” organized by Department of Electronics and Communication Engineering, Adithya Institute of Technology held on 28<sup>th</sup> & 29<sup>th</sup> March 2014.

- Participated and presented a research paper titled “Uccs-Wbsn:Ultrasonic Carrier Communication With Security In Wireless Body Sensor Networks” in ICMR sponsored National Conference on “ICT Solutions for Challenges and Issues in e-Health”(NCICTEH’17) organized by Department Of Information Technology, Pondicherry Engineering College, Puducherry held on 01<sup>st</sup> Sep 2017.

### Achievements

- “Best Award for Excellence in Research”, Awarded by Sri Karunanandar Charitable Trust, Thiruvannamalai.

### List of Seminar / Short Term Course /FDP/ Workshop attended: (Within India)

### Workshop

- Attended a One Day Workshop on “Advances in DSP & Applications” organized by ISTE Faculty Chapter & Department of Electronics and Communication Engineering, VRSCET, Arasur on 24<sup>th</sup> Feb 2003.
- Participated in one day Workshop on “Total Quality Management” at *Krishnasamy College of Engineering & Technology, Cuddalore* on Dec 18<sup>th</sup> 2004.
- Attended a One-day National Workshop on “Swarm Intelligence: Design of Filters” organized by Department of Electronics and Communication Engineering, *CK College of Engineering and Technology, Cuddalore* on 26<sup>th</sup> Sep 2011.
- Participated in 3 days “TI MSP430 Embedded System Workshop” conducted jointly by *Texas Instruments, Bangalore* and *Steps Knowledge Services Pvt. Ltd., Coimbatore* held during from 08<sup>th</sup> to 10<sup>th</sup> April 2015.
- Attended a 3 Days Workshop on “Research Methodologies” Organized by Computer Centre, *MIT Campus, Anna university, Chennai* held from 4<sup>th</sup> to 6<sup>th</sup>, January 2013.
- Participated a One Day Workshop on “High Frequency Design Using ADS” organized by Department of Electronics Engineering, *M.I.T Campus, Anna University, Chennai* in association with Keysight Technologies On 11<sup>th</sup> August 2017.
- Participated in National Workshop on “Research Issues in Data Mining Applications (Resi -3)” organized by Department of Computer Science and Engineering, Faculty of Engineering and Technology, *Annamalai University, Annamalai nagar* during 19<sup>th</sup> & 20<sup>th</sup> Feb 2018.
- Participated in 2 Weeks Online Workshop on “ Comprehensive e-Learning to e-Learning guide for Administrative Work” sponsored by Ministry of Human Resource Development , Pandit Madan Mohan Malaviya, National Mission on Teachers and Teaching , conducted by Teaching Learning Centre, Ramanujam College, University of Delhi from May 25- June 05, 2020.

## FDP

- Attended CFD, Anna University sponsored 1 week FDP on “Medical Electronics” at KonguEngineering College, Perundurai, Erode in the year 2003 (23<sup>rd</sup> to 27<sup>th</sup> June).
- Attended CFD, Anna University sponsored FDP on “Electronic System Design Lab” at College of Engineering, Guindy, Chennai from 9<sup>th</sup> to 11<sup>th</sup> Jan 2004.
- **Coordinator** for CFD, Anna University Sponsored Faculty Development Training Programme on “Wireless Network” from 12<sup>th</sup> to 18<sup>th</sup> DEC 2012.
- Participated AICTE Sponsored 2 weeks FDP on “Security in Wireless Heterogeneous Network –Issues & Challenges” organized by the Department of Electronics and Communication Engineering, Pondicherry Engineering College, Puducherry from 15<sup>th</sup> to 26<sup>th</sup> April, 2013.
- Attended TEQIP Sponsored one week FDP on “A Compendium in High Speed and Mobile Networks” organized by Dept of ECE, Anna University BIT Campus, Trichy during 5<sup>th</sup> to 11<sup>th</sup> August 2013.
- Attended CFD, Anna University sponsored 1 week FDP on “Data Warehousing and Data Mining” at RMK Engineering college during 11<sup>th</sup> to 17<sup>th</sup> Jun 2014.
- Participated CFD, Anna University sponsored 1 week FDP on “Mathematics –I” at University College of Engineering, Panruti on 24<sup>th</sup> to 30<sup>th</sup> JUNE, 2015.
- Attended CFD, Anna University sponsored 1 week FDP on “Multi-Core Architectures and Programming” at University College of Engineering, Panruti from 23<sup>th</sup> to 29<sup>th</sup> NOV 2016.
- Attended AICTE sponsored 2 weeks FDP on “IoT (Internet of Things) Issues and Challenges” organized by the Department of Computer Science and Engineering at M.A.M College of Engineering, Trichy during 6<sup>th</sup> to 19<sup>th</sup> NOV 2017.
- **Coordinator** for CFD, Anna University Sponsored Faculty Development Training Programme on “Electronic Devices” organized by Anna University, Chennai from 24<sup>th</sup> to 30<sup>th</sup> November 2017.
- Attended 2 weeks FDP on “Applications of MULTISIM & MyRIO” organized by the NITTTR, Chennai 6<sup>th</sup> to 18<sup>th</sup> Aug 2018.
- Attended AICTE sponsored 5 days Faculty Development Programme on “ Including Universal Human Values in Technical Education” at University College of Engineering, Panruti, on 6<sup>th</sup> to 10<sup>th</sup> December 2021.
- Attended 2 Weeks Faculty Development Programme on “ Advanced Concepts for Developing MOOCS”, sponsored by Ministry of Human Resource Development, Pandit Madan Mohan Malaviya, National Mission on Teachers and Teaching, conducted by Teaching Learning Centre, Ramanujam College, University of Delhi from July 02- July 17 2020.
- **Coordinator** for CFD, Anna University Sponsored Faculty Development Traning Programme on “ Wireless Networks” organized by Anna University, Chennai from 20<sup>th</sup> to 25<sup>th</sup> December 2021.

**Course**

- Participated in the short-term course on “Instructional Design and Delivery System” conducted by the National Institute of Technical Teachers Training & Research, Chennai under sponsorship of QIP, MHRD, Government of India, from 29<sup>th</sup> June to 03<sup>rd</sup> July 26 of 2009.
- Attended short term course on “Enabling Technologies to Aid Smart City Framework(Et-Smart City)” organized by Dept of ECE & Dept of CSE, Pondicherry Engineering College, Puducherry during 6<sup>th</sup> to 10<sup>th</sup> FEB 2017 under the sponsorship of QIP, AICTE Government of India.
- Completed an online course on “ET701x: Elements of Learner-Centric MOOCs” Offered by IIT-BOMBAY, an online learning initiative of Indian Institute of Technology, Bombay during 03<sup>rd</sup> to 23<sup>rd</sup> May 2018.
- Completed an online course on “ET702x: Designing Learner-Centric Microfarad by IIT-BOMBAY, an online learning initiative of Indian Institute of Technology, Bombay during 02<sup>nd</sup> Aug 2018 to 6<sup>th</sup> Sep 2018.