

**Name and Designation: Dr Ch. Usha Kumari, Professor**

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#### **Educational Details:**

- Ph.D., Jawaharlal Nehru Technological University, Hyderabad
- M.Tech, Andhra University, Visakhapatnam
- B.Tech, Jawaharlal Nehru Technological University, Hyderabad

#### **Professional Background:**

1. Professor, Gokaraju RangaRaju Institute of Engineering and Technology -2009-Present
2. Assistant Professor, Anil Neerukonda Institute of Engineering and technology, Visakhapatnam, 2006-2009.
3. Assistant Professor, Sri Vishnu Engineering College for Women, Bhimavaram, June 2006-Nov 2006.
4. Assistant Professor, Godavari Institute of Engineering and Technology, Rajahmundry, 2005-2006

#### **Administrative Experience:**

1. Coordinator for conducting Technical Training to Government of Telangana Police Department for Sub-Inspector (Sis) and Police Constables (PCs)- **SCT PCs and Sis (IT&C)**
2. Established “**Community FM Radio 90.4MHz**” named as **PRAGNYA FM** at Gokaraju Ranga Raju Institute of Engineering and Technology in the academic year 2015-2016. Testing of signal coverage was done on 19<sup>th</sup> January and inaugurated officially on 20<sup>th</sup> January 2016.
3. Departmental NBA co-coordinator for M.Tech Embedded Systems program.

#### **PUBLICATIONS:**

1. **Ch. Usha Kumari**, Padmavathi Kora, K. Meenakshi, K. Swaraja, T. Padma, Asisa Kumar Panigrahy, N. Arun Vignesh “Feature Extraction and Detection of Obstructive Sleep Apnea from Raw EEG Signal”, In International Conference on Innovative Computing and Communications 2020 (pp. 425-433). Springer, Singapore,

DOI: [https://doi.org/10.1007/978-981-15-1286-5\\_36](https://doi.org/10.1007/978-981-15-1286-5_36) (Scopus)

2. **Ch. Usha Kumari**, Asisa Kumar Panigrahy, N. Arun Vignesh, “Sleep Bruxism Disorder Detection and Feature Extraction Using Discrete Wavelet Transform”, in Proceedings of ICETIT 2019. Lecture Notes in Electrical Engineering, vol 605. Springer, Cham pp 833-840, Online ISBN978-3-030-30577-2, [https://doi.org/10.1007/978-3-030-30577-2\\_74](https://doi.org/10.1007/978-3-030-30577-2_74). (Scopus)
3. **Ch. Usha Kumari**, G. Mounika, and S. Jeevan Prasad , “Identifying Obstructive, Central and Mixed Apnea Syndrome Using Discrete Wavelet Transform”, Advances in Decision Sciences, Image Processing, Security and Computer Vision. ICETE 2019. Learning and Analytics in Intelligent Systems, vol 3. Springer, Cham, ISBN: 978-3-030-24322-7, pp. 16–22, 2020, DOI: [https://doi.org/10.1007/978-3-030-24322-7\\_3](https://doi.org/10.1007/978-3-030-24322-7_3). (Scopus)
4. **Ch. Usha Kumari**, N. Arun Vignesh, Asisa Kumar Panigrahy, L. Ramya, T.Padma “Fungal Disease in Cotton Leaf Detection and Classification using Neural Networks and Support Vector Machine” in International Journal of Innovative Technology and Exploring Engineering (IJITEE)’, ISSN: 2278–3075 (Online), Volume-8, Issue-10, August 2019, Page No.:3664- 3667. (Scopus)
5. **Ch. Usha Kumari**, N. Madhusudhana Rao, M.N.V.S.S Kumar, Kishore Pinninti, M Pala Prasad Reddy , “Benign and Malignant Tumor Classification using Machine Learning Technique”, in International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Volume-8, Issue-3, September 2019, Page No. 7731-7735. (Scopus)
6. **Ch. Usha Kumari**, T. Pavani, A. Sampath Dakshina Murthy, B. Lakshmi Prasanna, M. Pala Prasad Reddy “Generating Cipher Text using BLOWFISH Algorithm for Secured Data Communications” in International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9 Issue-2, December 2019, Page No. 117- 121. (Scopus)
7. **Ch. Usha Kumari**, Padamvathi Kora, K Meenakshi, Swaraja K, “Short Term and Long Term Path Loss Estimation in Urban, SubUrban and Rural Areas”, Third IEEE International Conference on Computing Methodologies and Communication (ICCMC 2019), 27-29 2019, pp:114-117, ISBN: 978-1-5386-7808-4, DOI: 10.1109/ICCMC.2019.8819842. (Scopus)
8. **Ch. Usha Kumari**, S. Jeevan Prasad, G. Mounika , “Leaf Disease Detection: Feature Extraction with K-means clustering and Classification with ANN”, Third IEEE

International Conference on Computing Methodologies and Communication (ICCMC 2019), 27-29 2019, pp:1095-1098, ISBN: 978-1-5386-7808-4, DOI: 10.1109/ICCMC.2019.8819750. **(Scopus)**

9. Padma Tatiparti, **Ch. Usha kumari**, “Effective Analysis using DWT and RBF for Biomedical Signals Pick-up from Heart through Surface Electrodes” Third IEEE International Conference on Computing Methodologies and Communication (ICCMC 2019), 27-29 2019, pp: 99-103, ISBN: 978-1-5386-7808-4, DOI: 10.1109/ICCMC.2019.8819817. **(Scopus)**
10. R. Ankita, **Ch.Usha Kumari**, Mohd Javeed Mehdi, N. Tejashwini, T. Pavani , “Lung Cancer Image- Feature Extraction and Classification using GLCM and SVM Classifier”, in International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-8, Issue-11, September 2019, Page No. 2211- 2215. **(Scopus)**
11. R. Ankita, **Ch. Usha Kumari**, Swapna Raghunath, Tejashwini Neela, “Lung Cancer Detection from Computed Topography Images using Marker controlled Watershed” in Test Engineering and management, January - February 2020, ISSN: 0193 - 4120(Online), Volume 82, Page No. 2738 – 2743. **(Scopus)**
12. Tejashwini Neela, **Ch. Usha Kumari**, Swapna Raghunath, R.Ankita “Image Encryption and Decryption using Chaotic Bit level Pixel Permutation”, in Test Engineering and management, January - February 2020, ISSN: 0193 - 4120(Online), Volume 82, Page No. 2744 - 2751. **(Scopus)**
13. S Sairam Akhil, N Arun Vignesh, Sudharsan Jayabalan, E Karthikeyan, Ayyem Pillai, **Ch. Usha Kumari**, Asisa Kumar Panigrahy “A Novel Approach for detection of the symptomatic patterns in the acoustic biological signal using Truncation Multiplier” In 2019 2nd International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT) 2019 Jul 5 (Vol. 1, pp. 49-53). IEEE. DOI: 10.1109/ICICICT46008.2019.8993389 **(Scopus)**.
14. S Kanithan, N Arun Vignesh, Asisa Kumar Panigrahy, V Ayyem Pillai, E Karthikeyan, **Ch. Usha Kumari**, Sudharsan Jayabalan, T Santosh Kumar, “A Survey on Energy Efficient Image Transmission in WSN”, In 2019 2nd International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT) 2019 Jul 5 (Vol. 1, pp. 41-44). IEEE. DOI: 10.1109/ICICICT46008.2019.8993149. **(Scopus)**.

15. K Meenakshi, K Swaraja, **Usha Kumari Ch** and Padmavathi kora, “Grading of quality in tomatoes using multi-class SVM”, Third IEEE International Conference on Computing Methodologies and Communication (ICCMC 2019), 27-29 2019, pp: 104-107, ISBN: 978-1-5386-7808-4, 10.1109/ICCMC.2019.8819866. (**Scopus**)
16. Padmavathi Kora, **Ch Usha Kumari**, Swaraja K, K Meenakshi, “Atrial Fibrillation detection using Discrete Wavelet Transform”, in 2019 IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), 17 October 2019, ISBN: 978-1-5386-8158-9, DOI: 10.1109/ICECCT.2019.8869498. (**Scopus**)
17. Padmavathi Kora, K. Swaraja, K. Meenakshi, **Ch. Usha Kumari**, and G. Karuna “Cognitive Recognition of Heart Ailments Using Fuzzy Logic on ECG Samples”, in International Conference on Intelligent Computing and Communication Technologies (ICICCT 2019), pp. 474–479, 2020. DOI: [https://doi.org/10.1007/978-981-13-8461-5\\_53](https://doi.org/10.1007/978-981-13-8461-5_53) (**Scopus**)
18. Dadaipally Pragathi, N Arun Vighnesh, **Ch. Usha Kumari**, Tatiparti Padma and Asisa Kumar Panigrahy, “Noise Performance Improvement In Future IC Integration using Perylene-N As Dielectric Material”, in International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-9 Issue-2, December 2019, Page No: 1056-1059. (**Scopus**)
19. E. Laxmi Lydia, A.Sampath Dakshina Murthy, **Ch.Usha Kumari**, N.Arun Vignesh, T.Padma “Health Care Protection and Empowerment of Internet of Things (IoT) through Big Data”, in Test Engineering and management, January - February 2020, ISSN: 0193 - 4120(Online), Volume 82, Page No. 1187 - 1196. (**Scopus**)
20. Venkateswara Rao Varri, N. Arun Vignesh, Asisa Kumar Panigrahy, **Ch. Usha Kumari** “Implementation of Low density Parity Check system using Probabilistic Gradient Descent Bit Flipping Decoder” in International Journal of Innovative Technology and Exploring Engineering (IJITEE)’, ISSN: 2278–3075 (Online), Volume-8 Issue-10, August 2019, Page No.2005- 2009. (**Scopus**)
21. M. Krishna Monika, N. Arun Vignesh, Asisa Kumar Panigrahy, **Ch. Usha kumari**, “Survey on Localization Techniques in Wireless Sensor Networks”, in in Test Engineering and management, January - February 2020, ISSN: 0193 - 4120(Online), Volume 82, Page No. 2766 – 2772. (**Scopus**)
22. T. Pavani, **Ch. Usha Kumari**, A. Naga Jyothi, Y. Rajasree Rao, Taha Ahmed,” Investigations on metamaterial based log periodic dipole antenna”, ICCCEEEE-2020,

10-11th January, 2020, organized by GPREC, Kurnool, Andhra Pradesh. (Scopus Journal)

23. T. Pavani, **Ch. Usha Kumari**, A. Naga Jyothi, Y. Rajasree Rao, “Design of Split ring resonator for ground penetrating Radar Antenna”, ICRDETMS-2019: 22-December-2019, organized by International association of Research and Developments in Engineering and Technology. (Scopus Journal)
24. T. Pavani, A. Naga Jyothi, A. Usha Sree, Y. Rajasree Rao, **Ch. Usha Kumari**,” Design of Metamaterial loaded dipole antenna for GPR”, 5th International Conference on Micro-electronics Electromagnetics and Telecommunications (ICMEET-2019) December 6th -7th, 2019 organized by Department of Electronics & Communication Engineering Raghu Institute of Technology, Visakhapatnam. (Springer Book Chapter).
25. **Ch. Usha Kumari**, R. Ankita, T.Pavani, N. Arun Vignesh, N. Tarun Varma, Md. Aqeel Manzar, A. Reethika “Heart Rhythm Abnormality Detection and Classification using Machine Learning Technique” in 4<sup>th</sup> IEEE International Conference on Trends in Electronics and Informatics (ICOEI 2020) (**Scopus**)

## **PROFESSIONAL WORK:**

### Workshops Conducted:

1. Organized a workshop for students on “Internet of Things using GISMO board”, April 12-13, 2017 in the Department of Electronics and Communication Engineering at Gokaraju RangaRaju Institute of Engineering and Technology, Hyderabad
2. Organized a faculty development programme on “Internet of Things using GISMO board”, April 7-8, 2017 in the Department of Electronics and Communication Engineering at Gokaraju RangaRaju Institute of Engineering and Technology, Hyderabad
3. Organized a workshop under TEQUIP-II on “Internet of Things (IOT)”, March 24-25, 2017 in Gokaraju RangaRaju Institute of Engineering and Technology, Hyderabad.
4. Organized a workshop on Design of “Booster Packs and Shields”, December 27-28, 2016 in Gokaraju RangaRaju Institute of Engineering and Technology, Hyderabad.
5. Organized a Hands on IOT workshop on “Sensor to Cloud”, October 19-21, 2016 in Gokaraju RangaRaju Institute of Engineering and Technology, Hyderabad

6. Organized Embedded systems workshop using “**Tiva C, Orbit Booster Pack and Energia**” 6<sup>th</sup>-7<sup>th</sup> December 2016 in in Gokaraju RangaRaju Institute of Engineering and Technology, Hyderabad.
7. Organized, conveyed and coordinated a two day Hands on Faculty Development Programme under TEQUIP-II on “**Software Defined Radio**” 16<sup>th</sup> & 17<sup>th</sup> December 2015 in Gokaraju RangaRaju Institute of Engineering and Technology, Hyderabad.

#### **Memberships:**

- IEEE member **No:94109744**
- Life time and Associate Member of “Institution of Electronics and Telecommunication Engineers (IETE)” **Membership No: 198516**
- Life time and Fellow member of “International Society for Research and Development (ISRDR)”--- **Membership ID: F3140900252**
- Life member of “International Association of Engineer (IAENG)”—**Member No:169353**
- Life time member of “The society of Digital Information and Wireless Communications (SDIWC)”-- **Membership ID:13939**