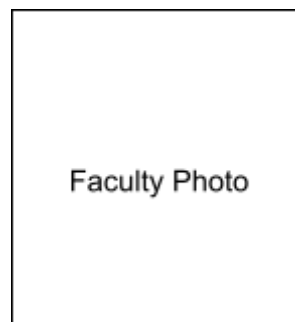


Faculty Profile

Brief Profile (Few Paragraphs)



Personal Information

- **Name:** Dr.CH.Renu Madhavi
- **Designation:** Associate Professor&HoD
- **Department :**Electronics and Instrumentation Engineering]
- **Email:** renumadhavi@rvce.edu.in
- **Phone:** 080-68188164

Google Scholar / ResearchGate / LinkedIn: [Link if applicable]/ ORCID: [Link]

[linkedin.com/in/dr-renu-madhavi-67328028/?originalSubdomain=in](https://www.linkedin.com/in/dr-renu-madhavi-67328028/?originalSubdomain=in)

https://scholar.google.co.in/citations?user=BBzW_bEAAAAJ&hl=en

Domain of Expertise

Research Focus

- **Primary Area:** Biomedical Instrumentation
- **Allied Areas:**
 - Biomedical signal and image Processing ,, IoT for lhealthcare

Academic Qualifications

- **Ph.D.:** Computer Science ,Avinashi Lingam University for Women [2015]
- **M.Tech:** Electronic Instrumentation, Kakatiya, [1993]
- **B.Tech:** Electronics and Instrumentation ,Kakatiya,[1988]
- **Postdoctoral Research:** NA)

Professional Experience

Experience			
S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	RV College of Engineering	Associate Professor&HoD	19.7.2018-till date
2.	RV College of Engineering	Associate Professor	2011-2018
3	RV College of Engineering	Assistant Professor	2005-2011

4	RV College of Engineering	Sr.Lecturer	2001-2005
5	RV College of Engineering	Lecturer	1994-2001
6	KITS ,Warangal	Lecturer	1993-1994
7	NITW,Warangal	Research Engineer	1990-1992
8	KITS Nagpur	Lecturer	1988-90

Publications & Patents

Journal Publications

1. **Shilpa Chippalakatti, Renu Madhavi Chodavarapu, Andhe Pallavi** "Identification and segmentation of tumor using deep learning and image segmentation algorithms", Indonesian Journal of Electrical Engineering and Computer Science Vol. 38, No. 3, June 2025, pp. 1~1x ISSN: 2502-4752, DOI: 10.11591/ijeecs.v38.i3.pp1-1x
2. **Shilpa.Chippalakatti¹* Dr. C.H.Renumadhavi²* Dr. Andhe Pallavi³* Identification and segmentation of tumor using deeplearning and image segmentation algorithms"** Indonesian Journal of Electrical Engineering and Computer Science to be published in Vol. 38, No. 3, June 2025, pp. 1~1x ISSN: 2502-4752, DOI: 10.11591/ijeecs.v38.i3.pp1-1x
3. **Shilpa.Chippalakatti¹* Dr. C.H.Renumadhavi²* Dr. Andhe Pallavi³* Small Medical Image Identification Using YOLOV8 Algorithm"** International Research Journal of Engineering and Technology (IRJET) Volume 11, Issue 10, October 2024 <https://www.irjet.net/volume11-issue010> S.No:61
4. **Dhanush K, Dr. CH Renu Madhavi, A."**Demand forecasting using different methods in Python In journal of University of Shanghai for science and Technology Journal, :ISSN:1007-6735(UGC CARE Group II Journal)pp38-50,vol 26,issue6,,May2024
5. **Meeth Jain, Dr. CH Renu Madhavi"**To enhance efficiency in automated Palletisation systems with wireless communication In journal of University of Shanghai for science and Technology Journal, :ISSN:1007-6735 UGC CARE Group II Journal)pp38-50,vol 26,issue6,,May2024 pp12-20
6. **Chalapathiraju Kanumuri, ch.Renu Madhavi,Torthi Ravichandra,"Novel Approach in Classification and Prediction of COVID-19 from Radiograph Images using CNN,(IJACSA)"** International Journal of Advanced

Computer Science and Applications, Vol. 13, No. 9, 2022 {scopus indexed, Q3} pp 566-570 29th october, 2022

7. **Shwetha V, CH. Renu Madhavi and Nagendra Kumar M "Classification of Brain Tumours using Hybridized Convolutional Neural Networks in Brain MRI Images" in International Journal of Circuits, Systems and Signal Processing, Vol 16, Feb 2022, pp 561-570., E-Issn: 1998-4464**
8. **Chalapathiraju Kanumuri CH. Renu Madhavi A Survey: Brain Tumor Detection Using MRI Image with Deep Learning Techniques in Smart and Sustainable Approaches for Optimizing Performance of Wireless Networks. Available from: VitalSource Bookshelf, Wiley Professional and Trade, 2022. pp 125-138 feb 2022**
9. **Ananya Ananth Rao, Shaun Qien Yeau Tan, Raghavi R, Archit Srivastava, C H Renu Madhavi Autism Spectrum Disorder Therapy: Analysis of Artificial Intelligence integrated Robotic Approach Journal of Physics: Conference Series 2161 (2022) 012038 IOP Publishing doi:10.1088/1742-6596/2161/1/012038 Jan 2021**
10. **R. R. Deshpande, M. R. Bhatt and C. H. R. Madhavi, "Accuracy in Depth Recovery and 3D Image Synthesis From Single Image Using Multi-Color Filter Aperture and Shallow Depth of Field," in *IEEE Access*, vol. 9, pp. 123528-123540, 2021, doi: 10.1109/ACCESS.2021.3109865.**
11. **Kavitha, D., Renu Madhavi, C.H. An efficient multilayer deep detection perceptron (MLDDP) methodology for detecting testicular anomalies with or without congenital heart disease (TACHD). *J Supercomput* (2021).**
12. **Shwetha.V.C.H. Renu Madhavi.: Design techniques for improvement of Canny edge detection algorithm in [journal IJCRT \(ISSN: 2320-2882\)](#).**
13. **R. R. Deshpande, C. Renu Madhavi and M. R. Bhatt, "3D Image Generation From Single Image Using Color Filtered Aperture and 2.1D Sketch-A Computational 3D Imaging System and Qualitative Analysis," in *IEEE Access*, vol. 9, pp. 93580-93592, 2021, doi: 10.1109/ACCESS.2021.3089938. Print ISSN: 2169-3536 Online ISSN: 2169-3536**
14. **Ch. Renu Madhavi, Unnati Simran, Debashish Bhaskar, Siddharth Bhadoria and Rushil Srivastava Iot based flood alerting system Research journal Publication IJISRT Vol 6, Issue 7 JULY 2021**

15. Shwetha V , Dr.C.H.**Renu Madhavi**.. ‘Design techniques for detection of brain tumor in MRI images.’ International journal of Advances in Engineering Volume 3, Issue 1, pp: 683-701.
16. Kavitha.DC,CH.Renu Madhavi and S.Sridevi “Application of machine learning algorithm to diagnose prenatal ventricular septal defects from ultrasound images” ARPN Journal of Engineering and Applied Sciences
issn1819-6608,vol15,no.10,2020,pp1170-1176
17. Renu Madhavi C.H. et al. (2020) Microcontroller-Based Detection of Diabetes and Ketosis State Using Breath Sensors. In: Jain S., Paul S. (eds) Recent Trends in Image and Signal Processing in Computer Vision. Advances in Intelligent Systems and Computing, vol 1124.pp1-17,2020 Springer, Singapore.
https://doi.org/10.1007/978-981-15-2740-1_1
18. Soundarya S Dr.CH. Renu Madhavi¹, Tayamma², Namita Shah², Likhitha U²Design and Development of a Compact Communication System for Deaf, Dumb and Blind People in Australian Journal of Wireless Technologies, Mobility and Security ISSN 2200-1883 2020,,volume1,issue3, Pages1-24
19. Rajesh Babu D. L, Dr. C.H. Renu Madhavi ‘ Automatic 2-axis cnc foam cutting machine for aerofoil Design with internet of things (iot) capabilities” International Journal of Science and Innovative Engineering & Technology, Volume 7 ,May issue 2019 ,ISSN 978-93-81288-18-4
20. .Renu Madhavi,,Abinav bijapur,poorna chander bhat,Sagar Angadi,Vidya Shree “Design of Wearable Haptic Gloves: virtual environment technology” Journal of Advanced Research in Dynamical and Control Systems – JARDCS,volume11,issue6,pg285-290,2019
21. .C H Renu Madhavi “Estimation of Spectral Entropy of HRV Data and its Application to Depression and Thyroid Subjects to Predict Cardiac Risk” Biomedical and Pharmacology Journal,volume 11(3) ,,September 2018,pp1643-1648
22. Adhish Aithal and Ch.Renu Madhavi “ Automatic Tumour Segmentation Using Image Geometry and Intensity Parameters” International Research Journal of Engineering and Technology (IRJET), Volume:03,issue:05:2016:pp1-5
23. Aparna Goje. C H Renumadhavi, Sunil R,,” Analysis of Work Done on Limbs using EMG” IJSRD - International Journal for Scientific Research & Development| Vol. 4, Issue 07, 2016 | ISSN (online):2321-0613 ,pp317-318
24. Kanduru Sairam and CH.Renumadhavi “A review on blood glucometer based on photo acoustics” JIRST–International Journal for Innovative Research in Science & Technology| Volume 1 , Issue 9 Febru 2015 online ISSN 2349-6010 pp5-9
25. K Sairam,Akesh Govada,Ch Renumadhavi,,B.S.Satyanarayana,K B Ramesh “Design and Development of Non Invasive Blood Glucose Measurement System using Near Infrared technique” International Journal of Advanced

Research in Computer and Communication Engineering Vol. 4, Issue 7, July **2015**, pp74-79

26. Aditya Rao, Deepthi, CH. Renu Madhavi, Girish Chandra, Rajgopal Srinivasan "compressed sensing methods for DNA microarrays, RNA interference and meta genomics, journal of computational biology, feb 2015, pp145-158
27. CH Renu Madhavi, Akesh Govada, Dr. K. B. Ramesh, Non- Invasive Blood Glucose Measurement International Journal of Advanced Research in Computer and Communication Engineering Vol. 3, Issue 1, January **2014**. pp5122-5125
28. Deepthi P, C.H. Renu Madhavi, "DNA Microarrays and Smart Pooling", IOSR Journal of Pharmacy and Biological Sciences (IOSR-JPBS) e-ISSN: 2278-3008, p-ISSN: 2319-7676. Volume 9, Issue 1 Ver. III (**Jan. 2014**), **PP 61-64**.
29. CH. Renu Madhavi and Ashwini. S. Chatra, "Contrast uptake analysis in Dynamic Susceptibility Contrast MRI perfusion", International Journal of Engineering Research and Technology, Volume 2 Issue 6 – June 2013, Page No 2198-2201
30. CH. Renu Madhavi and A.G. Ananth, "Finding a suitable nonlinear technique to distinguish between HRV data of cardiac & non-cardiac diseased subjects", International Journal of Soft Computing and Engineering, Volume 3 Issue 4 – September 2013, Page No 208-210.
31. CH. Renu Madhavi and A.G. Ananth "A Review of Heart Rate Variability and Its Association with Diseases "International Journal of Soft Computing and Engineering (IJSCE) ISSN : 2231-2307, Volume-2, Issue-3, July 05, pp86-90, 2012.
32. Kashyapa Swathi, C H Renu Madhavi " Review paper on Quantitative Image Quality Assessment – Medical Ultra sound Images" International Journal of Engineering Research & Technology Vol.2 Issue 4 June 2012 pp1-6.
33. CH. Renu Madhavi and A.G. Ananth "Noninvasive Detection of Thyroid Dysfunction using Bicoherence plot and Bicoherence metric of HRV data " International Journal of Multidisciplinary Research and Advances in Engineering (IJMRAE), Ascent Publications, vol 3, No1, pp81-90, 2011.
34. CH. Renu Madhavi and A.G. Ananth "Modified Multiple Scale/ Segment Entropy (MMPE) Analysis of Heart Rate Variability of NHH, CHF and AF subjects " International Journal Of Life Sciences", David Publishing, USA. Volume 5, Number 8, pp593-597, 2011.
35. CH. Renu Madhavi and A.G. Ananth " Investigating and Validating the Dominant Activity Component of Autonomic Nervous System (ANS) Activity of Normal Healthy Subjects Using HRV " International Journal of Biomedical Signal Processing, Serial Publications, Volume 2(2), pp. 99-102, 2011,
36. CH. Renu Madhavi and A.G. Ananth "Spectral Entropy Estimation of HRV Data of Thyroid & Healthy subjects", International Journal of Computer Applications, Volume 30– No.1, pp39-41, 2011.
37. CH. Renu Madhavi and A.G. Ananth " Analysis and Characterisation of Heart Rate Variability (HRV) Data of Different Sets of Subjects Using Nonlinear

- Measure (Approximate Entropy)" International Journal of Computer Theory and Engineering, Vol 2(4), pp 619-623, 2010.
38. CH.Renu Madhavi and A.G.Ananth " Estimation of Multiple scale Sample Entropy (MPE) of Heart Rate Variability(HRV) of normal and Congestive Heart Failure(CHF) cases by selecting 'm' and 'r' values" , The Journal Of Material Science and Engineering" David Publishing, USA, volume 4 (34), No.9, ,pp 66-71, 2010.
 39. CH.Renu Madhavi and A.G.Ananth, "Quantification of Heart Rate Variability (HRV) data using Symbolic Entropy to Distinguish between Healthy and Disease subjects" International Journal of Computer Applications ,Vol 8(12), pp10-13, 2010.
 40. CH.Renu Madhavi and A.G.Ananth,"Analysis and Characterisation of Heart rate variability (HRV) Data of different sets of subjects using nonlinear measure", International 29 Journal of computer theory and engineering , Vol 2 No 4, August 2010.
 41. A new approach for evaluating SNR of ECG signals and its implementationC Renu Madhavi, SM Kumar, AG Ananth, N Srinivasan - Proceedings of the 6th WSEAS International 2006
 42. Shilpa. Chippalakatti , C.H. Renu Madhavi Data Security Techniques on Cloud ""International Journal of innovative research in science and Engineering,vol7, Issue11, 2021, pp15-21

Conference Papers

1. Renu Madhavi,Vidya,Padmaja Synergism of Medicine and Robotic Applications for the Future- A Review"CSITSS-24 ,8-9 Nov24
2. Chalapathiraju Kanumuri, Renu Madhavi CH and Torthi Ravi ChandraCognitive Computing in diagnosis of Covid-19 from CT scan and radiograph images: A comparative study2022 6th International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)Dec2022
3. Shipla Chippalkatti ,Ch.Renu Madhavi .Comparative Review on the Machine Learning Algorithms for Medical Data"" in 6th International Conference on Computation System and Information Technology for Sustainable Intl conf 2022 Dec21-23
4. C. H. Renumadhavi has presented a paper entitled "Emission Abatement Systems for Coal Fired Thermal Power Plants" at the International Conference on Mechanical, Manufacturing, Industrial and Civil Engineering (ICMMICE) held in Ghaziabad, th India on 05 March, 2022.
5. Ananya Anantram,Archith srivastava,Raghavi and Shaun.q.tan and Renu Madhavi,"**Autism Spectrum Disorder Therapy: Analysis on Artificial Intelligence integrated Robotic Approach**"AICES2021 ,at Manipal Institute of Technology.28th-30th October 2021 for Journal of Physics Conference Series
6. A. Suresh, B. N. Reddy and C. Renu Madhavi, "Hardware Accelerators for Edge Enabled Machine Learning," 2020 IEEE REGION 10 CONFERENCE

(TENCON), Osaka, Japan, 2020, pp. 409-413, doi: 10.1109/TENCON50793.2020.9293918.

7. **V. Divya K.Ch.Renu Madhavi et al., "A Novel Approach towards Early Detection of Obliteration in Lumbar Lordosis," 2020 42nd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), Montreal, QC, Canada, 2020, pp. 4042-4045, doi: 10.1109/EMBC44109.2020.9176048**
8. Rakshitha. CH.Renu Madhavi "Determination of root causes of defects in the boards of MR subsystems Dissemination of PG projects and Research Work, May 7th - 8th, 2018, RVCE, Bengaluru.
9. Aparna Goje ,C H Renu Madhavi,Sunil Yalamalle "Analysis of fatigue on right trapezius muscle "presentedpaper in Second International Conference on Large AreaFlexible Microelectronics (ILAFM 2016): WearableElectronics, December 20th–22nd, 2016.
10. Shreesha Kurdi, B. Rajshekar Reddy, G. Yashodha,Sushma Patil, C.H. Renu Madhavi "Design anddevelopment of 3d printedProsthetic arm" presentedpaper in Second International Conference on Large AreaFlexible Microelectronics (ILAFM 2016): WearableElectronics, December 20th–22nd, 2016.
11. CH.Renu Madhavi and A.G .Ananth "Estimation of Approximate entropy of heart rate variability of healthy subjects and investigation of the effect of meditation on it "in the proceedings of International Conference on Signal Acquisition and Processing ICSAP /IEEE, Bangalore, Feb2010 ,pp304-306.
12. CH.Renu Madhavi and.A.G..Ananth. "Quantification of Heart Rate Variability of Normal and Thyroid Subjects with Computerized Non linear Techniques" , International Conference on Aerospace Electronics communications and Instrumentation-ASECI 2010 , Vijayawada, Jan 2010,pp355-358.
13. CH.Renu Madhavi, A.G..Ananth "Effect of Psychological Disorder on Heart Dynamics from Correlation Dimension and Approximate Entropy Computations of Heart Rate Variability", The international conference on Informatics, Cybernetics, and computer applications ICICCA2010, July2010 Bangalore, pp610-614.
14. CH .Renu Madhavi , A.G.Ananth. " Different methods of analysis of heart rate variability (HRV)and their application to normal and abnormal subjects" Proceedings of International Conference on System Dynamics and Control (ICSDC-2010) ,ISBN 978-93-80578-58-3', July 2010, at MIT, Manipal, pp 95.
15. CH.Renu Madhavi,and.A.G..Ananth ' Estimation of Multiple scale Sample Entropy (MPE) of Heart Rate Variability (HRV)of normal and Congestive Heart Failure (CHF) cases by selecting 'm' and 'r' values" International Conference on Nano Biosensors ,Visakhapatnam , Jan 2010,pp68.
16. Ch. Renu Madhavi, Dr. S. MadhavaKumar, "V. I based graphical user interface for the analysis of heart rate variability" published in Proceedings of the 4th

WSEAS International Conference on Mathematical Biology and Ecology (MABE'08), Acapulco, Mexico, January 2008.

17. Vidya M J, CH Renu Madhavi, K.V.Padmaja " Cost effective Electromagnetic Surgical Device for Removal of Ferromagnetic Objects from the Endobronchial and Endoesophageal Passage", International Conference on Emerging Trend in Engineering Technology & Science on 13 –14 Jan 2008 , Department of Computer Science , Saurashtra University, Rajkot, Gujarath.
18. CH . Renu Madhavi, Dr. S. MadhavaKumar, Dr. Ananth, "Linear and nonlinear measures of heart rate variability" ", International conference on Computer, Communication, Control & Instrumentation, NOV 2007, RVCE, Bangalore, India
19. Ch. Renu Madhavi, Dr. S. MadhavaKumar, Dr. Ananth, "Implementation of algorithms using MATLAB for the measurement of heart rate", International Symposium on Engineering at M. S. Ramaiah Memorial hall, Bangalore, Jan2007

Books/Book Chapters

1. Chalapathiraju Kanumuri CH. Renu Madhavi , A Survey: Brain Tumor Detection Using MRI Image with Deep Learning Techniques, Smart and Sustainable Approaches for Optimizing Performance of Wireless Networks. Available from: Vital Source Bookshelf, Wiley Professional and Trade, pp125- 138 2022.
2. Renu Madhavi, C.H., Jamuna, N., Chandana, A.N. Kallur, R., Sindhu, R ,Microcontroller-based detection of diabetes and ketosis state using breath sensorsAdvances in Intelligent Systems and Computing, 1124 , pp. 1–17, 2020

SWAYAM/NPTEL E-Books Translated to telugu having (10Lectures)

3. Integrated circuits Mosfets, Opamps and their applications 2021
4. Fundamentals of Electrical Engineering, 2022
5. Waves and Oscillations 2023
6. Fundamentals of Power Electronics 2024
7. Brief introduction to Micro sensors (submitted)

Text Book

Somashekhar Malipatil, Veena Divya Krishnappa, Renu Madhavi, Sharanagouda Nawaldgi ,Digital Electronics and Logic Design , ISBN: 9798888152539

- ,Pages: 196, Publisher: Notion Press, Edition: 1, 2022

Patents **[Filed / Published / Granted]**

1. nil

R &D Grants & Consultancy Projects

Ongoing & Completed Research Projects

- **Fabrication of Breast Tissue Mimicking** phantoms,characterisation elastic and acoustic properties with numerical model validation,Funding Agency:VGST:, Duration: 2021–2023, Role: Co-PI.
-].

Professional Memberships

- IEEE Sr.Member
- **Awards & Recognitions**
- Academic Excellence RSST 2009
- Academic Excellence RSST 2017

Student Supervision

- Ph.D. Candidates: [6]; [4] Graduated)
- M.Tech/M.Sc. Students: NA
- Undergraduate Research Mentees: 23

Professional Roles

- Editorial Board: [Journal Name]
- Chair/Committee Member: *IEEE International Conference on Women in Technology*
- Industry Advisor: [Company/Startup Name]

Teaching

Core Courses: **[Current semester]**

- [EI265TDA] [Industrial wireless TechnologiesS

Advanced/Lab Courses:

Professional Roles

Responsibilities

- Academic: HOD/BoE Chair person/BoS Chair Person/Academic Council Member
- Administrative: Overall Department labs,projects,DTL and Minor Projects

External Connect

- Member of BoE for Dr.Ambedkar Institute of Technology
- Reviewer for IEEE Tencon and IEEE Humanitarian Conferences

- Reviewer of Elsevier Biomedical signal processing and Control Journal
- Journal of King Saud University: Computer and Information Sciences
- Selection board member of Research Organisations
- Organising Committee member of CISCON-2024