

**Dr. M. Ramasubba Reddy**  
Professor   
Head of Laboratory, Biomedical Engineering Group  
Department of Applied Mechanics  
Indian Institute of Technology  
Chennai - 600036, INDIA.

**Ph:** +91 44 2257 4057  
**Fax:** +91 44 2257 4052  
**Email:** rsreddy[at]iitm[dot]ac[dot]in

An experienced teacher cum researcher in the areas of BiomedicaI Instrumentation, Signal and Image Processing with B.Tech. in Electronics and Communication Engineering and Ph.D. in Biomedical Signal processing is currently working as professor of Biomedical Engineering at the Department of Applied Mechanics, Indian Institute of Technology Madras, Chennai, India.

**Research Interests**

* Biomedical Instrumentation
* Biomedical Imaging systems
* Biomedical Signal Processing

**Latest Paper**

* R.Malathi and **M.R.S.Reddy,**Arrhythmia studies using computational model of ventricular tissue, Feb.2008.**Biophysical Journal**, 94, pp. 285.

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| **PERSONAL INFORMATION**   |  |  | | --- | --- | | *Name in full* | **MACHIREDDY  RAMASUBBA REDDY** | | *Date of birth* | **May 10, 1959** | | *Address for correspondence* | Professor Biomedical Engineering Group,  Department of Applied Mechanics Indian Institute of Technology, Chennai - 600 036, INDIA. Tel: +91 44 22574057(O), +91 44 22576057 (R) FAX: +91 44 2257 4052 ; E-mail: rsreddy[at]iitm[.]ac[.]in | | *Organizational membership* | Life Member of Biomedical Society of India | |  |

**HONOURS AND AWARDS**

* Awarded a merit certificate of President's Scout, highest award given to the scouts, by the President of India (1973).
* Awarded the National Merit Scholarship for standing within the first hundred ranks of Secondary School Certificate Examination and thall through graduation.
* From August 1983 through June 1988, received Tata memorial scholarship.
* Ph.D. work was conferred the best thesis award and bagged two gold medals in the faculty of engineering, I.I.Sc.,Bangalore, (1991).

**Journal Publications**

1. U.C. Niranjan, G.S.S.D. Prasad, **M.R.S. Reddy** and I.S.N. Murthy,*Elimination of powerline interference from ECG using DCT,* Medical  and  Life Sciences Engineering,**Jl. of  BME  Society  of India, Vol. 12, pp:11-24, Dec. 1990.**
2. C.F. Starmer, **M. Ramasubba Reddy**, A. Namasivayam, and M Singh,*Potassium channel Blockade Amplifies cardiac instability - Numerical studies of Torsades De pointes*,  **Indian Journal of Physiology and Pharmacology, Vol.38, No.4, pp:259-266, 1994.**
3. V.P.S. Naidu, Bindu. E and **M.R.S. Reddy**, *A high precision R-point detection algorithm,* **Trends in Biomaterials and Artificial Organs, Vol. 14. No.1, pp:5-8, June, 2000.**
4. K. Bommanna Raja, M. Madheswaran, K. Thyagarajah, **M. Ramasubba Reddy** and S. Swarnamani, *Efficient Information System for Health Care – Study and Implementation Methodology*,**IETE, Vol. 20, No. 4, pp:387-394, July-Aug., 2003.**
5. G.B. Mukarthihal, S. Radhakrishnan, **M. Ramasubba Reddy** and S.S.K. Ayyar, Comparative studies on Visual Evoked Potentials in Normal and Diseased Subjects, **Annals of Indian Academy of Neurology, Vol. 8, pp:243-248, 2005.**
6. C.F. Starmer, D.N. Romashko, **R.S. Reddy**, Y.I. Zilberter, J. Starobin, A.O.Grant, V.I. Krinsky;*Proarrhythmic Response to Potassium Channel Blockade: Numerical Studies of Polymorphic Tachyarrhythmias*,**Circulation, Vol.92, No.3, pp:595-605, Aug. 1995.**
7. Joseph.S.Paul, **M.R.S.Reddy** and V. Jagadeesh Kumar, *Recursive Algorithm for efficient representation of ECG signals,* **Electronics Letters : An International Publication**, **Vol. 34, No.6, pp:526-528, 19th March 1998.**
8. Joseph.S.Paul, **M.R.S.Reddy** and V. Jagadeesh Kumar,  *Data Processing of Stress  ECGs Using Discrete Cosine Transform,* **Computers in Biology and Medicine, Vol.28, pp:639-658,1998.**
9. Joseph.S.Paul, **M.R.S.Reddy** and V. Jagadeesh Kumar,  *Identification of Premature Ventricular Cycles in Surface Electrograms Using the Envelope of DCT*,   **Applied Signal Processing, Vol. 5, pp:226-239, 1998.**
10. Vimal Kumar Y.M., Radhakrishnan S. and **Reddy M.R.S.,***A Study on Somatosensory Evoked Potentials for the evaluation of Scoliosis*,**Innovation and Technology in Biology and Medicine (ITBM), Vol. 19, No.4, pp: 325-333, 1998.**
11. Joseph.S.Paul, **M.R.S.Reddy** and V. Jagadeesh Kumar,  *A QRS Estimator using Linear Prediction approach,* **Signal Processing, Vol. 72, pp: 15-22, 1999**.
12. Joseph.S.Paul, **M.R.S.Reddy** and V. Jagadeesh Kumar,  *A Cepstral transformation Technique for dissociation of wide QRS type ECG signals using DCT,*  **Signal Processing, Vol. 75, No.1, pp: 29-39, May 1999.**
13. Joseph S. Paul,**M.R.S.Reddy** and V. Jagadeesh Kumar,  A *Transform Domain SVD Filter for Suppression of Muscle Noise artifacts in Surface ECG’s,* **IEEE Trans. on BME.**Vol.47, No. 5,**pp: 654 – 663, May, 2000.**
14. Y.M. Vimal kumar, S. Radhakrishnan and **M. Ramasubba Reddy**, *An Efficient algorithm for extraction of Somatosensory Evoked Potentials in Scololiosis by Frequency Co-efficients Averaging,* **Mathematical Modelling and Computing**, **Vol.13, No.1-2, pp: 152-159, 2001.**
15. V.P.S. Naidu and **M. Ramasubba Reddy**, *Time-variant spectral analysis of heart-rate time series by auto regressive moving average (ARMA) method*, **Sadhana, Vol.28, Part 6, pp: 1027-1035, December 2003.**
16. K. Prahlad Rao, S. Radhakrishnan and **M. Ramasubba Reddy**,*Development of Tissue Phantoms for Functional study of Photon propagation through Brain,*Transactions of the **JSMBE, Vol.42, Suppl. 1, pp:371, 2004**. (Japanese Society of Medical Biological and Engineering).
17. N.K.Suresh Kumar and **M.Ramasubba Reddy**, *Non-Invasive Electrical Imaging of Heart:A Patient Specific Approach*, **International Journal of Bioelectromagnetism, Vol. 6, No.1, 2004,**([www.ijbem.org/volume6/number1/006.html](http://www.ijbem.org/volume6/number1/006.html)).
18. N.K.Suresh Kumar and **M.Ramasubba Reddy**, *Non-Invasive Electrical Imaging of Heart:3D Ultrasound based Heart Surface Reconstruction for Patient Specific Approach*, **International Journal of Bioelectromagnetism, Vol. 7, No.2, 2005,**
19. J. Manivannan, **M. Ramasubba Reddy**, S. Thanikachalam and R. Ajay Kumar, *Detection of Left Ventricular Systolic Dysfunction from shape deformity*, **Australian Physical and Engineering Sciences in Medicine, Vol. 28, No.1, 2005, pp:51-55.**
20. Atul Singh Minhas and **Ramasubba Reddy M.**, Neural Network based Approach for Anomaly Detection in Lungs Region by Electrical Impedance Tomography, **Physiological Measurement, Vol.26, pp: 489-502, August 2005.**
21. Mukartihal.G. B, S. Radhakrishnan, **M. Ramasubba Reddy**and S. S. K. Ayyar *Frequency Domain Analysis of Visual Evoked Potentials*, **Journal of Muscle & Nerve. Vol.32. No. 3, September 2005, pp 423.**
22. J. Manivannan, **M. Ramasubba Reddy**, S. Thanikachalam and R. Ajay Kumar, *Quantitative Evaluation of Left Ventricle Performance from Two Dimensional Echo Images*, **Journal of Echocardiography, Vol.23, No.2, 2006, pp:87-92.**
23. K. Prahlad Rao, S. Radhakrishnan and **M. Ramasubba Reddy**, Brain Tissue Phantoms for Optical Near Infrared Imaging,**Journal of Experimental Brain Research, Vol. 170, No. 4, April 2006, pp. 433-437.**
24. Mukartihal.G. B, S. Radhakrishnan,**M. Ramasubba Reddy**and S. S. K. Ayyar *Design and Development of Visual Evoked Potentials Recording System for Diagnosis of Optic Nerve Diseases*, **Journal of Instrument Society of India**, Vol.36, No. 4, December 2006, pp:227-234.
25. R. Malathi,**M.R. Reddy,***Study of arrhthymia using computational model of ventricular myocyte,***Journal of Biomechanics** , Vol. 39 Suppl. 1, 2006, page S278
26. Vijayalakshmi P., **Ramasubba Reddy M**. and Douglas O’Shaughnessy,*Acoustic analysis and detection of hypernasality using a group delay function*, **IEEE Trans. on Biomedical Engineering**, Vol.54, No.4, April 2007, pp:621-629.
27. B.Prabhakar and **M.Ramasubba Reddy**, *Automated Assesment of Aortic Regurgitation using 2D Doppler Echocardiogram*, **Journal of Digital Imaging, 2007**,
28. B.Prabhakar and **M.Ramasubba Reddy**, *HVS scheme for DICOM image compression;Design and Comparative performance evaluation* ,**European Journal of Radiology, Vol.63, July 2007, pp:123-135.**
29. R.Malathi, and **M.R.S. Reddy**. A Simulation Study of Arrhythmia using Computational Model, **IEEE*Proceeding Series***, 2007 *Page*s 513-516.
30. R.Malathi and **M.R.S.Reddy,**Arrhythmia studies using computational model of ventricular tissu*e,* Feb.2008*.* **Biophysical Journal**, 94, pp. 285.

**Books Co-authored**

1. **Current Trends in Biomedical Engineering: Proceedings of the 5th National Conference of Biomechanics**, Held at I.I.T., Madras, Editors: S.Radhakrishanan and **M.Ramasubba Reddy**, Allied Publishers Ltd., New Delhi, 1996.
2. **Medical Diagnostic Techniques and Procedures**, Procedings of Intl. Conference, held at IIT Madras, Chennai, During December 15-17, 1999, Editors: Megha Singh, S. Radhakrishnan, K.M. patil and **M.R.S. Reddy**