

1. Personal Information

- **Name:** Dr. Ramchandra Manthalkar
- **Position:** Professor
- **Department:** Electronics and Telecommunications Engineering
- **Contact Information:** rrmanthalkar@sggs.ac.in, 9423373690/9130015230

2. Educational Background

- **Degrees:** B. E., M. E., Ph. D. (IIT Kharagpur)
- **Postdoctoral Experience:** No
- **Certifications:**

3. Research Interests

- **Areas of Expertise:** Texture Analysis, Signal and Image Processing, Computer Network
- **Ongoing Projects:** RPS – Effect of Meditation on Physiological Signals
- **Interdisciplinary Work:** A course development titled “Positive Psychology for Joyful Learning” in association with Yashwantrao Chavan Open University, Nashik.

4. Teaching Experience

- **Courses Taught:** Electronic Devices and Circuits, Communications Engineering, Computer Networks, Physics of Semiconductor Devices, VLSI Design, Signal Processing, Image Processing, Data structures, Introduction to Computer Algorithms, Artificial Intelligence.
- **Course Development:** EDC, VLSI Design, Joyful Learning

5. Publications and Presentations (Plz provide Google scholar link)

(https://scholar.google.co.in/citations?user=VNYCr_QAAAAJ&hl=en)

- **Books:** -
- **Journal Articles:** 47
- **Conference Papers:** 48

- **Editorial Work:** Reviewer-Pattern Recognition Letters, IETE Journal of Research.

6. Awards and Honors

- **Grants:**

Sr. No.	Title of the project	Project Value (Rs. In lakh)	Granting agency	Date of start	Date of Completion
1	Texture Analysis in biomedical images (RPS)	8.60	AICTE	2003	2006
2	Content based video retrieval (RPS)	7.50	AICTE	2007	2009
3	Mixed signal VLSI design lab (MODROB)	15.00	AICTE	2009	2012
4	ECG signal analysis (RPS)	7.00	AICTE	2011	2013
5a	Centre of Excellence (COE) in Signal and Image Processing Member	500.00	TEQIP	2012	2017
5b	Additional funds for COE based on performance	117.00	TEQIP	2020	2021
6	FIST	35.50	DST	2007	2011
7	QIP courses	19.63	AICTE	2016	2017
8	FDP	5.00	AICTE	2015	2016
9	Effect of meditation on EEG signal – RPS	15.90	AICTE	2020	continuing
10	AICTE IDEA Lab	55.00	AICTE	Awarded in June 2021	This project is of 2 year duration
		786.13			

- **Awards:** Outstanding Engineer award by Institution of Engineers, Aurangabad-2024
- **Fellowships:** IETE, IE

7. Professional Experience

- **Administrative Roles:**

Sr. No.	Post	Period From... to..... (dates and duration)	Name of the University/Colleges /Institution& location
1	Professor	14.05.2011 to till date	SGGSIET Nanded.
2	Head of the Department in a University	May 2009 - June 2012	SGGSIET Nanded.
3	Dean (PG studies and R&D)	July 28, 2018 - August 2, 2020	SGGSIET Nanded.

4	Member, MPSC selection committee for Polytechnic Teachers	2009	MPSC selection board, Pune
5	QIP coordinator	May 22, 2015 - August 2, 2020	SGGSIET Nanded.
6	Member, Board of Management	June 2017	SGGSIET Nanded.
7	Member Building and works committee	August 2018 - June 2019	SGGSIET Nanded.
8	Member IQAC	July 2018 - August 2020	SGGSIET Nanded.
9	Member Grievance Committee	2017 - August 2, 2020	SGGSIET Nanded.
10	Member of committee to develop "VISION and MISSION"	January 2016	SGGSIET Nanded.
11	Chief Superintendent, exam. SRTMU	Nov. 2006 - Dec. 2006	SGGSIET Nanded.

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- **Industry Collaboration:** Chipspirit Bangalore, Sankalp Semiconductors Huballi, Zeal Electronics Pune, Bharat Forge Pune.
- **Consulting Work:** Signal and Image Processing

8. Supervision and Mentoring (Ph. D.)

Sr.No.	Student	Thesis title	Period of Guideship	Ph D awarded in
1	Dr. V. R. Ghorpade	Design and analysis of self-secured, scalable, distributed authentication services for Ad-hoc networks	2006-2008	2008
2	Dr. Varsha Ratnaparkhe	Biomedical Image analysis	2006-2008	2008
3	Dr. R. B. Naik	Design and analysis of intelligent real time scheduler: a case study of greenhouse monitoring system	2008-2011	2012
4	Dr. Shubhda Ardhapurkar	Studies on classification of ECGs using signal processing techniques.	2009-2012	2013
5	Dr. Neeta Deshpande	Designing robust algorithms to embed watermarks in digital video	2008-2013	2014
6	Dr. Deepa Deshpande	Associative rule mining	2008-2013	2014
7	Dr. Kalpana Thakre	Content based video retrieval in compressed domain	2008-2014	2015
8	Dr. Kiran Bhandari	Retrieval of remotely sensed images using multimodal approach	2009-2014	2016
9	Dr. Vaishali Mandhare	Quality of service strategies by enhancing routing techniques in mobile ad-hoc networks	2013-2017	2017

10	Dr. Narendra Jadhav	EEG based emotion analysis and recognition	2014-2017	2018
11	Dr. Mininath Bendre	Cloud based predictive analytics on Big data: A case study on precision agriculture	2014-2017	2018
12	Mr. Kailash Sharma	Illumination and pose invariant face recognition	2008-2017	2018
13	Mr. Sidharth Bhorage	Video based indoor human activity detection and analysis	2014-2018	2019
14	Mr. Sunil Hirekhan	The effect of meditation on EEG	2016	2020
15	Ganesh Pakle	QoS in next generation high speed networks	2013	2020
16	Ms. Aditi Vedalankar	Studies in automation of screening mammography examinations	2013-	Submitted
17	Shankar Gupta	Analysis of cognitive workload using EEG	2017-2021	2021
18	Mahesh Ladekar	Design and implementation of some digital signal processing blocks	2015-2022	2021
19	Jaishree Shinde	Segmentation of spinal images	2014-2021	Submitted

9. Professional Memberships

- **Associations:** Life member - IETE, IE, SSI

10. Miscellaneous

- **Languages:** Marathi, Hindi, English
- **Skills:** Signal and Image Processing, VLSI design, Computer Network
- **Personal Interests:** Reading, gardening

Journal Publications

Sr. No.	Title of the publication	Name of the international journal	Month and year of publication
1	PC based ECG Interpreter by R. R. Manthalkar , Dr. T.R. Sontakke, and S.S. Gajre	<i>Journal of Biomedical Engineering Society of India</i> , vol. 15, pp. 19	1995
2	PC based heart sound data acquisition system by A. G. Deshpande, R. R. Manthalkar	IE(I) journal, vol. 77	March 1997
3	A survey of rotation invariant texture classification methods by Ramchandra Manthalkar , P. K. Biswas	IETE Journal of research, vol 48, no. 3 & 4. pp. 189-198	May 2002
4	Rotation invariant texture classification using Gabor phase features by Ramchandra Manthalkar , P. K. Biswas	IETE Journal of research, vol 48, no. 3 & 4. pp. 199-204	May 2002
5	Rotation invariant texture classification using even symmetric Gabor filters by Ramchandra Manthalkar , P. K. Biswas, B. N. Chatterji	Pattern Recognition Letters, No. 24, pp. 2061-2068	August 2003
6	Rotation and scale invariant texture classification using discrete wavelet packet transform by Ramchandra Manthalkar , P. K. Biswas, B. N. Chatterji	Pattern Recognition Letters, No. 24	October 2003
7	Trust Evaluation in Mobile Ad Hoc Networks by V. R. Ghorpade, Y. V. Joshi, R. R. Manthalkar	The Journal of The Computer Society of India, Vol 36 No 4	Oct-Dec. 2006
8	Image compression using Curvelet, Ridgelet and Wavelet Transform – A comparative study by M. S. Joshi, R. R. Manthalkar and Y. V. Joshi	ICGST-GVIP Journal, ISSN 1687-398X, Vol. 8, Issue III, pp 25-34	Oct. 2008
9	Fuzzy Logic based Trust Management Framework for MANET by V. R. Ghorpade, Y. V. Joshi, R. R. Manthalkar	DSP Journal, Volume 8, Issue 1, pp- 37-46	December, 2008
10	Texture Characterisation of CT images based on Ridgelet Transform by V. R. Ratnaparkhe, R. R. Manthalkar , Y. V. Joshi	ICGST-GVIP Journal, ISSN 1687-398X, Vol. 8, Issue V, pp 43-50	January 2009
11	Review of robust video watermarking algorithms by Neeta Deshpande, Archana Rajurkar, Ramchandra Manthalkar	International journal of computer security, vol. 7, no. 3, pp. 237-246.	April 2010
12	An overview of transform domain robust digital image watermarking algorithms by B. L. Gunjal and R. R. Manthalkar	Journal of emerging trends in computing and information sciences 2(1), 37-42	2010
13	An effective CBVR system based on motion, quantized color and edge density measures by Kalpana Thakre, Archana Rajurkar, Ramchandra Manthalkar	International journal of computer science and information technology, vol. 3, no. 2, pp. 78-92.	April 2011

14	Performance contribution-based scheduling framework for precedence constraint tasks in real time system by Radhakrishna Naik, R. R. Manthalkar	International journal on computer science and engineering, vol. 3, issue 2, pp. 664-675.	February 2011
15	Optimally-balanced hash tree generation in ad hoc networks by V. R. Ghorpade, Y. V. Joshi, R. R. Manthalkar	African journal of information and communication technology, vol. 6, no. 1, pp. 7-12.	September 2011
16	A hybrid algorithm for classification of compressed ECG by Shubhada S. Ardhapurkar, Ramchandra Manthalkar , Suhas Gajre	I. J. Information technology and computer science, 2, 26-33.	2012
17	Content based video retrieval using latent semantic indexing and color, motion and edge features by Kalpana Thakre, Archana Rajurkar, Ramchandra Manthalkar	International journal of computer applications, vol. 54, no. 12, pp. 42-48.	January 2012
18	VisiMaerk1_0: An assistance tool for evaluating robustness of video watermarking algorithms by Neeta Deshpande, Mahesh Sanghvi, Archana Rajurkar, Ramchandra Manthalkar	I. J. Information technology and computer science, 5, 10-21.	April 2013
19	ECG denoising by modeling wavelet sub-band coefficients using kernel density estimation by Shubhada S. Ardhapurkar, Ramchandra Manthalkar , Suhas Gajre	International journal Inf. Process system, vol. 8. No. 4, 669-684.	December 2012
20	QoS Routing enhancement using metaheuristic approach in mobile ad-hoc network by Mandhare, V.V., Thool, V.R., Manthalkar, R.R.	Computer Networks 110, pp. 180-191	December 2016
21	Effect of meditation on emotional response: An EEG-based study by N.Jadhav, R. Manthalkar , and Y. Joshi	Biomedical Signal Processing and Control, Vol.34, pp. 101-113,	April 2017
22	A novel approach to improve quality of service in MANET using cache update scheme for on-demand protocol by Mandhare, V.V., Thool, V.R., Manthalkar, R.R.	International Journal of Communication Networks and Distributed Systems 18(3-4), pp. 353-370	2017
23	Modeling and predicting weather in agro-climatic scarcity zone using iterative approach by Mininath Bendre, Ramchandra Manthalkar , Vijaya Thool	Decision, springer India, vol. 44, pp. 51-67	2017
24	Recognition of vision-based activities of daily living using linear predictive coding of histogram directional derivative by Sidharth Bhorge, Ramchandra Manthalkar	Journal of ambient intelligence and humanized computing, pp. 1-16	January 2017
25	Novel approach for cache update on multipath DSR protocol in MANET for QoS support by V. V. Mandhare, R. R. Manthalkar , V. R. Thool	Wireless personal communications, vol. 98, pp. 505-519	January 2018

26	Three-dimensional spatio-temporal trajectory descriptor for human action recognition by Bhaorge S. B., Manthalkar R. R.	International Journal of Multimedia Information Retrieval 7(3), pp. 197-205	September 2018
27	The Detrended Fluctuation and Cross-Correlation Analysis of EEG Signals by S.Hirekhan, and R. Manthalkar	<i>Int. J. Intelligent Systems Design and Computing,</i>	November 2018
28	Time series decomposition and predictive analytics using MapReduce framework, M. Bendre, Ramchandra Manthalkar	Expert systems with applications 116, 108-120	February 2019
29	Multidomain feature level fusion for classification of lumbar intervertebral disc using spine MR images, J. V. Shine, Y. V. Joshi, R. R. Manthalkar	IETE Journal of Research, 1-14	July 2020
30	Classification of visual cognitive workload using analytic wavelet transform, S. S. Gupta, Ramchandra Manthalkar	Biomedical Signal Processing and Control, 61, 101961	August 2020
31	Addressing architectural distortion in mammogram using AlexNet and support vector machine, A. V. Vedalankar, S. S. Gupta, Ramchandra Manthalkar	Informatics in Medicine Unlocked, 23, 100551	January 2021
32	EEG based visual cognitive workload analysis using multirate IIR filters, M. Y. Ladekar, S. S. Gupta, Y. V. Joshi, Ramchandra Manthalkar	Biomedical Signal Processing and Control, 68, 102819	July 2021
33	Performance analysis in higher-order IIR filter structures with application to EEG signal, M. Y. Ladekar, Y. V. Joshi, Ramchandra Manthalkar	Circuits, Systems and Signal Processing, 1-17	February 2021

Conference/book chapters published

Sr.No.	Title of the book/ book chapters	Name of the publisher	Institutions where referred for study
1	Retrieval of Satellite Images using LTRP and ASMC (Reference book)	LAP LAMBERT Academic Publishing, 2016	Worldwide
2	Video Content Description Using Fuzzy Spatio-Temporal Relations by Archana M. Rajurkar, R.C. Joshi , Santanu Chaudhary and Ramchandra Manthalkar Accepted for publishing in book (Book chapter)	Digital Video as a chapter published by In-Tech Publishers, Austria, ISBN 978-3-902613-44-8.	Worldwide
3	Analysis of effect of Meditation on Cognitive Load using Higher Order Crossing Features by N.Jadhav, R. Manthalkar, and Y. Joshi (Book chapter)	Advances in Intelligent Systems Research, Vol.137, 2017, pp.433-439	Worldwide
4	Electroencephalography-Based Emotion Recognition Using Gray-	proceedings of International Conference Vision and Image	Worldwide

	Level Co-occurrence Matrix Features by N.Jadhav, R. Manthalkar, and Y. Joshi (Book chapter)	Processing, Advances in Intelligent Systems and Computing, Vol.459, 2017, pp.335-343	
5	The Detrended Fluctuation Analysis of EEG Signals : A Meditation-based Study by S. Hirekhan, R. Manthalkar, and S. Phutke (Book chapter)	Computing, Communication and Signal Processing, Advances in Intelligent Systems and Computing, Vol.810, 2019. (in printing)	Worldwide
6	Texture based based associative classifier – an application of data mining for mammogram classification by Deepa Deshpande, Archana Rajurkar, Ramchandra Manthalkar (Book chapter)	Computational intelligence in data mining- vol. 1, pp. 387-400, 2015	Worldwide
7	Education after COVID -19 disruption by R. Manthalkar, S. Gajre, Y Joshi	EasyChair preprint No. 3431	Worldwide
8	Intervertebral disc classification using deep learning technique by Shine J. V., Joshi Y. V. and Manthalkar R. R.	Lecture notes in computational vision and biomechanics, Vol. 30, pp. 551-563, 2019	Worldwide
9	Optimal forwarding in named data networking by Pakle G, Manthalkar R.	Lecture notes in Electrical Engineering, Vol. 521, pp. 33-44, 2019	Worldwide
10	Analyzing effect of meditation using higher order crossings and functional connectivity by Phutke S., Jadhav N., Manthalkar R., Joshi Y.	Advances in intelligent systems and computing, Vol. 810, pp. 761-769, 2018	Worldwide
11	Pricing based caching strategy in named data networking, G. Pakle, Ramchandra Manthalkar , M. Vaidya	ICT for Competitive Strategies, 593-600, 2020	Worldwide