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Area Of Interest	ANALOG CIRCUIT DESIGN, VLSI, ARTIFICIAL NEURAL NETWORKS, IOT			
Publications	International Journal (s):	12	National Journals (s) :	**01**
	International Conference (s):	28	National Conference:	-

Publication Details

INTERNATIONAL JOURNALS:

[1] RAJESH GHONGADE, DR. A.A. GHATOL; "DECIDING OPTIMAL NUMBER OF EXEMPLARS FOR DESIGNING AN ECG PATTERN CLASSIFIER USING MLP", **INDIAN JOURNAL OF SCIENCE AND TECHNOLOGY**, , VOL.2 NO 4, 2009, PAGES: 40-42 , E-JOURNAL (ISSN:0974-5645), PRINT JOURNAL (ISSN:0974-6846)

[2] RAJESH GHONGADE, DR. A.A. GHATOL; "A NOVEL QRS DETECTION METHOD"**, INTERNATIONAL JOURNAL OF APPLIED COMPUTING**,, VOL. 2, SUPP. ISSUE1, 2009, PAGES: 6-13 ISSN: 0974–6277

[3] RAJESH GHONGADE, DR. A.A. GHATOL; "OPTIMIZATION OF A MULTI-CLASS MLP ECG CLASSIFIER USING FCM"**, INDIAN JOURNAL OF SCIENCE AND TECHNOLOGY** , ISSUE NO:9-10 VOL.3, 2010 **,** PP: 1102-1105, E-JOURNAL (ISSN:0974-5645), PRINT JOURNAL (ISSN:0974-6846)

[4] RASIKA BURTE, RAJESH GHONGADE, "ADVANCES IN QRS DETECTION: MODIFIED WAVELET ENERGY GRADIENT METHOD", INTERNATIONAL JOURNAL OF EMERGING TRENDS IN SIGNAL PROCESSING VOLUME 1 , ISSUE 1 ,NOVEMBER 2012, ISSN(ONLINE)2319-9784

[5] DEVASHREE JOSHI, RAJESH GHONGADE "PERFORMANCE ANALYSIS OF FEATURE EXTRACTION SCHEMES FOR ECG SIGNAL CLASSIFICATION" INTERNATIONAL JOURNAL OF ELECTRICAL, ELECTRONICS AND DATA COMMUNICATION, ISSN: 2320-2084, AUG 2013

[6] AA MULEY, RB GHONGADE, "DESIGN AN ANTENNA FOR AQUEOUS GLUCOSE MEASUREMENT", , INTERNATIONAL JOURNAL OF ENGINEERING INNOVATIONS AND RESEARCH, IJEIR 3 (4), 540-543

[7] RBGHONGADE," ON DESIGN OF A THREE CLASS ECG CLASSIFIER", INDIAN JOURNAL OF SCIENCE AND TECHNOLOGY, ISSUE NO:16 VOL.11, APRIL 2018, PP: 1-6, E-JOURNAL (ISSN:0974-5645), PRINT JOURNAL (ISSN:0974-6846)

[8] S. MUNGDE, R.B. GHONGADE," DESIGN AND DEVELOPMENT OF A SMART WATER TANK", JOURNAL OF INSTRUMENTATION SOCIETY OF INDIA, VOL:48, JUNE 2018

[9] D.E. UPASANI, RB GHONGADE," DIVERGENCE CODING FOR DIAGNOSIS OF ATRIAL FIBRILLATION IN ECG SIGNAL ANALYSIS", INTERNATIONAL JOURNAL OF APPLIED ENGINEERING RESEARCH, VOL:13 ISSUE:14, 2018, PP:11501-11507,

[10] S. HABBU, MP DALE, RBGHONGADE, "ESTIMATION OF BLOOD GLUCOSE BY

NON-INVASIVE METHOD USING PHOTOPLETHYSMOGRAPHY", SADHANA, SPRINGER INDIA, VOL:44, ISSUE:6, JUNE 2019, PP:135

[11] A DIKSHIT-RATNAPARKHI, D BORMANE, R GHONGADE, "A FRAMEWORK FOR OPTIMAL ATTRIBUTE EVALUATION AND SELECTION IN HESITANT FUZZY ENVIRONMENT BASED ON ENHANCED ORDERED WEIGHTED ENTROPY APPROACH FOR MEDICAL DATASET", JOURNAL OF BIOMEDICAL PHYSICS & ENGINEERING, VOL:9, ISSUE:3, JUNE 2019, PP:327

[12] ALKA BARHATTE, MANISHA DALE, RAJESH GHONGADE, "CARDIAC EVENTS DETECTION USING CURVELET TRANSFORM", SADHANA, SPRINGER INDIA, VOL:44, ISSUE:2, PP:47, FEB 2019

INTERNATIONAL CONFERENCES:

[1] RAJESH GHONGADE, DR. A.A. GHATOL; "ELECTROCARDIOGRAM PATTERN CLASSIFICATION: AN APPROACH **EMPLOYING DWT AND ARTIFICIAL NEURAL NETWORKS", (PRESENTED) AT TRENDS IN PROCESS INSTRUMENTATION AND CONTROL - INCON2004, P.I.E.T, PUNE,2004**, INDIA, PP: 777-779

[2] RAJESH GHONGADE, DR. A.A. GHATOL; "A BRIEF PERFORMANCE EVALUATION OF ECG FEATURE EXTRACTION TECHNIQUES FOR ARTIFICIAL NEURAL NETWORK BASED CLASSIFICATION", (PUBLISHED), AT **IEEE TENCON 2007, TAIPEI, TAIWAN**

[3] RAJESH GHONGADE, DR. A.A. GHATOL; "ELECTROCARDIOGRAM PATTERN CLASSIFICATION: AN APPROACH EMPLOYING DCT AND ARTIFICIAL NEURAL NETWORKS", (PRESENTED) AT **3RD INDIAN INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE ,2007** (IICAI 07), PUNE, INDIA

[4] RAJESH GHONGADE, DR. A.A. GHATOL; "ON PERFORMANCE EVALUATION OF ECG FEATURE EXTRACTION TECHNIQUES FOR ARTIFICIAL NEURAL NETWORK BASED CLASSIFICATION", (PUBLISHED) AT **INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTER VISION AND INFORMATION TECHNOLOGY, 2007,** (ACVIT-07), AURANGABAD, INDIA

[5] RAJESH GHONGADE, DR. A.A. GHATOL; "PERFORMANCE ANALYSIS OF FEATURE EXTRACTION SCHEMES FOR ARTIFICIAL NEURAL NETWORK BASED ECG CLASSIFICATION", (PRESENTED) AT **INTERNATIONAL CONFERENCE ON COMPUTATIONAL INTELLIGENCE AND MULTIMEDIA APPLICATIONS , IEEE SPONSORED (ICCIMA 2007), SIVAKASI, INDIA**

[6] RAJESH GHONGADE, DR. A.A. GHATOL; "A MULTI-CLASS HEARTBEAT CLASSIFIER EMPLOYING HYBRID FUZZY-NEURAL NETWORK", (PRESENTED) AT **INTERNATIONAL CONFERENCE ON INTELLIGENT AND ADVANCED SYSTEMS, NOV 2007 IEEE SPONSORED ICIAS 2007, KUALA LUMPUR, MALAYSIA**

[7] RAJESH GHONGADE, DR. A.A. GHATOL; "REDUCED FEATURE SET FOR ECG PATTERN CLASSIFICATION", (PUBLISHED) AT **INTERNATIONAL CONFERENCE IN MEDICAL BIOMETRICS (ICMB 08), HONG KONG**

[8] RAJESH GHONGADE, DR. A.A. GHATOL; "A ROBUST AND RELIABLE ECG PATTERN CLASSIFICATION USING QRS MORPHOLOGICAL FEATURES AND ANN" AT **IEEE TENCON 2008**, HYDERABAD, INDIA

[9] AMRUTA DATE, R.B.GHONGADE;" PERFORMANCE OF WAVELET ENERGY GRADIENT METHOD FOR QRS DETECTION IN PRESENCE OF NOISE", AT INTERNATIONAL CONFERENCE ON RECENT TECHNOLOGIES 2012 , PUNE,INDIA

[10] SHRADDHA HABBU, ARCHANA RATNAPARKHI, DR.RAJESH GHONGADE; "PERFORMANCE OF SVM BASED CLASSIFIER, AT INTERNATIONAL CONFERENCE ON RECENT TECHNOLOGIES 2012 , PUNE,INDIA

[11] P.S.CHAUDHARI, DR.R.B.GHONGADE,P.P.KULKARNI; "CLOSED LOOP PERFORMANCE OF THREE PHASE SQUIRREL CAGE INDUCTION MOTOR ON MOSFET BASED QUASI SQUARE WAVE VOLTAGE SOURCE INVERTER WITH SIMULATED RESULTS", AT INTERNATIONAL CONFERENCE ON RECENT TECHNOLOGIES 2012 , PUNE,INDIA

[12] RASIKA BURTE, AMRUTA DATE, RAJESH GHONGADE. "COMPARATIVE STUDY OF QRS DETECTION ALGORITHMS, AT INTERNATIONAL CONFERENCE ON RECENT TECHNOLOGIES 2012 , PUNE,INDIA

[13] AMRUTA DATE, RAJESH GHONGADE," PERFORMANCE OF WAVELET ENERGY GRADIENT METHOD FOR QRS DETECTION", AT **INTERNATIONAL CONFERENCE ON INTELLIGENT AND ADVANCED SYSTEMS, JUNE 2012 IEEE SPONSORED ICIAS 2012, KUALA LUMPUR, MALAYSIA**

[14] RASIKA BURTE AND RAJESH GHONGADE, "ADVANCES IN QRS DETECTION: MODIFIED WAVELET ENERGY GRADIENT METHOD" AT **IEEE** IMAC4S-2013 , KERALA, INDIA ,MARCH 2013, IEEE CATALOG NUMBER CFP1341U-DVD ISBN NUMBER 978-1-4673-5088-4

[15] DEVASHREE JOSHI, ARCHANA RATNAPARKHI AND RAJESH GHONGADE , "PERFORMANCE ANALYSIS OF FEATURE EXTRACTION SCHEMES FOR ECG CLASSIFICATION" AT **IEEE** IMAC4S-2013 KERALA, INDIA ,MARCH 2013, IEEE CATALOG NUMBER CFP1341U-DVD ISBN NUMBER 978-1-4673-5088-4

[16] R GHONGADE, A RATNAPARKHI, D JOSHI, "ARTIFICIAL NEURAL NETWORK BASED ELECTROCARDIOGRAM PATTERN RECOGNITION", THIRD INTERNATIONAL CONFERENCE ON COMPUTATIONAL INTELLIGENCE AND INFORMATION TECHNOLOGY (CIIT 2013), P. 305 – 312, 2013, MUMBAI, INDIA

[17] AA MULEY, RB GHONGADE "DESIGN AND SIMULATE AN ANTENNA FOR AQUEOUS GLUCOSE MEASUREMENT", INDIA CONFERENCE (INDICON), 2014 ANNUAL IEEE, 2014/12/11

[18] RAJESH GHONGADE, MINAL DESHMUKH, DEVASHREE JOSHI, "ARRHYTHMIA CLASSIFICATION USING MORPHOLOGICAL FEATURES AND PROBABILISTIC NEURAL NETWORKS", COMPUTATIONAL INTELLIGENCE ON POWER, ENERGY AND CONTROLS WITH THEIR IMPACT ON HUMANITY (CIPECH), 2014 ,IEEE, 2014/11/28

[19] ARCHANA RATNAPARKHI, RAJESH GHONGADE, "A FRAME WORK FOR ANALYSIS AND OPTIMIZATION OF MULTICLASS ECG CLASSIFIER BASED ON ROUGH SET THEORY", ADVANCES IN COMPUTING, COMMUNICATIONS AND INFORMATICS (ICACCI), 2014, NEW DELHI, INDIA

[20] MRS ALKA BARHATTE, RAJESH GHONGADE, "R-PEAK DETECTION USING WAVELET-ENERGY HISTOGRAM AND ADAPTIVE THRESHOLDING", INTERNATIONAL CONFERENCE ON ELECTRICAL, ELECTRONICS, ENGINEERING TRENDS, COMMUNICATION, OPTIMIZATION AND SCIENCES , (IJETEE – ISSN: 2320-9569, VOL. 10, ISSUE. 10, OCT. 2014)

[21] R.B.GHONGADE, ALKA BARHATTE, "A MULTICLASS CARDIAC EVENTS CLASSIFIER USING CLUSTERING AND MODIFIED ADAPTIVE NEURO-FUZZY INFERENCE SYSTEM, IEEE INTERNATIONAL CONFERENCE ON RESEARCH IN COMPUTATIONAL INTELLIGENCE AND COMMUNICATION NETWORKS,HELD ON NOVEMBER 20-22,2015 AT KOLKATA

[22] R.B.GHONGADE, ALKA BARHATTE, "QRS COMPLEX DETECTION AND ARRHYTHMIA CLASSIFICATION USING SVM", IEEE INTERNATIONAL CONFERENCE ON COMMUNICATION CONTROL AND INTELLIGENT SYSTEMS, HELD ON NOVEMBER 7-8,2015 , MATHURA

[23] R.B.GHONGADE, PRARTHANA SAKHARE, "THREE CLASS ECG CLASSIFIER USING ADAPTIVE NEURO FUZZY INFERENCE SYSTEM" , INTERNATIONAL CONFERENCE ON ELECTRICAL, ELECTRONICS ,MECHANICAL & COMPUTER

	ENGINEERING (ICEEMCE) COCHIN, JULY, 2015 [24] VIDYA DESHMUKH, R.B.GHONGADE, "MEASUREMENT OF DIELECTRIC PROPERTIES OF AQUEOUS GLUCOSE USING PLANAR RING RESONATOR", ASIA MODELLING SYMPOSIUM 2015: ASIA 9TH INTERNATIONAL CONFERENCE ON MATHEMATICAL/ANALYTICAL MODELLING AND COMPUTER SIMULATION,MALAYSIA [25] ABHIJIT S PATIL, RB GHONGADE, "DESIGN OF BIOIMPEDANCE SPECTROMETER", INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING, COMMUNICATIONS AND INFORMATICS (ICACCI),2016, JAIPUR, INDIA [26] TAPASH BARMAN, RAJESH GHONGADE, ARCHANA RATNAPARKHI, "ROUGH SET BASED SEGMENTATION AND CLASSIFICATION MODEL FOR ECG", JUNE 2016 , ADVANCES IN SIGNAL PROCESSING (CASP), 2016, PUNE, INDIA [27] ALKA S BARHATTE, RAJESH GHONGADE, SACHIN V TEKALE, "NOISE ANALYSIS OF ECG SIGNAL USING FAST ICA", ADVANCES IN SIGNAL PROCESSING (CASP), 2016, PUNE, INDIA [28] MRS AS BARHATTE, RAJESH GHONGADE, SACHIN L MANE, "ANALYSIS OF ST SEGMENT IN ECG FOR DETECTION OF ISCHEMIA", 3RD INTERNATIONAL CONFERENCE ON ELECTRICAL, ELECTRONICS, ENGINEERING TRENDS, COMMUNICATION, OPTIMIZATION AND SCIENCES (EEECOS) -2016, TADEPALLIGUDEM, ANDHRA PRADESH, INDIA **NATIONAL CONFERENCES:** [1] RAJESH GHONGADE, M.J. KHURJEKAR, "ECG: APPLICATIONS IN CLINICAL DIAGNOSIS AND TELEMEDICINE", NATIONAL CONFERENCE ON EMERGING `TRENDS IN BIOMEDICAL ENGINEERING, BIOCON 2005, BVDU, SEPETEMBER 2005
Books Published	-
Professional Memberships	1. LMISOI 2. LMIETE 3. LMISTE
WorkShop/ Seminar/Conference attended	• "MICROPROCESSORS IN INSTRUMENTATION" AT S.G.G.S. COE&T, NANDED, DURATION : TWO WEEKS (17TH TO 28TH JUNE 1996) • "DIGITAL IMAGE PROCESSING AND PATTERN RECOGNITION AT DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE, DURATION: TWO WEEKS (30TH JULY TO 11TH AUGUST 2001) • "DISTRIBUTED OBJECT COMPUTING USING JAVA / CORBA" AT DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE, DURATION: TWO WEEKS (4TH TO 16TH FEBRUARY 2002) • " CAMPUS WIDE NETWORK ADMINISTRATION" AT DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE, DURATION: TWO WEEKS (13TH TO 25TH JANUARY 2003)

	"STILL IMAGE AND VIDEO PROCESSING" AT PUNE INSTITUTE OF ENGINEERING & TECHNOLOGY, PUNE, DURATION: TWO WEEKS (12TH TO 25TH JUNE 2004) - CERTIFICATE COURSE IN VLSI DESIGN AT BIT MAPPER INTEGRATION TECHNOLOGIES PVT LTD, PUNE, DURATION: ONE WEEK (9TH TO 15TH JULY 2001) - SIXTH ANNUAL CONVENTION OF MAHARASHTRA-GOA SECTION OF I.S.T.E. AT DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE, DURATION: TWO DAYS (14TH TO 15TH DECEMBER 2001) 1. **COURSES CONDUCTED**: "VLSI: TECHNOLOGY OF THE FUTURE", AICTE-ISTE SPONSORED SHORT TERM TRAINING PROGRAMME, AT DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE, DURATION: TWO WEEKS (12TH TO 25TH FEBRUARY 2003)
Achievements	**PATENT(S)**: 1. "FUZZY ROUGH ASSISTED PORTABLE MINIATURE DILIGENT E-HEART SYSTEM", FILED (24/07/2018), PUBLICATION DATE: 10/08/2018, APPLICATION NO.201821027705 A 2. "SOFT ROUGH SET BASED HEART HEALTH MONITORING SYSTEM USING PHOTOPLETHYSMOGRAPHIC WAVEFORMS", FILED: 12/05/2018, PUBLICATION DATE: 01/06/2018, APPLICATION NO.201821017915 A 3. "NONINVASIVE BLOOD GLUCOSE ESTIMATION BY PHOTOPLETHYSMOGRAPHY USING SINGLE PULSE TECHNIQUE WITH CEPSTRAL COEFFICIENTS", FILED: 08/08/2019, APPLICATION NO.201921032125 A 4. "A MATURITY METER SYSTEM FOR CONCRETE MATERIALS" FILED:10/2/21, APPLICATION NO.:(202121005594) TEMP/E-1/5991/2021-MUM **COPYRIGHT(S)**: 1. "DISCRETE DESIGN FACTORY" SW-8280/2015 2. "POWER TRANSFORMER DESIGN -50Hz", SW-8281/2015 3. "BASIC LINEAR POWER SUPPLY DESIGN" SW-9066/2017 4. "BJT BIASING INTERACTIVE DEMO" SW-14109/2021 **AWARDS:** 1. PORWAL HUMANITY AWARD, 2007 2. RESEARCH AWARD, PCERF, CONSTRO 2016, 3. SPECIAL RECOGNITION FOR INDUSTRY EXCELLENCE CATEGORY UNDER IEI BLC-FCRIT EXCELLENCE AWARD 2021

Extra Activities	- WORKED AS A CO-ORDINATOR FOR MODROBS PROJECT TITLED "MODERN COMMUNICATIONS", 1999(DBATU) - WORKED AS A CO-ORDINATOR FOR MODROBS PROJECT TITLED "VIRTUAL CIRCUIT DESIGN LAB", 2000(DBATU) - WORKED AS A CO-ORDINATOR FOR MODROBS PROJECT TITLED "APPLICATIONS OF DSP", 2000(DBATU) - SYLLABUS PREPARATION FOR UG SUBJECTS: ELECTRONIC DEVICES AND CIRCUITS-I, ELECTRONIC DEVICES AND CIRCUITS -II, VLSI, INTEGRATED CIRCUITS AND APPLICATIONS, ELECTRONIC INSTRUMENTATION, COMPUTER BASED MODELING AND SIMULATION PG SUBJECTS: ANN & FL, VLSI DESIGN, DIGITAL SYSTEM DESIGN (DBATU) - PARTICIPATED IN THE PREPARATION OF NBA PROPOSAL , 2003 FOR E&TC DEPARTMENT OF DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE - PARTICIPATED IN THE PREPARATION OF NBA PROPOSAL , 2004 FOR E&TC DEPARTMENT OF SINHGAD COLLEGE OF ENGINEERING,PUNE - PARTICIPATED IN THE PREPARATION OF NBA PROPOSAL , 2008 FOR E&TC DEPARTMENT OF VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY,PUNE - PARTICIPATED IN THE PREPARATION OF NBA PROPOSAL , 2015 FOR E&TC DEPARTMENT OF VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY,PUNE - PARTICIPATED IN THE PREPARATION OF NAAC PROPOSAL, 2016 FOR VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, PUNE **CONSULTANCY WORK:** 1. "DEVELOPMENT OF HOME AUTOMATION UNIT", GIZMO TOTAL HOME AUTOMATION AND SECURITY SOLUTIONS, PUNE 2. "DEVELOPMENT OF CLOUD BASED GPS TRACKER FOR VEHICLES .3DMLYNX LLP, PUNE 3. "DEVELOPMENT OF CLOUD BASED TEMPERATURE DATA ACQUISITION SYSTEM + FRONT END GRAPHICAL INTERFACE", ASHOKA STRUCTURAL CONSULTANTS, PUNE 4. "DEVELOPMENT OF CENTRAL MONITORING SYSTEM, ATECHNO EMBEDDED SOLUTIONS OPC PVT LTD, PUNE 5. "DEVELOPMENT SMART MAINTENANCE SUPPORT SYSTEM, ATECHNO EMBEDDED SOLUTIONS OPC PVT LTD, PUNE