

# INFORMATION BROCHURE

## Admission to

## DOCTORAL (Ph. D) & M.E. BY RESEARCH DEGREE PROGRAMMES

**(2017-2018)**

- Only Autonomous Institution in Central India to get Dual Accreditation NAAC & NBA (Tier-I)
- 153 Patents filed in Central India



---

### **G.H. RAISONI COLLEGE OF ENGINEERING**

**(An Autonomous Institute affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

CRPF Gate-3, Hingna Road, Digdoh Hills, Nagpur (M.S.)

Phone: (07104) 325899, 235390

Fax: (07104) **232560**

**E-mail: [principal.ghrce@raisoni.net](mailto:principal.ghrce@raisoni.net)**

**Web site: [www.ghrce.raisoni.net](http://www.ghrce.raisoni.net)**

## **Courses Offered**

### **DOCTORAL PROGRAMMES**

Ph.D. Programmes are offered in:

1. Ph.D. in Electrical Engineering
2. Ph.D. in Mechanical Engineering
3. Ph.D. in Electronics Engineering
4. Ph.D. in Computer Science and Engineering
5. Ph.D. in Civil Engineering
6. Ph.D. in Information Technology
7. Ph.D. in Electronics and Telecommunication Engineering
8. Ph.D. in Physics
9. Ph.D. in Chemistry
10. Ph.D. in Mathematics

### **M.E. BY RESEARCH:**

M.E. (By Research) offered in:

1. ME (By Research) in Electrical Engineering
2. ME (By Research) in Mechanical Engineering
3. ME (By Research) in Electronics Engineering
4. ME (By Research) in Computer Science and Engineering
5. ME (By Research) in Civil Engineering
6. ME (By Research) in Information Technology
7. ME (By Research) in Electronics and Telecommunication Engineering

## OUR INSPIRATION



**Shri Sunil Raisoni**  
**Chairman, RGI**



**Mrs. Shobha Raisoni**  
**M.D., RGI**

The G H Raisoni College of Engineering was established in 1996 for providing leadership in education and research with a focus on science and technology. Over a period of one decade, about 10,000 students have graduated from the institute with Bachelors, Masters degrees. Today, G H Raisoni College of Engineering is a leading institution globally for education in engineering and management.

The institute is committed to playing a key role in creating an ambience for nurturing the engineers and leaders of tomorrow. In doing so, we hope to make significant contributions to the development of the country and improvement in the quality of life of its citizens. For this, we need to pursue a strategy that fosters creativity, supports interdisciplinary research and education. G H Raisoni College of Engineering is an essential component of this strategy. We are proud to say that the institute is ideally placed to exploit the synergies with the industries located in the heart of India- Nagpur.



## Our Dynamic Leadership

The scenario of Technical education is changing rapidly and change in attitude and facilities have become a must for all the Institutions in India. Since the early eighties, due to rapid industrialization and economic growth, engineering and technical education in India have been developing faster than anywhere else in the world, and India now has the second largest number of engineering students in the world. Recent Indian scientific, industrial and technological developments have earned India world recognition as an emerging global power.

At GHRCE, We have adopted standard competitive research and object-oriented Post Graduate Engineering study courses. These are innovative in nature and offer tremendous advantages and benefits to students. We believe that with these post graduate courses linked with industries and research organizations we can meet the present and future challenges of rapid technological changes and industrial development in our country.

I am delighted to tell you that GHRCE is the first institute in the region to undergo PG accreditation. We provide high standard of education at both the undergraduate and postgraduate levels. The institute lays special emphasis on human values & ethics, apart from academic excellence. For many years we have upheld a proud record of funding for research, and we have established a solid reputation for research achievements in many different fields and across many different disciplines. This reputation has attracted talented teachers and students to our Institute, further enhancing the quality of our research.

Our students have access to state of art library, computational facilities, and we aim to keep our digital systems up-to-date, in order to provide the most advanced knowledge acquisition system.

The interests of our students are at the heart of everything we do and providing high quality learning opportunities within a supportive environment is one of our main aims. The academic success of our students is very important to us and we will make every effort to help and support them.

Thank you for choosing GHRCE as a preferred institute for pursuing your M.E. by Research and Doctoral programme. I look forward to welcome you and do hope that if selected you will have a rewarding experience in the institute.

**Dr. Preeti Bajaj**

**DIRECTOR**

**G.H. Raison College of Engg.**

## PREAMBLE

G.H. Raison College of Engineering Nagpur (GHRCE) is a premier research institute in Central India which has coveted status of autonomy. We feel proud to inform you that GHRCE has been assessed by National Assessment & Accreditations Council (NAAC) and graded the college with “A” Grade. Various courses run by the college are duly accredited by National Board of Accreditation (NBA Tier-I) of AICTE. The Institute is the proud recipient of World Bank Project known under the Technical Education Quality Improvement Program (TEQIP-I & TEQIP-II). Institute has fetched many National Level awards at IITs including CII Top Innovator Award. Institute has Platinum rating in category for best industry linked institution by AICTE-CII Survey for three programmes and Gold for the rest.

The Institute has 7 UG Engineering Programs, **11 PG** Engineering Programs, MTM, MBA & MCA and 10 Doctoral Programs in Engineering & Technology and Basic Sciences. Institute has adopted modern teaching learning practices with blended MOOCS, Google class rooms, QEEE(IITM), NMEICT(IITB), Akash tablets, Virtual labs and E-yantra project which are all initiatives of MHRD. This is the only institute in central India to have sandwich program with 6 months industry internship embedded in 4 year degree course. Institute offers Choice Based Credit System (CBCS). It also offers Credit Transfer Scheme (CTS) with VJTI Mumbai & COE Pune. It has MoU with IIT Gandhinagar, VNIT Nagpur and SVNIT Surat. The institute promotes innovation and entrepreneurship through its own Incubation centre and research funding.

GHRCE has received number of Sponsored research projects from DST, AICTE, IEI, UGC and other funding agencies. It has hosted seven IEEE International Conferences in India and abroad, one Elsevier International conference and 34 National conferences. Institute publishes International Journal on Emerging Trends in Engineering & Technology. It has very high record of intellectual property with 4700 plus publications, 3200 plus citations and 153 patents in last 4 years with 6th position in India for filing patents. All Under Graduate courses have compulsory 6 months industrial internship embedded in 4 year degree course. As emphasis is given on innovation and internship has resulted into filing of 153 patents in last four years and Institute has been listed as 6th in top 10 highest patent filing Institution as per Annual Report of Indian Patent Office. Institute has received best E-Governance Project Award from Department of Information Technology, Government of India.

### Intellectual Capital

Number of Publications	4700 plus
Number of Books / Chapters	20
Number of Patents Applied / In process	153
Number of PhD Awarded at ARC	17
Number of PhD submitted/pre submission at ARC	60+2(Pre-Submission sem.)
Number of Sponsored R & D Projects	36
International Conferences organized	09
National Conferences organized	34

## **A. DOCTORAL PROGRAMMES (Ph.D. PROGRAMME)**

G. H. Raison College of Engineering offers Ph.D. degree through its various Departments. The award of Ph.D. degree is in recognition of high academic achievements, independent research and application of knowledge to the solution of technical and scientific problems in Engineering and Technology. Creative and productive inquiry is the basic concept underlying the research work.

The research work shall be an original work characterized either by the discovery of facts, or by a fresh approach towards the interpretation and application of facts. It shall demonstrate the candidate's capacity for critical examination and sound judgment and shall represent original contribution to the existing knowledge.

The degree of Doctor of Philosophy is granted for research work in areas recognized by the academic departments of the Institute. The degree of Doctor of Philosophy will be awarded in the discipline of the department in which the candidate is registered.

Departments have excellent R & D facilities and also tie up with national & International Labs & Center of Excellence.

### **Courses offering Ph.D Programme are:**

1. Ph.D. in Electrical Engineering
2. Ph.D. in Mechanical Engineering
3. Ph.D. in Electronics Engineering
4. Ph.D. in Computer Science and Engineering
5. Ph.D. in Civil Engineering
6. Ph.D. in Information Technology
7. Ph.D. in Electronics and Telecommunication Engineering
8. Ph.D. in Physics
9. Ph.D. in Chemistry
10. Ph.D. in Mathematics

## **B. M.E. by Research**

Courses offering ME by Research Programme are:

1. ME (By Research) in Electrical Engineering
2. ME (By Research) in Mechanical Engineering
3. ME (By Research) in Electronics Engineering
4. ME (By Research) in Computer Science and Engineering
5. ME (By Research) in Civil Engineering
6. ME (By Research) in Information Technology
7. ME (By Research) in Electronics and Telecommunication Engineering

**Research Facilities available**

<b>Name of Department</b>	<b>Name of Laboratory</b>	<b>Research Facility</b>
Computer Science & Engineering & Information Technology	Network Lab	OPNET IT Guru Network Simulator Wireless Access Points Wireless LAN Cards
	Software Engg. Lab	IBM Rational Rose Software
	Multimedia Lab	Infrared Thermal Camera
	Embedded & Wireless Communication Lab	Embedded Development Kits
Mechanical Engineering	Energy Conversion Lab.	Internal Combustion Engine test set up, Automotive Exhaust air pollution, Compressed Air.
	Refrigeration & Air Conditioning Lab.	Alternative refrigerants, Performances improvement of convectional and non convectional refrigeration system.
	CAD/CAE Lab.	ANSYS Multi-physics 9.0 software for structural and Thermal analysis. Unigraphics NX4 CAD/CAM -Nastran software for 2D/3D Modeling.
	Heat Transfer Lab.	Performance and testing of Heat exchangers.
	Automation in Production lab	Six axis vertically articulated robot set up, XLTURN CNC Lathe and milling machines
Electrical Engineering	High voltage	Impulse generator, 100 KV AC , 140 KVDC, 420 KV impulse. 2.94 kj, three stage Storage CRO Tan Delta System
	FACTS	Transmission line model SVC, VSC based FACTS Devices Power scope Phase shifting Transformer
	Switch Gear Protection	Advance Numeric Relays
	Control and Power System	Transmission line simulator with FACT devices
	Advanced electrical drives	3-ph SRM-IGBT Power Module 1 PH S R Motor SRM Module of Motor Pro Software Drives: - PLC Trainer kit, PLC, RS Logix Software & communication cable
	Wind Generator Lab	Wind generator panel

Electronics Engineering & Electronics and Telecommunications	Test and measurements lab	Universal Calibrator 9 in 1 Test Lab Hand Held DSO Programmable Multimeter
	Embedded System lab	Stand Alone Logic Analyzer (34 channel) (make- Techtronix) , Universal Programmer, LabView, Multisim, MultiMCU, NI ELVIS Hardware board, Embedded Development Tool for 8051 Microcontroller- KEIL PK 51, ARM Microcontroller- KEIL MDK- ARM, ARM Microcontroller Evolution Board for Philips -KEIL MCB2103, KEIL ULINK (USB JTAG link Adapter for ARM controller), 8051 $\mu$ C Kits
	Electronics Workshop Lab	Double sided PCB development equipments like Proto-contact PCB Artwork Film Maker Proto-Etch Etching Machine Photo Dye/developer (2 in 1) Motorized roller Tinning Machine Proto-Shot (Compact Vertical reprographic Camera) Thru-hole-plating system (PTH) Dry film laminator Photo developer /stripper Wave Soldering machine.
	Advance Communication lab	Optical Communication System Design equipment like Fiber optic power meter Fiber optic LED light source Fiber optic continuity tester Fiber optic video link Fiber optic Connectorization cum splicing Kit Fiber optic trainer system Optical Time Domain Reflectometer (OTDR) Power Quality Analyzer VisSim Software, Wireless Sensor Kits DSP starter kits (TMS320C5416, TMS320C6713), Spectrum Analyzer (3.3 GHz)
	Telephony Lab	CDMA Kit ,GSM Kit, Mobile Trainer, Telephone Trainer system LAN trainer System, GPS Trainer system



	Analog and Digital Lab	Xilinx 9.1, ModelSim , Altera MaxPlus- II, Tanner Tool for VLSI
	Soft Computing Lab	MATLAB with all toolboxes
Civil Engineering	Concrete Technology	Tile Abrasion Testing Machine
		Accelerated Curing Tank
		Compression Testing Machine
		Flexural Testing Machine
		Rebound hammer
		Ultra sonic Pulse velocity
	Structural Analysis	Horizontal Shake Table
	Geotechnical Engineerng	Soil Resistivity meter
		Tra-Axial Test Apparatus
		CBR testing machine
	Environmental Engineering	UV spectrophotometer
Physics	Physics	Monopan Balance
		Hydraulic Press Compression testing Machine.
		High Vacuum Pump
		Silicon Carbide Furnace
		Universal B-H Curve tracer
		Four Probe Energy Gap appts.
		PH Meter
		Magnetic Stirrer
		Auto LCR Q Tester
Chemistry	Chemistry	Orbital shaking incubator
		Magnetic Stirrer
		Digital conductivity meter
		Hot air oven
		Digital pH meter
		Water bath Thermostatic control
		Muffle furnace
		Centrifuge

**I] Registration procedure for Doctoral Programmes (Ph.D) and M.E. (By Research) Programmes of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur as per Direction No. 1 of 2016 (refer website [www.nagpuruniversity.org](http://www.nagpuruniversity.org))**

**II] Fees**

Candidates desirous of seeking admission to any of the M.E. by Research and Ph.D programme must deposit demand draft of required amount (refer table below) drawn in favour of the Director, G. H. Raisonni College of Engineering Nagpur, payable at Nagpur or cash payment at the College Bank Counter.

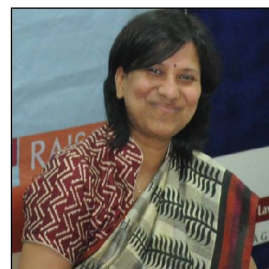
<b>Sr. No.</b>	<b>Name of Programme</b>	<b>Fees per Annum (Rs.)</b>	<b>Caution Money (Refundable)</b>
1	Doctoral (Ph.D)	Rs. 50,000/-	Rs. 2,000/-
2	M.E. by Research	Rs. 50,000/-	Rs. 5000/-

Prospectus and application form is to be purchased by paying Rs.1000/-.

Examination fees for Ph.D and M.E. by research will be charged separately as per RTM Nagpur University/ Rules and regulations of G. H. Raisonni College of Engineering (An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur as applicable from time to time.

**Electronics/Electronics and Telecommunications Engineering**

## 1. Dr. Preeti Bajaj



- **Qualification:** Ph.D.(Electronics), MBA
- **Area of Specialization /Research:** Intelligent Transportation System with soft computing, Hybrid Intelligent systems design
- **Total Experience:** 25 Yrs
- **Number of Publications :** Around 150
- **Books** : Three Books by In Tech Publications

- **Ph.D. Guided:**

Name of student	Area	Name of topic
Mr. M.M. Khanapurkar	Intelligent Transportation systems	Vehicular Communication: A Design for Some Intra-vehicular Communication applications with VLSI Tools
Mr. D. V. Padole	Embedded Systems	Optimum prototype Design of Embedded Controller for Some Applications in Intelligent Transportation Systems
Sharada Devi	Image Processing	Design & Development Of Some Methodology For Driver Monitoring System With Non Intrusive Approach
Purna Diagavane	Intelligent Transportation systems	Some Strategies For Analysis Of Traffic Flow On Highways With Computer Vision Algorithms Soft Computing Tools
Prashant Sharma	Intelligent Transportation systems	A Design Approach to Hybrid Intelligent System with Type Z Fuzzy Logic For Some Applications of Intelligent Transportation System
Shubhangi D Giripunje	Image Processing	A Design & Implementation of Simulation Facial Action Tracking & Emotion Recognition Based on Non Intrusive Parameters
Ratnaprabha Jasutkar	VLSI/Bio Medical	Design and Development of Sigma Delta Modulator with Power Optimization for Bio Medical Application.
Komal Mehta	Intelligent Transportation systems	Performance Improvement of vehicular ad-hoc network (vanet) with nature inspired biological computing algorithms.

- **Ph.D. Ongoing:** 03
- **Professional Accomplishments**
  - LM- ISTE
  - Fellow -Institution of Engineers
  - LM-CSI

- Fellow IETE
- Member ACM
- Senior Member-IEEE, Vehicular Society, Intelligent transportation , SMCS
- Execom member IEEE Bombay Section 2007-2010

- **Research**

- Approved and Research Center for PhD and higher Learning for Ten doctoral programs.
- Streamlined R & D policies and designing norms
- Foundation General Chair- ICETET series of International Conferences under
  - **SMC, IEEE** at GHRCE (ICETET2008, ICETET2009, ICETET2010, ICETET2011, ICETET2012, ICETET2013, ICETET2015)
- Editor-in-chief International Journal Of Engineering Trends In Engineering And Technology (IJETET)
- Design Development of Research Policy and Incentive plan
- Design, development and execution of Research methodology Course for undergraduate , Postgraduate and doctoral Students
- Developed Vision Plan for GHRCE for TEQIP-2 wherein Institute ranked Third amongst Private colleges in India
- Reforms in Research Norms, incentives, policy, PhD norms etc

- **Publications:**

- Chapter Contribution: 05
- Research Article: “Research on Driver’s Fatigue Detection” published in Special issue on Human Centered Transportation Systems, IEEE SMCS, June 2010
- National Conferences: 6
- International Conferences: 73
- Journals: 50

### **Awards/ Honors**

- Received international Travel Grant for attending International Conference at Moriokka, Japan from department Of Science and Technology, Government of India.
- Received international Travel Grant for attending International Conference at Oxford University, United Kingdom from All India Council for Technical Education, Ministry of Human Resource and Development.
- Received Best Teacher award of the Institute for the academic session 2001-2002
- Received international Travel Grant for attending International Conference at Washington D.C., USA from Department of Science and Technology, Ministry of Science and Technology, New Delhi
- ISTE-AICTE Sponsorship for 1 Week training course on DIP & real Time Applications.
- Reviewer For National Conference at KDK College of Engineering, Nagpur
- Proud Recipient of “**Bhaskar Woman’s Award**” for year 2010.
- Recipient of “**Faculty of Month**” for September 2011, by Teacher Academy, Hyderabad

## 2. Dr.A.Y.Deshmukh



- **Qualification:** Ph.D. (Electronics), M.E(Electronics), B.E.
- **Area of Specialization /Research:** VLSI, Hybrid Systems
- **Total Experience:** 19 Yrs
- **Industrial Experiences if any:** 1 Year
- **Citations:**131
- **Number of Publications**  
**Journal (National & International):** 25 International  
**Conferences (National & International):** 35-international / 15-National
- **Professional Body Affiliation:**
  - Senior Member, IEEE
  - Technical Committee Member of Soft Computing IEEE USA
  - Life Member, ISTE
  - Member, CSI
- **Ph.D students registered:** 08 Students
- **Patents Filed:** 02
- **Funded Research Project:**
  - Research Project funded by AICTE under RPS Scheme: 7.37Lacs
  - IEDC Project :2 Lac
- **M.Tech/ ME Project guided:** 18 Students
- **Research Activities:**
  - Technical Committee Member of Soft Computing IEEE USA
  - Worked as Publication Chair & Program Co-Chair for ICETET-08, 1<sup>st</sup> International Conference on Emerging Trends in Engineering & Technology at GHRCE.
  - Worked as International Chair for ICETET-09, ICETET-10, ICETET-11, ICETET-12, ICETET-13 International Conference on Emerging Trends in Engineering & Technology
  - Worked as Board of studies member of G. H. Raisonni International University, Raipur in Electronics Engineering.
  - Worked as Board of studies member of G. H. Raisonni International University, Raipur in Mechatronics Engineering.
  - Worked as chairperson for National Level paper presentation conference, BLITZKRIEG at BDCOE Wardha
  - Worked as Organising member for MSBTE Sponsored STTP on Mechatronics at GHRCE.
  - Worked as Coordinator for CDAC course on VLSI at GHRCE

### Editorial Board/Reviewer of International Journals

- IDT
- IJSSST
- Hindawi

### Special Achievements:

- Best Teacher Award at G.H. Raisonni College of Engineering Nagpur in 2004
- Visited countries like USA, Australia, Japan, Singapore, Dubai, Mauritius for visiting foreign universities and attending and presenting research papers in conferences.

**3. Dr. Sanjay S. Dorle**

- **Qualification:** B.E (Electronics), M.Tech (EDT), Ph.D (Electronics Engineering)
- **Area of Specialization:** Automotive Electronics, Vehicular Adhoc Network
- **Total Experience:** 16 years
- **Industrial Experience if any:** 01 year
- **Number of Publications**  
**Journal (International):** 17  
**Conferences (International):** 46
- **Ph.D students registered:** 05
- **M.Tech/ ME Project guided:** 20

**R & D:**

- Received Research grant from AICTE of Rs. 8.75 Lacs for the research work “Computational Capacity of Vehicular Adhoc Network” from AICTE, New Delhi in session 2008-09.
- Received best industrial paper award in the international Conference ICETET-12 at Himeji, Japan.

**Teaching Award:**

- Received “Best Teacher Award” for the session 2008-09, sponsored by Rasoni Group of Institutions.

**Reviewer:**

- Reviewed research papers for the International conference ICETET-08, ICETET-09, ICETET-11, ICETET-12, ICETET-13 & ICETET-15.
- Reviewed research papers for the International conference VPPC-08.
- Reviewed research papers for the International Journal IEEE – VTC.
- Reviewed research papers for the International conference IEEE WSN-10.

**Extracurricular activities:**

- IEEE Senior Member.
- Life Time ISTE Member.
- Life Member CSI
- ACM

**Resource Person**

- Delivered expert lecture at one week workshop on “VHDL design and Applications” at G. H. Rasoni Polytechnic, Nagpur, 2008.
- Delivered an expert lecture in ISTE Sponsored short term training Programme on “Embedded Microcontroller & RTOS” at GHRCE on 5<sup>th</sup> July 2006.
- Delivered an expert lecture in AICTE Sponsored Staff Development Programme on “Wireless & Mobile communication” at Priyadarshini College of Engineering, Nagpur on 6<sup>th</sup> September 2009.
- Delivered an expert lecture in AICTE Sponsored Staff Development Programme on “Advanced Wireless Communication” at Umrer College of Engineering, Nagpur on 13<sup>th</sup> February 2009.
- Invited as Session Chair for National Level Conference “NIRMITI-2011” on 8-9<sup>th</sup> March 2011 at Priyadarshini Institute of Engineering & Technology, Nagpur.
- Delivered an expert lectures in ISTE Sponsored short term training Programme, AICTE Sponsored Staff Development Programme, Research Methodology Workshop at various institutes.
- Session Chair in the National Conference “Spandan 2016” at YCCE, Nagpur.

**5. Dr. Shubhangi D. Giripunje**

- **Qualification:** Ph.D (Electronics Engg.), M.E.(Digital Electronics)
- **Area of Specialization /Research:** Embedded Systems, Multi-core SoCs, and Digital Signal Processing
- **Total Experiences:** 16 Years
- **Number of Publications:**   **National Conference-03**  
  **International Conference-07**  
  **International Journals-14**

**Research & Development:**

- Working on Emotion recognition in speech using neural network
- As a Reviewer for International Conference ICETET 08, India, 16-18 July 2008
- As a Reviewer for International Conference ICETET 09, India, 16-18 December 2009
- As a Reviewer for International Conference ICCSIT 2011, Cheungdu, China.
- As a Reviewer for International Journal of computer engineering Research.
- IEDC sponsored project 2011-12.
- Selected for Motorola Project competition, 2012-13.
- IEDC sponsored project 2012-13.
- 3 patents are filed

**Faculty Development:**

- 15 days STTP on MATLAB at YCCE, Nagpur. in Oct 2002.
- 7 days corporate training on VLSI by Bitmapper's PUNE.
- 2 days on Matlab (state level) at GHRCE, Nagpur in 2003.
- Workshop on Analysis & Simulation Software, VNIT, Nagpur in 2003
- 2nd International Expo on Smart card Mumbai, India Sept 2000.
- Seminar on 'Labview Software' by National Instruments, Bangalore, Sept 2004
- Training programme on 'Spectrum Analyzer' at GHRCE.
- 2 day Workshop on ORCAD, G.H.R.C.E Nagpur
- 6 days Workshop on MATLAB at GHRCE, Nagpur. in JAN 2006
- 3 days Workshop on 'Blue print for success' by Shiv Khera, Nagpur
- 3 days STC on Embedded Microcontroller and RTOS in GHRCE, 3-5<sup>th</sup> July 2006.

**Conf. /Seminars**

- IEEE State level Conference on e on Communication Systems at Alandi in March 2003
- 'Design of Cellular Network using Neural Network' Symposium at April 25-27, 2003.
- 5 days "Systems, Man, and Cybernetics (SMC), 2013 IEEE International Conference on 13-16<sup>th</sup> Oct., 2013, Manchester, UK.
- 2 days "PhD Track" for the 'International Workshop on Human-Machine Systems, Cyborgs and Enhancing Devices' on 12<sup>th</sup> Oct., 2013, Manchester, UK.



**6. Dr. Milind M. Khanapurkar**

- Ph. D. (Electronics Engineering), M. B. A.(Marketing Management)
- Professor and Head, Department of Electronics and Telecommunication Engineering (Chairman Board of Studies, E & TC and ETRX Board), G. H. Rasoni College of Engineering Nagpur
- Experience: 26 years
- Approved Supervisor: Ph. D. & M. E. By Research (RTMNU, Nagpur)
- Professional Bodies: LM ISTE, Senior Member IEEE, Fellow Member IETE, CSI, MIE, ACM
- AICTE-ISTE STTP Attended: 09
- Seminars/ Workshops / Conferences attended: 30
- Guest Lectures delivered : 10
- Publications:
  - Book Chapter :01
  - International Journals: 14
  - International Conferences: 14
  - National Conferences: 09

**Major Achievements:**

- Patent Applied : 01 ( March-2013)
- DST Travel Grant (Sept-2013) & AICTE Travel Grant (April 2008)
- RPS -AICTE grant of Rs. 09.00 lacs under (March- 2013)
- IEDC Grant , NSTEDB , DST New Delhi (July-2012) (Completed)
- IIP Cell –AICTE grant of Rs. 06. 50 lacs (April-2009) (Completed)
- AICTE Grant for STTP (May-2008) (Completed)
- PC Member of IC : VPPC 09, IEEE- ICETET-09, ICETET-10, ICETET-2011 & ICETET-11
- Guided Project has participated in National level Project competition at IIT Delhi and IIT Powai
- Dissertation / Projects Guided:
  - Ph. D. Registered :04 (01 in association with Industry, 01 RPS received)
  - M. E. By Research: 01 completed
  - PG (M. Tech.): 25
- UG: 40 (01 : Technology Transfer: 01: IEDC grant 1.00 lacs)

**7. Dr.S. S. Salankar**

- Designation: Professor
- Academic experience: 25 Yrs.
- Qualification: Ph.D.
- Area of Specialization: Signal Processing, Image Processing & Soft Computing
- PhD student Guided: 07
- Papers published in International Journal: 04
- Papers published in National/International Conferences: 17
- Training & Workshop attended: 19
- Institution level Portfolio: Dean (International Relations)

**8. Dr. Sanjay Laxmikant Haridas**

Highest Qualification: Ph. D. in Electronics Engineering

Experience: 25 Yrs. Teaching

Membership: ISTE & IE

Title of Dissertation: Power Optimization of Viterbi Decoder for Wireless Applications

Publications: National Conferences - 03  
 International Conferences- 07  
 Journals - 04

#### 4. Dr. Dinesh V. Padole

- **Qualification:** M.Tech (EDT), Ph.D (Electronics)
- **Area of Specialization /Research:** Embedded Systems, Multi-core SoCs, and Digital Signal Processing
- **Total Experiences:** 14 Years
- **Number of Publications:**



Book	Two chapter published on international book
Journal (National & International)	11
Conferences (National & International)	21

- **Ph.D Students Registered :** 06 Students
- **M.Tech Project guided:** 24 Students
- **Professional Membership:** IEEE, ISTE, CSI, SMCS-IEEE
- **Awards:**  
 Received Best Teacher Award for year 2009-2010 from G.H. Raisoni College of Engineering, Nagpur
- **Expert Talk Delivered:**
  - Resource Person for Phase-II Workshop on “Outcome based Accreditation and Education” organized by National Board of Accreditation at Punjab Technical University, Jalandhar, on date 26 to 29 Aug 2013.
  - Resource Person for “Curriculum Updation Faculty Development Program” at G.H. Raisoni Polytechnique College, Nagpur from 02-07 Feb 2009
  - Resource person for STTP “Role of Microprocessor & Microcontroller in Interdisciplinary applications” from 26-30 May 2008
  - Delivered a Guest Lecture on “Microcontrollers & their Applications” at Govt. Poly. on 20/9/06
  - As a resource person for ‘Microcontroller’ in Workshop on Modern Elevator., March 2004
  - Expert lecture on “Embedded System” and SB Jain college of Engineering, Nagpur, 14/9/2012
  - Delivered expert lecture in Research Methodology Workshop on “Research Methodology and sampling” at GHRE for Ph.D and Post graduate students.
  - Delivered expert talk at Short Term program on “C2000 Microcontroller: Real Time MCUs”, organized by Department of Electrical Engg, GHRCE on dated 22 to 26 July 2013.
  - Delivered expert talk at Short Term program on “Embedded System”, organized by Department of Information Technology, GHRCE on May 2013,
  - Delivered Expert talk at KITS, Ramtek on 16 Feb 2015.

**Mechanical Engineering**

**1. Dr. Pramod V. Walke**

Professor & Head (Mechanical Engg.)

- Qualification: M.Tech. (Heat Power Engineering), Ph.D.
- Area of Specialization /Research: Internal combustion engine, Renewable Energy Sources
- Research Scholar Enrolled (Ph .D): 04 Nos.
- Total Experiences: 22 Yrs.
- Publications:- 44 Nos..
- International journal: - 33 Nos.
- International Conference: - 07 Nos.
- National Conference : - 04 Nos.



- **M.Tech / ME Project guided: 21**

- **Ongoing Ph.D Projects (04 Nos.)**

Sr. No.	Name of Candidate	Topic of Research
01	Mr. Vivek Bhore	Some Studies Related to Improvement in Solar Photovoltaic Module Output- Experimental Approach
02	Mr Kishor Rambhad	An Experimental Investigation in Application of Concentric Solar Collector in Solid Desiccant Dehumidification
03	Mr. Rajesh Ganvir	Performance investigation and thermal analysis of compact heat exchanger using Nano Fluids
04	Mr. V.P.Kalbande	Performance improvement of thermal storage system using solar collector for domestic applications

- **Patent**

- Patent filed: Title of project: - Photovoltaic cell with concentrating collector.(File no.2666/MUM/2013)
- Patent filed: -Manually Operated Sprayer cum Herbicide Applicator. (1334/MUM/2014/DATED 11/04/2014)

**2. Dr. V.M. Kriplani**

Professor in Mechanical Engg.

- Qualification: M.Tech., Ph.D.
- Joined GHRCE, Nagpur: 11/9/2006
- Area of Specialization: Thermal Engineering
- Research Areas: Heat Transfr, Biofuels, Ref. & Air-conditioning
- Total Experiences: 50 Yrs.
- Industrial Experiences if any: NIL
- Number of Publications: (G.H. Raison College of Engg., Nagpur) as on March 2016  
Journals: International: 43 (includes Elsevier, Springer, Thermal Science)  
Conferences: International: 07 includes IEEE Computer Society
- Ph.D. Students completed and submitted thesis to RTM Nagpur University: 03
- Ph.D. students registered: 03
- M.Tech. Projects guided: 15



**Visited to Other Countries:**

- UK: Presented paper in International Conference AFM-08, 21-23, May 2008
- Dubai: To study the working of International Universities, 11-15 Jan. 2011
- Mauritius: Participated in International Conference, ICETET-11, 18-20 Nov.2011
- Japan: Presented research Paper in International Conference, ICETET-15, 18-20 Nov. 2015
- Vice-Chair, International Conference, ICETET-08, 16-18 July 2008.
- Chaired the sessions of International Conferences India, Japan.
- Chaired the sessions of National Conferences.
- Reviewer: International Journals / Conferences: Elsevier, Thermal Science ICETET-08, 09, 10, 15.
- Special Appreciation award: 20/9/2012, G.H. Rasoni College of Engineering, Nagpur.
- Approved Supervisor for Ph.D., RTM Nagpur University, Nagpur.
- Approved Supervisor for Ph.D., Sant Gadge Baba Amravati University Amravati.
- Retired as Principal of Engineering College.
- HoD, GHRCE till Nov. 2011 – handled various portfolios as Chairman BoS, Member of Academic Council, Autonomy, National Conference etc.
- Member of Professional Societies: Fellow of Institution of Engineers (India), Life Member: ISTE, Life Member: ISHRAE, Life Member: Solar Energy Society of India.

**4. Dr. S. B. Jaju**

- **Qualification:** M.Tech, Ph.D, MBA
- **Area of Specialization /Research:** Industrial Engg., Quality cost, CNC & Robotics, Modeling & Simulation
- **Total Experience:** 20 Years
- **Number of Publications**  
Journal (National & International): 50  
Conferences (National & International): 34  
Book Chapter: 04
- **Awards:** Best Teacher Award by GHRCE, Best case study Award by IIIE and 03 Best Paper Award by IEI
- **Ph.D students registered:** 05
- **Ph.D Awarded:** 01
- **M.Tech/ ME Project guided:** 18
- **Reviewer For International journal / conference:** Rapportire in ICQMP-06, Reviewer in series of ICETET, Member of Editorial Board, IJETET & IJESM, Reviewer-IJESM, IJSSCA, IJSOM, IJPQM, IJISE, IJBPSM, Inderscience Publisher, UK
- **Session chaired for International Conferences:** Session chair-ICETET, ICITAC, NCAME, Keynote speaker-ICIRSGM
- **Patents (filed):**
  - i) Sagar Vilasrao Ganorkar, Dr. Santosh B. Jaju, “**Development of gripping mechanism for a prosthetic hand**” 550/MUM/2013, National, filed, Date: 26/02/2013.
  - ii) Saikrupa Adenkiwar, Shailesh Alone, Tejas Pitale, Rachit Mazumdar, Dr. Santosh Jaju, “**Design, Development and Fabrication of Light-weight and Long-Range Pesticide Sprayer**” 2669/MUM/2013, National, Filed, Date: 14/08/2013



iii) Harshal Tulshiram Khamankar, Dr. Santosh B. Jaju, "A clamping system of a wear plate welding machine", 4037/MUM/2014, Filed, Date: 16/12/2014

• **Sponsored Projects:**

Dr. Santosh Jaju, Dr. D. J. Tidke "**Optimum Design of Robot using Workspace Simulation Technique**", Rs. 8.40 Lacs, 20/AICTE/RIFD/RPS(POLICY-III)52/2012-13 dated 13 Feb 2013, **AICTE-RPS, New Delhi, Govt. of India.**

**5. Dr. U. S. Wankhede**

- Qualification: M.Tech. (HPE), Ph.D.
- Area of Specialization /Research: Refrigeration and Air Conditioning, Heat transfer, Multiphase flows
- Total Experience: 21 years
- Number of Publications  
Journal (National & International): 18  
Conferences (National & International): 25



• **M.Tech/ ME Project guided:**

Area	Name of topic
Multiphase flow	Mathematical modeling and analysis of heat transfer in fluidized beds
Unconventional energy sources	Mathematical modeling and analysis of solar refrigeration system
Heat transfer	Heat transfer in bubbling fluidized beds
Refrigeration and Air Conditioning	An experimental study on process design for adsorption desiccant cooling driven out with low temperature heat
Heat transfer	Experimental investigation for natural convection heat transfer enhancements from a cylinder using porous carbon foam
Refrigeration and Air Conditioning	Experimental analysis of air conditioning system with additional condenser
Refrigeration and Air Conditioning	Experimental analysis for selection of the capillary tubes in refrigeration appliances
Heat Transfer	Experimental analysis of free cooling through heat pipe by using phase change material
Heat Transfer	Performance analysis of aluminum foams for heat transfer augmentation
Refrigeration and Air Conditioning	Experimental analysis for selection of spiral capillary tube for refrigeration appliances
Refrigeration and Air Conditioning	Experimental analysis of vapour compression refrigeration system with diffuser at condenser inlet
Heat Transfer	Experimental analysis of flow and heat transfer behavior in tube banks with wake splitter
Refrigeration and Air Conditioning	Experimental analysis to check suitability of hydrocarbon and other blends as refrigerant in refrigeration appliances
Multiphase flows	Experimental analysis of rectangular fluidized bed dryer with triangular wavy walls
Refrigeration and Air Conditioning	Capillary pumped loop system for high heat flux microelectronics cooling.

**Reviewer For International Journal / Conference:**

- Journal of Mechanical Engineering Research (Academic Journals)
- International Conference “Emerging trends in Engineering and Technology (ICETET-08)” from 16-18 July, 2008 at G. H. Rasoni College of Engineering, Nagpur.
- International Conference “Emerging trends in Engineering and Technology (ICETET-09)” from 16-18 December, 2009 at G. H. Rasoni College of Engineering, Nagpur
- Rasoni group of Institution Technical/Research paper competition for students(RGI-TRPCS-2009) on 11 February 2009.
- International Conference “Emerging trends in Engineering and Technology (ICETET-10)” from 19-21 November, 2010 at BITS Pilani, K.K.Birla Goa Campus, Goa.
- **Session chaired for International Conferences**  
International Conference “Emerging trends in Engineering and Technology (ICETET-10)” from 19-21 November, 2010 at BITS Pilani, K.K.Birla Goa Campus, Goa.

**Grants Received From AICTE Under Research Promotion Scheme/IEDC**

1. Research grant of Rs. 8.8 Lakhs from AICTE for “Heat transfer in a sound assisted fluidized bed” in 2008-09 under Research Promotion Scheme
2. Grant of Rs. 1 Lakh for UG project under IEDC (Innovative Entrepreneurship Development Cell) to AICTE on topic “Design and fabrication of multiutility refrigeration system” in 2009-10

**Patent applications (National) filed:**

1. Air conditioning system with additional condenser, Application No. 2186/MUM/2012, dated 31/07/2012.

**Editorial Board/Reviewer of International Journals**

1. Journal of Mechanical Engineering Research (Academic Journals)
2. Editorial board for International Journal of Emerging Trends in Engineering and Technology

**7. Dr. Arvind K.Mahalle**

Designation: **Dean(Administration) & Professor of Mechanical Engineering**  
**G. H. Rasoni College of Engineering,**

Qualifications: B.E., M. Tech. (MMD), Ph. D., Nagpur university.

Work Experience: Over 24 years in different faculty positions and administration.

Projects Guided at UG & PG Level:

- BE (Mech) - 15
- M Tech (CAD/CAM) – 05

Papers Published:

- National Journals – NIL
- International Journals –06
- National Conferences – 05
- International Conferences – 01

Professional Membership:

- Member, The Institution of Engineers (India)
- Member, Indian Society for Technical Education
- Participation in Training (**Conferences/Seminar/workshop Attended**):- 9





Organizing secretary for National conference:

- Organizing secretary of National Conference on Automation in Manufacturing held on 08-09 March 2003

Sponsored & externally funded R&D projects:

- Coordinator with Dr. P.V.Walke (Co-coordinator) in AICTE approved MODROB project, Project titled "Development and Testing of TRAP-CAT for Compression Ignition Engine" in the year 2003. AICTE has sanctioned Rs. 7.25 lacks for project

Institutional portfolios and activities at GHRCE:

- Dean (Administration) – College administration since 30 June 2011, including college discipline & hostel discipline

#### 8. Dr. Rupesh S.Shelke

- Qualification** : M.Tech. (HPE), Ph.D (Solar Energy)
- Area of Specialization /Research** : Heat Transfer, Solar energy
- Total Experience** : 17 Years
- Number of Publications**
  - Journal (National & International)** : 27-International
  - Conferences (National & International):** 5 -international  
10- National



#### Grants Received From AICTE Under Research Promotion Scheme/IEDC

- Research Project funded by AICTE under RPS Scheme (Ongoing): 20 Lakhs
- IEDC Project (Completed) : 1 Lac

#### Patent filed (National): 01

Title: Flat plate collector using concentrating lens array and insert coils

- M.Tech/ ME Project guided:** 18 Students
- Reviewer / Technical Program Committee Member International Journals**  
ICETET 2008, 2009, 2010, National conferences
- Professional Body Affiliation:**  
Indian Society for Technical Education, **I.S.T.E.**  
Institute of Engineer, **M.I.E**  
Solar Energy Society of India ,  
Combustion Institute of Indian Section, **CI**

**Name** : Dr. Vinod N. Bhaiswar

**Qualification:** M. Tech. (Mechanisms & Machine Design), Ph.D.

**Experience:** 21 Years

Details of Published and Research Papers Presented: - 19

**Membership of Professional Societies:** 03

**Projects guided at PG Level** : 12

**Projects guided at UG Level** : 10

**Short-term training courses attended:** 04

**Any other information:** Involved in sponsored research project of WCL





**Civil Engineering**

**1. Prashant Bharat Nagarnaik**  
Deputy Director and Dean Academics



**Ph.D students Guided/Ph.D Completed**

<b>Name of student</b>	<b>Area</b>	<b>Name of Topic</b>
V M Mohitkar (Awarded 2006)	Interdisciplinary	Development of Quality Assurance Mechanism for Engineering Education System.
D K Parbat (Awarded 2007)	Traffic Engg.	Assessment and Modeling of Noise Levels due to Traffic Flow.
P V Durge (Awarded 2008)	Environmental Engineering	Study and Design of New Concept in Tapered Flocculation
P D Jadhav (Awarded 2009)	Geotechnical Engineering	Behavior of Cement Stabilized Fiber Reinforced Soil Fly ash Mixtures in Road Construction.
P Y Pawade (Awarded 2012)	Structural Engg.	Critical studies on the influence of Silica Fume and Steel Fiber in Enhancing Properties of Concrete
N V Raut (Awarded 2013)	Structural Engg.	Innovative Methods for Retrofitting of Buildings.
R N Nibudey (Awarded 2015)	Structural Engg.	Feasibility Analysis of Use of Waste Plastics in Concrete.
D M Bhonde (Awarded 2015)	Structural Engg.	Feasibility Study and Analysis of the Use of Bamboo Reinforcement in Concrete Structural Members.
Bahuriya (submitted Jan 2016)	Structural Engg.	Feasibility Study of Replacement of Natural Sand by Quarry Dust and Waste Plastic in Concrete.
P P Dahale	Geotechnical Engineering	Soil Stabilization Using Lime in Combination with Different Solid Waste Materials
B.J.Godbole	Environmental Engineering	Feasibility Study of Removal of Fluoride From Ground Water By Various Solid Waste Adsorbent
Ranjeet N Patil	Environmental Engineering	Feasibility Study of De-fluoridation using forest herb.

**Ph.D Ongoing:**

K.R.Dabhekar	Structural Engg.	Feasibility Study of using GGBS and Steel Fiber in Enhancing the properties of concrete.
Harshal Warade Patil	Environmental Engineering	Feasibility Study on biogas production using animal manure as a co-substrate through pilot scale study
M P Bhorkar	Environmental Engineering	Study of Modified Tube Settlers in the process of water treatment

**M.Tech/ ME Project guided: 32 projects guided till date-- 22**

**Publications:**

**In International:Journals-- 35 National Journals--20**

**International:Conferences-- 30 National Journals--20**

**Membership of Professional Institutions:--9**

**Reviewer**

- Reviewer for International Journals of WESAS, and International
  - Journal of Environmental Pollution
- Conferences and journals of WESAS working group on energy , environment, ecosystems and sustainable development
- International conference ICETET 08,09. at GHRCE, NAGPUR and ICETET10 at BITs Goa and 11 at Mauritius during Nov 18-20,2011

**Awards/Rewards**

- Received Second prize for the best paper, "Feasibility Study of Reuse of Backwash Wastewater" in 18<sup>th</sup> Annual Convention of IWWA at Bangalore, Jan. 1989.
- Received First prize for best paper presented on "Role of NGO's in water supply " at seminar organised by IE(I) ,MS state centre & Nashik local centre at Nashik, Dec.8-9,1995.
- Received Best paper award at International Conference on 'Emerging Trends in Engineering and Technology' ICETET08, Organised by GHRCE, Nagpur and KES Center, Australia on 16-18 July 2008.
- Approved guide for Ph.D. in Civil Engg. at SSGB Amravati University, Amravati and RTM Nagpur University, Nagpur.
- Chairman Board of Studies of Civil Engg., Amravati University, Amravati. 2002-07

**Other Achievements**

Resource person & evaluator for National Board of Accreditation, New Delhi.

## **2. Dr. Prashant Y.Pawade**

- Qualification: M.Tech (Structural Engineering), Ph.D.(Civil Engineering).
- Area of Specialization /Research: Structural Engineering.
- Total Experiences: 27 yrs.
- Industrial Experiences if any: 1 yrs.
- Designation: Professor & HOD in Civil Engineering Department.

Professional Societies Affiliation-

- Indian Society of Technical Education.(ISTE)
- Indian Concrete Institute (ICI)
- American Concrete Institute (ACI,INDIA Chapter)
- Fellow of Institute of Engineers (FI)
- American Concrete Institute (ACI,USA)

**Research Paper Presentation/Publication in Conference:-**

- International Journal :12
- National Journal : 06
- International Conferences : 03
- Conference:07



- **Training Attended** :19
- **Awards/ Rewards:-**

Best Teacher for the academic session 2010.

Special area of Interests:- Structural Engineering and Concrete Technology.

- M.Tech/ ME Project guided: 12 in the Area of (Structural /Transportation/Environmental Engineering)

**Reviewer for International journal / conference:**

- International conference ICETET 08, 09,10 at GHRCE, Nagpur.

### 3. **Dr. Bhalchandra V.Khode**

#### **Educational Status**

B. E. [ Civil Engineering ], M. Tech.( Hydraulic Engineering ), Ph.D. in Civil Engineering (Hydraulics & Water Resource)

**Area of specialization:** Hydraulics & Water Resources.

#### **Work Experience**

Teaching – 25 Yrs

Industry – 02

**Designation:** Professor in Civil Engineering Department.

#### **Professional Societies Affiliation-**

- M.I.S.T.E.(L.M.31752)- Member of Indian Society for Technical Education.
- M.I.S.W.E. (L.M 247)- Member of Indian Society for Wind Engineering.
- M.I.S.H.- (L.M.290) - Member of Indian Society for Hydraulics.
- M.I.W.W.A (L.M 6154) - Member of Indian water Works Association
- FIE- F-118038-6 Institute of Engineers (INDIA)
- ASCE- American Society of Civil Engineers

#### **Research Paper Presentation/Publication in Conference**

- International Journals:18
- National Journal: 02
- Conferences ( National /International): 15
- Training Attended :17
- Conference:07

**Research guidance:** UG: 08 ,M.Tech -12, Ph.D – 01 (Ongoing)

#### **Awards/ Rewards**

Best Teacher for the academic session 2006-2007.

Shri S.P.Unvala memorial prize for best research paper in IWWA JOURNAL 2011.

#### **Coordinator /Convener**

- STTP on Advanced Techniques in survey held on 2<sup>nd</sup> to 6<sup>th</sup> Feb 2011
- National Conference on Emerging trend in civil engineering ( NCETCE-2012) held on 4<sup>th</sup> to 5<sup>th</sup> 2012
- National Conference on Emerging trend in civil engineering ( NCETCE-2013) held on 22<sup>nd</sup> to 23<sup>th</sup> Nov 2013
- National Conference on Emerging trend in civil engineering ( NCETCE-2014) held on 12<sup>th</sup> to 13<sup>th</sup> Dec 2014
- STTP on “Disaster Management” under TEQIP-II on 27<sup>th</sup> to 31<sup>rd</sup> July 2015.



**Special area of Interests:-** Hydraulics & Water Resources

Reviewer: - 1. American Society of Civil Engineering,  
 2. Journal of World Applied Science  
 3. International Journal of Civil Engineering Research & Technology

**Consultancy Services offered:-**

1. Topographic Survey & Counter mapping using Total Station
2. Technical Consultant for Design of Labyrinth weir/Spillway

**Guest Lectures Delivered:-**

- 1) Design of Labyrinth weir at Vidarbha irrigation development corporation, Nagpur
- 2) Effect Vertical aspect ratio on Design of Labyrinth weir at irrigation development corporation, (Sinchan Seva) New Delhi.
- 3) Parameter affecting Design of Labyrinth weir at Nagpur Engineering forum
- 4) Water Management

**4. Dr. Anand Govind Bhole**

**Highest Qualification: Ph.D.(Environmental)**

**Teaching Experience: 35 years**

**RESEARCH PROJETS:**

Five research projects in the field of water treatment awarded by Government of India.

List of Research Projects completed is:

- Relative performance evaluation of natural coagulants.
- Study of static flocculates
- Study of field performance of modified Tube Settlers
- Design, Fabrication and performance of package water treatment plant for rural areas.
- Package water treatment plant for Iron removal.

**Research Contributions:**

- Developed package water treatment plants especially suitable for rural areas.
- Modified conventional tube settler modules.
- Modified conventional plate settler units.
- Developed dual media and dual cum mixed media filters.
- Developed six static flocculates.
- Studied 50 edible materials as unconventional coagulants for the purpose of flocculation in water treatment.
- Modified the sludge blanket type clarifiers.
- Developed low cost treatment method for iron and fluorides removal for rural areas.
- Evolved theory for sludge blanket clarifiers.
- Evolved theory for trapped flocculation.
- Evolved theory for kinetics of flocculation for laminar flow conditions.
- Evolved head loss equations for pebble bed flocculates.
- Guided 26 Ph.D. Students (Appendix A) and a large number of students for M.E.(Research) and M.Tech. Dissertations.

**BOOK:** A manual on "Design of Water Treatment Plants" for Indian Water Works Association which is quite useful for field Engineers.

**PATENTS:** 10 patents, all patents are in field of Water Treatment which are low cost with almost no moving parts hence suitable for rural areas (Appendix B).



- Editorial Board of Asian Environment Journal published from Philippines for a period of 3 years.
- Invited to Regina University, Canada as visiting Professor in 1990.
- Invited to present papers at Bangkok, Tehera, London and Germany, Sweden, South Africa, Argentina, China, Finland and Geneva etc.
- Session Chairman at Germany, Argentina, China, Finland & Geneva.

#### MEMBERSHIPS :

- Life member of Indian Society of Technical education
- Life Fellow of Indian Water Resources Society
- Life Fellow of Institute of Engineers (India)
- Life Fellow of Indian Water Works Association
- Life Fellow of Institute of Public Health Engineers, India
- Life Fellow of Indian Association of Environment Management
- Life Fellow of Association of consulting Civil Engineers
- Life Fellow of Maharashtra Academy of Science.

#### HONOURS AND AWARDS:

- Awarded “**Best Teacher Award**” by Maharashtra State Govt. on 5<sup>th</sup> September, 1995.
- Awarded two **Gold Medals** for his two paper which were published in the Journal of Environmental Engineering Division of Institution of Engineers (India), in 1996 and 2002.
- Selected as **Emeritus Fellow by A. I. C. T. E., (G. O. I.)** in the year 1997 for three years.
- Nominated as **Chairman of the Environmental Engineering Divi. Board (National level) of Institution of Engineers (India)** by its President for a period of 2002 to 2004.
- **11 papers were awarded 1<sup>st</sup> prize** and one paper got 2<sup>nd</sup> prize and another got certificate of merit
- Indian Water Works Association selected 25 best paper published in their journals of last 25 years. His paper on Ground Water Recharge was one of the best 25 papers.
- Awarded “**Jal Nirmalata Puraskar**” the highest national level award by Indian Water Works Association for 1997. At Chandigarh
- Awarded “**National Design Award**” in Environmental Engineering, the prestigious award at national level by Institution of Engineers (India) for 2003. At Lucknow
- bestowed “Honorary Membership” by Indian Water works association in 1998.
- Elected as “**Eminent Environmental Engineer**” of Institution of Engineers (India) in 2005 at Trichi.
- Elected as “**Eminent Engineer**” by Association of consulting Civil Engineers at their Silver Jubilee Celebrations at Bangalore on 28<sup>th</sup> Aug 2010.
- Recipient of “**Life Achievement Award**” of Institute of Public Health Engineers (India) in 2006 at Kolkatta
- In the 1999 edition of “**Who’s who in the world**” Marque Directory published in USA
- Invited many to deliver **Late N. V Modak Memorial lecture** (the prestigious lecture) at the National Convention of the Institute of Engineers (India) at Udaipur in Oct. 2003.
- Recipient of “Eminent Environmental Engineer” Award in 2005 by Institute of Engineers (India) in Kolkata in 2006.
- Invited by National Environmental Engineering Research Institute., Nagpur to deliver “**Late Prof. P Khanna Memorial**” Lecture in Oct. 2008.
- Invited by IWWA, Pune centre to deliver “**P.C. Wadia Memorial**” lecture at Pune in Feb. 1999.

**Electrical Engineering**

**1. Dr. S.G. Tarnekar**

- Highest Qualifications: Ph.D.
- Area of Specialization /Research: Electrical Drives/Energy Systems
- Total Experience : 44 years in Academics
- Industrial Experiences if any: 1.5 years
- Number of Publications :  
Journals (National & International): 13  
Conferences (National & International): 40
- Ph.D students registered:



Name of stud-ent	Area	Name of topic
Mrs. M.V. Palandurkar (degree awarded in 2015)	Applications of control of modern Drives	Elimination of Flywheels for Process Machines using modern drives
Mr. Bante K.G. (degree awarded in 2017)	Electric Drives	Up-rating a Drive by improving the cooling-system monitoring.
Mr.Akshay Kakde	Supercapacitor-Applications	Faster energy transactions by reconfiguring (series/parallel) basic units in a super-capacitor-bank

**M.Tech Projects ( on-going):**

Area	Name of topic
Flywheels	Inverter frequency control for replacing the flywheels: A simulation study
Modern Energy storage systems	Calculations for grid- support during Peak-load hours using Modern Energy storage systems

- **Reviewer For International journal / conference: International Journal Power Electronics**
- **Session chaired for International Conferences : ICETET 2009 at GHRCE, Nagpur**
- **Patents filed: Eight patent applications** have been filed so far as follows:

Sr. No	Year	Title
1	2009	Related to utilizing energy stored in waste water in case of high-rise buildings
2	2011	<b>Xv</b> Related to partially utilizing energy in flowing water in community-water- distribution systems
3	2011	Replacement of bulky flywheels by a pony motor and super-capacitor in case of processes subjected to frequent over-loads.
4	2012	Fast charging/discharging of super-capacitor-bank by series / parallel re configuration of units
5	2015	Microprocessor-based PLC program to run main motor (of cooler blower-motor in steel rolling mills) at optimum speed, for highenergy



		efficiency.
6	2016	<b>Authors: PMDaigavane/ PP Kose/ SGTarnekar: Title:</b> Green-Power generation from renewable energy sources and bio-fuels through holistic control-strategies for ' <u>Vehicle to Grid Power</u> '
7	2016	<b>Authors:</b> SGTarnekar/JGChaudhary/ PRSawarkar/PPKose <b>Title:</b> Ultra-low-frequency low-power oscillator using an ultra-capacitor and an advanced flywheel
8	2016	<b>Authors:</b> SGTarnekar/JGChaudhary/ PRSawarkar/PPKose <b>Title:</b> Ultra-low-frequency low-power oscillator using an ultra-capacitor and an Inductor.

## 2. Dr. P.M.Daigavane

- Highest Qualification:Ph.D.
- Area of Work:- Controllers, DSP Processor, Image Processing
- Work Experience:- 27 years
- Research Guidance: A) PhD. :03  
B) M.Tech : 06 and ME (R): 01  
C) B.E. Projects: 30 plus
- Research Publications: 42
- International journals : 09
- International Conference: 13
- National Conference: 14
- Academic honor : Session Chair :03
- Review of research paper : 06
- Conference, seminar attended, Training program, Workshop Attended:- 11
- Professional Society affiliation:- ISTE, IE(I), IEEE



## 3. Dr. V.K. Chandrakar

- Highest Qualification: Ph.D.
- Area of Work: **FACTS Technology, Power System**
- Work Experience: 30 years in academics
- Research Guidance: A) PhD. :07  
B) M.Tech : 24 and ME (R): 01  
C) B.E. Projects: 40
- Research Publications:- 49
- International journals :- 14
- National journals :- 01
- International Conference:- 21
- National Conference:- 13
- Awards Received:-Pt Madan Mohan Malviya for R & D contribution in Electrical Engineering IE(I) Journal, 2010
- Academic honor : Session Chair :03
- Review of research paper : 20



- Conference, seminar attended, Training program, Workshop Attended:- 11
- Professional Society affiliation:- ISTE, IE(I), CSI, IEEE
- Projects carried out : (AICTE)

S.N	Title	Sponsoring agency	Sanctioned amount (Lakhs.)	Duration
1	Exploring the benefits of coordination between controllable components in electrical power system transmission	AICTE	10.00	2003-06
2	Stabilization of grid connected wind generator by STATCOM	AICTE	10.59	2007-09
3.	Augmentation of FACTS Laboratory	AICTE	7.00	2008-10
4.	Travel grant for IEEE PED 2003 Singapore	AICTE	0.37	5 days
5	Faculty development program (FDP)	AICTE	2.0	2007

**International/ National Journal publications : 15**

**Computer Science & Engineering & Information Technology**

**1. Name : Urmila Shrawankar****Qualification :**

- Ph.D. (Comp Sci. & Engg.)
- M.Tech. (Comp Sci. & Engg.)

**Area of Interest**

- Advanced Operating Systems
- Cloud Computing & Virtualization
- Parallel Programming
- Assistive Technology
- Algorithms

**Grant Received**

- UGC Minor Research Project, "Multilingual Number Interpreter ", from University Grants Commission, File No. No. F. 47-1270/14(WRO), Year 2016
- DST Travel Grant for attending International Conference (Springer Publications) at Manchester, UK From Govt. of India, Ministry of Science & Technology, Dept. of Science & Technology (DST), Lett. No. : SR/ITS/02521/2010-2011, Year 2010

**Patent Application Filed : 03**

- Assistive Technique of Mouse Controlled Desktop Navigation for Visually Impaired, National 405/MUM/2015, 06/02/2015, In process
- Multilingual Number Image Interpreter, National 571/MUM/2015, 20/02/2015, In process
- Accessing Computer System Files Via Mobile SMS,, National, 3314/MUM/2015, 29/08/2015, In process

**Paper Publications : 119**

- Book Chapters – 02
- International Journal – 33
- International Conférences – 80
- National Conférences – 04

**Research Guidance**

- PhD : 03
- M.Tech (CSE) : 58
- ME by Research : 01
- B.E. (CSE) Groups : 24

**Professional Bodies Membership**

- IEEE – 80612077
- ACM - 9478430
- CSI – 00148040 (Associate LM)
- ISTE – 34071 (LM)
- IE – AMTIE-400015 (LM)
- IAENG - 140645

**Research Participation in Journals and Conferences**

- Editorial board member : 03
- Conference Convener : 01
- Member Core Organizing Committee : 08
- Session Chair : 10
- Session Speaker : 03
- International Journals, Member, TPC: 43

- International Conferences, Member, TPC: 53

**Approved Supervisor :**

- PhD Supervisor, RTM Nagpur University, Nagpur
- PhD Supervisor, SGB Amravati University, Amravati
- ME by Research Supervisor, RTM Nagpur University, Nagpur

## Ph.D. in Physics

### 1. Dr. Mrs. B P Butey

**Qualification:** Ph.D. (Physics), V.N.I.T., Nagpur

**Designation:** Professor and Dean, First Year

Department of First Year Engineering

**Teaching experience:** 21 years.



### Research Experience:

- Worked as *Junior Research Fellow (JRF)* in National Environmental Engg. Research Institute, *NEERI* for one year (1990-91) on project entitled "Mathematical Modeling for Thermal Pollution".
- Worked as *JRF* for two years (1991-93) on *project financed by DAE* entitled "Development of Colour Center LASERS" at Physics Department PGTD, Nagpur.
- Worked on problems in *Relativity and Cosmology* since 1999 till 2011.
- Working in the area of Luminescence since 2012

**Current Research Interest:** Luminescence

### Publications:

- National Journal :- 04
- International Journal :- 05
- National conferences :- 03
- International conferences :- 03
- Number of Ph.D. Students Registered: 01
- Number of Guest Lectures Delivered: 02

### Achievements

- Awarded *First prize* in Seminar Competition on M Sc Project held by IPA (Indian Physics Association) in the year 1990.
- Best teacher award at GHRCE session 2003-04.
- Convener of National conferences: 03
- *Chaired a Technical Sessions in National Conferences & Seminars: 5*
- Member of the *RTM Nag. Uni. Selection panel for appointments on Regular Posts of Asst.Prof. and Lecturer* in various Engg. Colleges
- Member LEC, RTM Nagpur university for inspection.

### SCI /Reputed Publications

- "Higher Dimensional Cosmological Model of the Universe with Decaying  $\Lambda$  Cosmology with varying  $G$ ", Int J Theor Phys., Vol.48, pp 2618-2624, 2009. ISSN: 0020-7748 ( Impact Factor- 0.688)
- "Luminescence studies on lanthanide ions ( $Gd^{3+}$ ,  $Tb^{3+}$ ) doped YAG:Ce phosphors by combustion synthesis", International organization of Scientific Research-Journal of Applied Physics.(IOSRJAP) e-ISSN – 2278-4861 Volume 6, Issue 2 Ver. III (Mar-Apr. 2014), PP 28-33, DOI: 10.9790/4861-06232833
- "Doping effect of Mg on photoluminescence properties of YAG:Ce phosphor", International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056 p-ISSN: 2395-

0072, Volume: 02 Issue: 03, June-2015:pg 2360-2363

- “Synthesis, Characterization and Optical Properties of  $Y_3Al_5O_{12}:Ce$  Phosphor by mixed fuel combustion synthesis”, Journal of Alloys and compounds-Elsevier,650(2015), pg 858-862. <http://dx.doi.org/10.1016/j.jallcom.2015.08.076>
- “Photoluminescence Study of Rare earth doped Yttrium Aluminum Garnet-YAG-RE(RE:Eu<sup>3+</sup>, Pr<sup>3+</sup>, Tb<sup>3+</sup>)” OPTIK-International Journal of Light & Electron Optics- Elsevier , 127 (2016), pg 2004–2006. <http://dx.doi.org/10.1016/j.ijleo.2015.11.070>

### Membership of Professional & Scientific Bodies/ Societies:

- Life member of ISTE (Member No. **LM 24043**)
- Member of IEEE, USA (Member No. **41473736**)
- Life Member of IPA (Member No. **NAG/LM/11935**)

### Ph.D. in Math



### 2. Dr. Onkar K. Chaudhari

**Qualification:** M.Sc., M.Ed. M.Phil., DBM, PGDHRM, Ph.D.

**Designation:** Professor

Department of Applied Mathematics

**Teaching experience:** 31 years.

**Research Interest:** Operation Research, Educational Pedagogy

- Nation/International Journal :-6
- National/International conferences.:- 20
- Books :-01
- Number of Ph.D. Students Registered:02
- Number of Guest Lectures Delivered :20

### Achievements

- **Third Merit** in M. Sc. (Maths) Nagpur University, 1984
- Dr. Sarvapalli Radakrishnan **Gold Medal** for securing First position in M. Ed (1999), Nagpur University
- Visited National University **Singapore & Dubai**
- **“Best Teacher Award”** of GHRCE in 2011-2012

### Professional Societies Affiliation & Member Of Advisory Boards:

- Life Member of ISTE
- Life Member of Indian journal of Mathematics
- Member of University Teachers Organization
- Member of Advisory Board, Interdisciplinary National Conference on Higher Education in 21st Century Vision and Action, 2nd September 2014, JyotibaFuley College of Education, Nagpur.
- Member BOS for First Year for Autonomous Stream of GHRCE (2010-2011 onwards)

### Ph.D. in Chemistry

3.Dr. Rashmi R . Shrivastava,

**Qualification:** Ph.D. ( Physical Chemistry ),APS Université Rewa (M.P.)

**Designation:** Professor

Department of Applied Chemistry

**Teaching experience:** 20 Years.

**Research Interest:** Water analysis,

- International Journal :- 5
- International conferences.:- 4
- Number of M.Tech. Project Guided: 5

**Administration:**

- BOS Member since 2010

**Achievements**

- Best teacher award at GHRCE session 20012-13
- Life Member ISTE.







**RAISONI GROUP**  
— a vision beyond —