

DR.SHANTHARAMA RAI C. B.E, M.Tech, Ph.D., MISTE, MISLE

Principal of A.J. Institute of Engineering and Technology Mangalore
And
Professor, Department of Electronics and Communication Engg,
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Jappinamoger, Mangalore-7

Date of Birth : 10/05/1975

Educational Qualification

BE : From KVGCE Sullia with Specialization Electrical and Electronics Engg
(1994-1998)

M.Tech : From ~~National Institute of Technology Karnataka, Surathkal~~ with Specialization
Power and energy system (2003-2005)

Ph.D :

Area: Control Systems and Power Electronics, signal conditioning/processing
(2006-2011)

Title of the thesis: A Novel Controller for biomass based hybrid power system
using Fly back Converter

University: Visvesvaraya Technological University, Belgaum (V.T.U)

POSITION HELD (Around 18 years)

- A.J. Institute of Engineering and Technology Mangalore from 26th Feb 2016 till date as Principal and Professor in E&C Department
- Canara Engineering college Benjanapadavu, Bantwal from Feb 2008 till 25th Feb 2016 as Professor & H.O.D E&C Dept.
- ST.Joseph Engineering College Vamanjoor, Mangalore from 2005 September to till 2008 Feb as a Asst.Professor

- ST.Joseph Engineering College Vamanjoor, Mangalore from 2002 to 2005 June as a Lecturer
- N.M.A.M. Institute of Technology, Nitte, From 2000 to 2002 as a Lecture
- K.V.G.College of Engineering, Sullia, From 1998 to 2000 as a Lecturer

Responsibilities in the University level:

- **Member of Board of Examiners** , Electronics and Communication Engg Board, VTU for the year 2013-2014.
- **Member of Ph.D Selection committee of the** Visvesvaraya Technological University, Belgaum (V.T.U) from 2014 on words
- **Coordinator for VTU lab exams** for the Mysore region during the academic year 2013-2014
- **Member for Local inspection committee (LIC)** of VTU for the year 2013-2014 onwards
- **Member of panel of examiners** for International center for applied sciences(ICAS) Manipal

Projects Guided

- **Ph.D :**
Presently guiding 07(seven) students in the area of Power electronics, control systems and signal processing
- **PG : 15 Students**
- **UG : 35 Batches**

Sponsored Research Activities taken in the institution:

Title of the Project	Year of Sanction	Funding Agency	Amount In Rs	Status
Modernization of DSP and Microcontroller based advanced power electronics /real time system lablab	2013	AICTE	18,00,000	Completed

Design and development of biomass based hybrid power system with a novel controller	2012	V.T.U	7,08,000	Completed
Modernization of DSP and Microcontroller based advanced power electronics lab	2012	AICTE	6,10,000	Completed

Subjects taught:

Power Electronics, Fuzzy Logic, Control Systems, Analog and Mixed mode VLSI Design, Embedded Systems, Digital signal processing etc for UG and Digital circuits and logic design , Digital control systems, Nan electronics Advanced control systems etc for PG

Research Publications:

Journal

1. **IEEE Transactions on Electron Devices** TED-2016-09-1335-R entitled "Analysis of 8-MeV Electron-Irradiation Induced Degradation in a-IGZO TFT's" Under review
2. **Elsevier** journal Sadhana : "Simulation model for Electron irradiated IGZO thin film transistor" has been received by .The submission id is: SADH-D-16-01751 Under review
3. Applications of Fuzzy Logic in Image Processing A Brief Study An international journal of advanced computer technology, 4 (3), March-2015(Volume-IV, Issue-III, pp 1555-1559, **ISSN 2320-0790**)
4. Fuzzy -A Comprehensive Study published in **International Journal of Advance foundation and research in computer (IJAFRC) ISSN: 2348-4853, Volume-1, Issue-10, pp 10-15**
5. Design and Modeling ,simulation and analysis of V/F Controller for WECS "published in **International Journal of Engineering Trends and Technology (IJETT) ISSN: 2231-5381, Volume-12, Issue-3, pp 141-143,June 2014**

6. Image Processing Algorithms-A Comprehensive Study published in **International Journal of Advanced Computer Research (IJACR)** ISSN(Print): 2249-7277, ISSN(online): 2277-7970, Volume-4, No.-2 Issue-15, pp 533-540, June 2014
7. Design and Modeling and simulation of a PID Controller for Buck Boost and Cuk Converter “published in **International Journal of Science and Research (IJSR)** ISSN(online): 2319-7064, Volume-3, Issue-5, pp 1226-1229, May 2014
8. Design of Processor Interface Module for P1750A processor using VHDL” published in **International Journal of advanced and innovative research** ISSN: 2278-7844/#90/, Volume-2, Issue-10, pp 90-96 October 2013
9. Design and Modeling of Fuzzy Logic Based Voltage Controller for an Alternator “published in **International Journal of Recent Technology and Engineering (IJRTE)** ISSN: 2277-3878, Volume-2, Issue-2, pp 155-158 May 2013
10. “Fuzzy Logic Controller for the Speed Control of an IC Engine using Matlab \ Simulink “published in **International Journal of Recent Technology and Engineering (IJRTE)** ISSN: 2277-3878, Volume-2, Issue-2, pp 124-127 May 2013
11. “Simulation of Beam forming Solutions for High Altitude Air Bone Systems” published in **International Journal of Computer Applications (IJCA)** Volume 47, No 10 pp 39-43. June 2012 Edition
12. “Comparative Study on Angiogram Enhancement” Published in **International Journal of Graphics & Image Processing (IJGIP)** vol 2, Issue 2. pp 166-169 may 2012 Edition
13. “A Novel Controller for Biomass Based Hybrid Power System” published in **International journal of Engineering research and industrial applications (IJERIA)**, Volume 2, No V September 2009 pp 15-27

Conference

1. Study of Radiation Resistance Property of a-IGZO Thin Film Transistors proceedings of IEEE International Conference On Recent Trends In Electronics Information Communication Technology, P 1870-73, 2016

2. "Analysis of electron irradiation effect on IGZO TFTs"Proceedings of the International Conference on smart materials and technologies for emerging electronics-IC-SMTEE-2016, p41 ,SCEM Mangalore 19-20 February 2016.ISBN2456-186x
3. "Density –of –states modelling of solution processed InGaZnO thin film transistors"Proceedings of the International Conference on smart materials and technologies for emerging electronics-IC-SMTEE-2016 p22 ,SCEM Mangalore 19-20 February 2016.ISBN 2456-186x
4. "*Channel Estimation for MIMO OFDM System Using Normalized Least Mean Square Method*" published in the proceedings of **International Conference on Electrical and Electronics Engineering(ICEEE)** at Mysore, held on 30th June 2012 ISBN: 978-93-81693-82-7, pp 171-174
5. "Performance analysis of PCA-based and LDA-based algorithms for Face Recognition" published in the procesings of **4th International Conference on Electronics Computer Technology (ICECT 2012)** held at Kanyakumari, India between April 6 - 8, 2012, ISBN: 978-1-4673-1849-5, Volume 2, On Page(s): 594-600 Paper ID 540, the paper will be archived in the IEEE Xplore and indexed by Ei Compendex and ISI shortly.
6. " Increasing the productivity of automation tool by developing Socket." published in the procesings of **4th International Conference on Electronics Computer Technology (ICECT 2012)** held at Kanyakumari, India between April 6 - 8, 2012, ISBN: 978-1-4673-1849-5, Volume 2, On Page(s): 601-604 Paper ID 541, the paper will be archived in the IEEE Xplore and indexed by Ei Compendex and ISI shortly.
7. "Design and simulation of Fuzzy Logic Based Voltage Controller for an Alternator "published in the proceedings of **National Conference on Emerging trends in Electronics and communication Engineering** held on 27th April 2013 at Canara engineering college mangalore ISBN: 978-93-81195-47-5, pp 138-143
8. "A novel approach for the Speed Control of an IC Engine using fuzzy logic controller "published in the proceedings of **National Conference on Emerging trends in Electronics and communication Engineering** held on 27th April 2013 at Canara engineering college mangalore ISBN: 978-93-81195-47-5, pp 174-179

9. "Image compression using DCT and DWT" presented in the **National Conference on information science** held at Manipal, 29th & 30th April 2011
10. "Modeling and Simulation of a Novel Photovoltaic Energy Conversion System Using Fuzzy Controller ", presented in the **3rd National Conference on Communication Networks (NCOCN'11)** held at Thrissur, Kerala On 19th March 2011
11. "Simulation And Mathamatical Modelling Of A Novel Converter Used For Solar Panel Tracker" presented in **IEEE conference ICEDSP 09**, to be held MIT Manipal during Dec., 2009, publishing in IEEE Explorer ,paper ID 230.
12. "Simulation And Modelling Of Flyback Converter Used For Novel Pv MPP Tracker" , presented in the National Conference held at N.M.A.M.I.T .Nitte Feb 2009
13. Sensor Based Maximum power point tracking system using Flyback converter- Accepted for publication in **IEEE conference IECON06**, France held during Nov. 7-10, 2006 paper ID PD-006491
14. "A novel photovoltaic power conversion system using the fly back converter" in the proceedings of **Third International energy resources and development (ICERD-3)** held at state of Kuwait Vol-II 2005,page no.819-823
15. "A Novel technique for photovoltaic maximum power point system" in the proceedings of **11th European conference on power electronics and applications** held at Dresden Germany September 2005 pp P1-P8
16. Grid Connected Photovoltaic System, Presented in the National Conference held at N.M.A.M.I.T .Nitte May 2004
17. Dregulations in power Industries , presented in the National Conference held at N.M.A.M.I.T .Nitte May 2004

Responsibilities taken

- Principal and starting new engineering college , AJ Institute of Engineering Mangalore
- H.O.D, Department Electronics and communication Engineering from 2008 August to 2016 Feb in Canara Engineering College
- Started the NBA Process during the year 2011 and Chief coordinator for NBA up to 2012 September in Canara Engineering College and obtained the NBA for the institution
- Coordinator for VTU on line upload process

- Chairman of R&D Committee of the institution
- Chief Coordinator for KSCST Projects of institution
- Chief coordinator for the Aakrthi(State level Techno-culture fest) for the year 2010-2011 and 2011-2012
- Chief coordinator for Canara Engineering college Decennial celebration
- Founder secretary of ISTE CHAPTER Canara Engineering college Mangalore
- Organized first time the national conference at Canara engineering college in the year 2013
- Chief superintendent for VTU Examinations
- Chairman for LIBRARY Committee during the year 2012-2013

Interactions with outside world

- Expert member of staff selection committee Sadguru Swami Nithyananda Institute of technology Kanhangad Kerala State
- Given an invited talk on the “ Fuzzy logic and its application at KVGCE Sullia On 25/09/2014
- Chair person for the National conference held at SJEC Mangalore on 13th and 14th august 2014
- Given an invited talk on the “ Fuzzy logic controller at AIET Moodabidri On 19/09/2013
- Chair person for the national conference held at SJEC Mangalore on 13th and 14th august 2013
- Given technical talk on the “ Fuzzy logic controllers using MATLAB TOOL box in the FDP held at CEC On 25/07/2013
- Given an invited talk on the “ Fuzzy logic and its application at PACE Mangalore On 10/10/2012
- Served as judge for evolution of project work EXPO-12 Held at KVGCE Sullia on 21/05/2012
- Served as judge for evolution of project work KAUSHAL-12 Held at PACE Mangalore On 14/05/2012
- Served as judge for evolution of project work EXPO-12 Held at NMAMIT Nitte on 2/04/2012
- Chair person for the national conference e-Congregation held at KVGCE Sullia On 20/04/2010
- Served as judge for evolution of project work KAUSHAL-12 Held at PACE Mangalore On 23/05/2009

Award & Recognitions

Dr. Shantharama Rai.C Guided Project Titled “Generation of Electric Power from waste products using specially designed Spark Ignition Engine “ Awarded as “**Quality of very high order**” and obtained the “**Certificate of commendation**” from Karnataka State Council for Science and Technology ,Indian Institute of Science Bangalore

Member ship of professional body:

- Member of Indian Society for technical Education
- Member of Indian Society for Lighting Engineers

Abroad Visited :

Dr. Shantharama Rai.C, Participated and presented a research paper titled “A novel photovoltaic power conversion system using the fly back converter” in the **Third International energy resources and development (ICERD-3) held in state of Kuwait.**

Coordinator for the Mangalore region To Assess the Quality Of Electrical Distribution Governance and Performance in Karnataka (MESCOM Region) appointed by K.S.C.S.T Bangalore for the year 2007-2008

Other significant contributions

- Worked as a Secretary of ISTE Chapter of Canara Engineering college Mangalore
- Worked as a H.O.D of the E&E Dept at . SJEC Vamanjoor
- Mr. Shantharama Rai.C has been Selected as the Technical Paper Reviewer for “IEEE International Symposium on Industrial Electronics
- Co-ordinator of **Karnataka State Council for Science and Technology** ,Indian Institute of Science Bangalore Sponsored Projects of the Institution for the year 2006-2007 and 2007-2008 at SJEC Mangalore and from 2009-to till date C.E.C

Workshop/Conference Conducted

- Organized National conference on **Emerging trends in Electronics and communication Engineering** on 27th April 2013 at Canara engineering college mangalore

- Organized National conference on **Emerging trends in Engineering and technology** on 24th April 2014 at Canara engineering college mangalore
- Organized National Joint conference on Innovation in **Engineering and Technology** on 29th April 2015 at Canara engineering college mangalore
- Organized and Co-ordinated *national level technical fest “COLOSSEUM”* on 25th march 2011 at CEC Mangalore
- Organized 3 day work shop for non teaching staff on basics of computers and electronics between 20-22 January 2014
- Organized 2 day work shop on android app Development on 12th October and 2nd November 2014
- Organized 3 day work shop Electronic circuit design (hands on) between 23/8/2014 and 25/08/2014
- Organized one day work shop Image processing using LABVIEW 1st November 2014
- Organized One day work shop Use of open source software for image processing 21st September 2013
- Organized and Co-ordinated a State level Project Exhibition Cum Competition on “ Renewable energy application and Electrical Engineering Projects “between 17-19 June 2005 at SJEC Mangalore
- Organized and Co-ordinated *One day work shop on MATLAB and its Applications* on 17th Nov 2008 at CEC Mangalore
- Organized and Co-ordinated *state level technical fest MAGNIFEST* on 19th march 2010 at CEC Mangalore
- Organized and Co-ordinated *One day work shop on IMAGE PROCESSING and its Applications* on 4th Nov 2010 at CEC Mangalore
- Faculty Development Programme on Emerging Trends in Signal and Image Processing Applications during 27th – 29th January, 2011 at Canara Engineering College, Benjanapadavu, Mangalore.

Workshop/STTP/Seminars attended

- Two day work shop on Research methodology held at M.S.R.I.T Bangalore on 28th and 29th 26-28 May 2009 organized by Visveswariah Technological University Belgaum

- Shantharam Rai C Given an invited talk in the “ AICTE-ISTE, NEW DELHI, sponsored 15 days Short term training program on “Recent Trends On Power Electronics Circuits “held at NMAMIT Nitte March -2005
- Three day work shop on Nonlinear systems Theory and design held at NMAMIT Nitte between 26-28 February 2009 organized by TEQIP
- One day Work shop on “Intellectual Property Rights ” held at SDM College Mangalore on 20th march 2008 organized by KSCST Bangalore and TIFAC ,Govt of India
- Attended the **AICTE-ISTE, NEW DELHI**, sponsored 15 days Short term training program on “RECENT TRENDS ON POWER ELECTRONICS CIRCUITS “held at NMAMIT Nitte March -2005
- Two day Seminar on ‘Constitution of India and Professional Ethics” held at R.V.C.E Bangalore between 11-12 august 2005
- Three day staff development program at SJEC Mangalore between 29th august 2005 and 31st august 2005
- One day Work shop on “Rain Water Harvesting” held at St. Joseph engg College Mangalore on 4th May 2003
- Work shop on “INTRODUCTION TO MICROELECTRO-MECHANICAL SYSTEM TECHNOLOGY “held at N.I.T.K.Surathkal on 5th April 2003
- **ISTE NEW DELHI** sponsored 5 days STTP on “Human values in Technology” held at V.C.E.T Puttur. between 25th -29th Mrch 2002
- **32nd** Annual convention and National seminar of **Indian Society for Technical Education** held at N.M.A.M.I.T.Nitte ,between 27-29 Dec 2002
- Work shop on “V.L.S.I Design” held at K.L.C.E.T Belgaum on 5th and 6th October 2002
- Work shop on “CONTROL SYSTEMS” held at R.V.C.E Bangalore on 22nd and 23rd March 2001