

Faculty Profile

Name of Faculty	Shubha Rao K
Department	Electrical and Electronics
Qualification	B.E, M.Tech.(Ph.D)
Designation	Associate Professor
Area of specialization	Low Power SMPS, VLSI, Digital Control.
Date of Joining BNMIT	11.08.2004
Nature of Association (Regular/Contractual/Adjunct)	Regular
e-mail	shubharaok@bnmit.in, shubhak112003@yahoo.co.in
No. of years of Experience	Teaching:19.5



Academic Qualifications

- **M.Tech.** in VLSI Design and Embedded systems (2008), VTU.
- **B.E.** in Electrical and Electronics Engg (1997), NIE, Mysore University.

Working Experience Details

- **Associate Professor**, Dept. of EEE, BNMIT, Bangalore, India, (05.03.2012 – Till date).
- **Asst. Professor**, Dept. of EEE, BNMIT, Bangalore, India, (24.08.2011–04.03.2012).
- **Senior Lecturer**, Dept. of EEE, BNMIT, Bangalore, India, (21.08.2008-23.08.2011).
- **Lecturer**, Dept. of EEE, BNMIT, Bangalore, India, (11.08.2004-20.08.2008).
- **Lecturer**, Dept. of ECE, K.S.Polytechnic, Bangalore, India, (01.08.2001-31.07.2004).
- **Lecturer**, Dept. of ECE, A.P.S.College of Engineering, Bangalore, India, (01.09.1998-31.1.2001).

Subjects taught

- **B.E.**– Basic Electrical Engineering, Logic design, Electrical power generation, Electrical and Electronics Measurements, Field Theory, Op-amps and linear ICs, Modern Control theory, Embedded systems, OOPs with C++,VLSI Design, Digital Design Using VHDL,AI applications to power systems, Renewable Energy Sources.
- **M.Tech.** – VLSI design, Dynamics of linear systems, Advanced Control systems, Embedded systems and its applications and Predictive control of drives.

Research Experience Details:

Ph.D:

Completed Comprehensive-Viva and currently pursuing Hardware implementation. My research topic is “Study and implementation of load aware, high performance switching mode power supply for system on chip (soc)”.

Academic Positions and other Responsibilities (Institute Level):

1. **Deputy Chief Superintendent** (External) at City Engg College, Bangalore from 18-12-2017 to 12-01-2018 for the conduction of Dec 2017/Jan 2018 B.E. examinations of VTU, Belgaum.
2. **Deputy Chief Superintendent** (External) at DSCE, Bangalore from 14-12-2015 to 04-01-2016 for the conduction of Dec 2015/Jan 2016 B.E. examinations of VTU, Belgaum.
3. **Chief Test-Coordinator**, BNMIT (2014-15).

Academic Positions and other Responsibilities (Department Level):

1. Dept NAAC Coordinator(2016-17)
2. Dept NBA Coordinator (2015-17)
3. Project Coordinator for the Academic year 2013-14
4. Lab In-charge for Circuit and Simulation Lab (2014-15, 2015-16), Control Systems lab(2017-18), Electronics Lab(2018-19).

Professional Memberships:

- Life Member, Indian Society for Technical Education (ISTE).

Workshops /Seminars Organized:

1. Introduction to Research Investigations in Recent years in Electrical and Electronics Engg', March 2009, BNMIT, Bangalore
2. Organized a workshop "Programmable Logic Controllers and SCADA systems" for a period of 5 days in EEE Dept BNMIT, Bangalore from 9th to 23rd Jan 2015
3. Organized a workshop on "Recent trends in Power Quality Issues and Mitigations in Electrical Systems", B.N.M. Institute of Technology, Bengaluru, 18th to 23rd Jan 2016
4. One week faculty development program on "Modern Power Electronic Drives: Design and Future Trends" from 16th to 20th January 2018

Research Publications:

I. In National & International Journals

International Journals:

1. Shreyas R H, Vishrutha G, Shubha Rao K, "Type III Compensator Design for Buck converter", IJIRCCE, Volume 6, Issue 5, May 2018, www.ijircce.com, ISSN(online): 2320-9801, ISSN(Print) : 2320-9798, DOI 10.15680/IJIRCCE.2018.0605048, Impact factor-7.194
2. Veena P, Shubha Rao K, "Co-Simulation of a BLDC motor with a front end converter using an FPGA based controller in MATLAB/SIMULINK and Xilinx System generator", IJIRCCE, Volume 5, Issue 4, April 2017, Website: www.ijircce.com, ISSN(online): 2320-9801, ISSN(Print) : 2320-9798, DOI: 10.15680/IJIRCCE.2017.0504334, page no 8914-8921, Impact factor-6.577.

3. Shubha Rao K, Abhinav Prabhu, “Design and FPGA Implementation of sliding mode controller for buck converter”, IJIEEE, Volume-3 , ISSUE-7, July 2015, ISSN: 2347-6982,DOI: 10.15680/ijirce.2015.0305096, Page.no 48-53.Impact Factor 2.51
4. Shubha Rao K ,Mamatha S, Veena S Chakravarthi, “FPGA Based Digital controller for DC-DC buck converter”, IJIRCCE, Volume 3 , ISSUE 5,MAY 2015, ISSN(Online): 2320-9801, ISSN (Print): 2320-9798,Impact Factor:5.618.Page no.4616- 4623.
5. Shubha Rao K, Veena S Chakravarthi, Soumya P Maharajanvar, “ Design of Digitally controlled switched mode power supply for low power high frequency applications” IJISSET, Volume 1, Issue 4 ,June 2014, ISSN 2348 – 7968. PP.529-532 Impact factor 5.264

II. In National/International Conference Proceedings

1. Shubha Rao K, Abhinav Prabhu, Veena S Chakravarthi, “Design of FPGA-Based Sliding mode controller for Low-voltage High-frequency Buck converter”, IEEE-International conference on Power and Advanced Control Engineering (ICPACE), BNMIT, Bangalore, August 2015,PP 147-151.
2. Shubha Rao K, Veena S chakravarthi, “FPGA implementation of voltage regulator module for System On Chip”, IEEE sponsored 2nd International Conference on Electronics and Communication Systems,Coimbatore,26 and 27 February,2015.PP 297-302.
3. Shubha Rao K,Laxmi Deshpande,Mamatha S, “A Novel Digital current mode control technique for Buck Converter” Proceedings of 09th IRF International Conference, 27th July-2014, Bengaluru, India, ISBN: 978-93-84209-40-7,pp35-39.
4. Shubha Rao K, Dr.Veena S Chakravarthi, “Digital Modeling of Switching Mode Power Supply for SOC’s” , International Conference on Electrical Computer and Communication Engineering (ICECCE) ,pp 929-934, Paris , 14-16 Nov 2011.
5. Shubha Rao K,Kavitha K S,Gurumurthy.G.R,“FPGA Implementation of a Novel Voltage Modulation technique of the space vector PWM”, National conference on Energy systems and Energy Issues,B.M.S.College of Engineering,Bengaluru,18-19 Feb,2011.

Papers presented in International/National Conferences

International

1. Shubha Rao K, Abhinav Prabhu, Veena S Chakravarthi, “Design of FPGA-Based Sliding mode controller for Low-voltage High-frequency Buck converter”, IEEE-International conference on Power and Advanced Control Engineering (ICPACE), BNMIT, Bangalore, August 2015,PP 147-151.
2. Shubha Rao K, Veena S chakravarthi, “FPGA implementation of voltage regulator module for System On Chip”, IEEE sponsored 2nd International Conference on Electronics and Communication Systems,Coimbatore,26 and 27 February,2015.PP 297-302.
3. Shubha Rao K,Laxmi Deshpande,Mamatha S, “A Novel Digital current mode control technique for Buck Converter” Proceedings of 09th IRF International Conference, 27th July-2014, Bengaluru, India, ISBN: 978-93-84209-40-7,pp35-39.

4. Shubha Rao K, Dr.Veena S Chakravarthi, "Digital Modeling of Switching Mode Power Supply for SOC's", International Conference on Electrical Computer and Communication Engineering (ICECCE), pp 929-934, Paris , 14-16 Nov 2011.

National

1. Shubha Rao K, Shruthi H S, "Design and Implementation of Z source Inverter for Motor Application", National Conference on Convergence of Science, technology and Management, 5th May 2016, Dayananda Sagar Academy of Technology and Management, Bengaluru.
2. Shubha Rao K, Ramya M, "Implementation and modeling of a Dc-Dc converter and electrical parameters using IOT", National conference on Emerging trends in engineering Sciences and management, 23rd, 24th March 2016, Shridevi Institute of Engineering and Technology, Tumakuru.
3. Shubha Rao K, Kavitha K S, Gurumurthy.G.R, "FPGA Implementation of a Novel Voltage Modulation technique of the space vector PWM", National conference on Energy systems and Energy Issues, B.M.S.College of Engineering, Bengaluru, 18-19 Feb, 2011.

Participation in Training courses/Seminars/Workshops

1. One week faculty development program on "Modern Power Electronic Drives: Design and Future Trends" from 16th to 20th January 2018
2. Three Day national workshop on "Advanced Reconfigurable FPGA Architectures for Research and Industrial Applications", PES Institute of Technology , Bengaluru, 24th -26th November 2016.
3. FDP on "Role of IT in power sector", B.N.M. Institute of Technology, Bengaluru, 9th -13th Jan 2017.
4. One week Short Course on INNOVATIVE TEACHING METHODS conducted by National Institute of Technical Teachers Training & Research at B.N.M.Institute of Technology, Bengaluru, 18th -23rd July 2016.
5. FDP on "Integration of Green Energy to Smart grid-Opportunities and Challenges", B.N.M. Institute of Technology, Bengaluru, 11th -16th July 2016.
6. FDP on "Recent trends in Power Quality Issues and Mitigations in Electrical Systems", B.N.M.Institute of Technology, Bengaluru, 18-23 Jan 2016.
7. "Preparation for Accreditation by NBA", B.N.M.Institute of Technology, Bengaluru, 3-5 December 2015.
8. 18th ISTE Karnataka state level annual faculty convention , Main Theme: Technical Education Interventions For make In India and Digital India Initiative, PES university, Bengaluru, November 6-7, 2015.
9. Pre conference tutorial of IEEE-International conference on Power and Advanced Control Engineering, ICPACE on 12th August 2015.
10. Two day workshop on "Outcome-Based Education", BMS College of Engineering, 2nd and 3rd Aug 2015.
11. One Week Faculty Development Program on "IT Infrastructure Management Services", B.N.M.Institute of Technology, 5th-9th January, 2015.
12. Three day workshop on "Research Methodologies and Latex", Shree Devi Institute of technology, Mangalore, Sept 2014.

13. Training Cum Faculty Development program on “Cyber Security and Cyber laws”, BNMIT, Bangalore, 20th August 2014.
14. Faculty development program on ‘SoC-System on Chip’ ,BNMIT Bangalore , 17-19th Jan 2011.
15. Faculty Development Program on “VLSI Design Methodology “ , SJB Institute Of Technology , Bangalore , 26th to 30th July 2010,
16. Short Term Training Program on “VLSI System Design, Development and Testing” , S.J.C Institute of Technology, Chickballapur, 20-24th March,2007.
17. Workshop on “Signal and Image Processing” , B.N.M.I.T, 28th and 29th of January, 2010
18. Seminar on “Introduction to Research investigations in recent Years in Electrical and Electronics Engineering”, B.N.M.I.T, 16th March 2009.
19. National workshop on “Embedded solutions engineering and lab view”, University Visvesvaraya College of Engineering, Bangalore, 9th to 14th March 2009.
20. National Workshop on “Developments, Issues and Challenges in Power sector” Nitte Meenakshi Institute of Technology, Bangalore, Feb 02-04, 2009.
21. National Workshop on “Recent Trends in Drives and Power System Protection”, 27th and 28th July 2006 , RVCE Bangalore.

Personal Details:

- **Date of Birth:** 12 .04.1975; **Sex:** Female.
- **Family Details:** Husband Name: Umesh Rao worked in TESCO as Senior System Engineer
Son Name: Vismay and two daughters-Vinamra and Vinanthi.

13th August 2018

SHUBHA RAO K