


## Faculty Profile

<b>Name of Faculty</b>	<b>Dr. Bindu S</b>	
<b>Department</b>	Electronics & Communication Engineering	
<b>Qualification</b>	<b>B.E., M.E., Ph.D.</b>	
<b>Designation</b>	Professor	
<b>Area of specialization</b>	Sensors, Smart and Nano Materials, Conducting Polymers	
<b>Date of Joining BNMIT</b>	23/02/2004	
<b>Nature of Association (Regular/Contractual/Adjunct)</b>	Regular	
<b>e-mail</b>	bindus@bnmit.in bindu.ct@gmail.com	
<b>No. of years of Experience</b>	Teaching:22 years	

### Academic Qualifications

- **Ph.D.** (2018), Department of Electrical Engineering, VTU, Belagavi.
- **M.E.** (2004), Power Electronics, BU, Bengaluru (2<sup>nd</sup> Rank)
- **B.E.** (1996), Bangalore Institute of Technology, Bangalore.

### Working Experience Details

- **Professor**, Dept. of Electronics and Communication Engineering, BNMIT, 2016 -Till date.
- **Associate Professor**, Dept. of Telecommunication Engineering, BNMIT, 2012-2016
- **Assistant Professor**, Dept. of Telecommunication Engineering, BNMIT, 2008-2012.
- **Lecturer**, Dept. of Electrical and Electronics Engineering, BNMIT, 2004-2008.
- **Lecturer**, Dept. of Electronics & Communication Engineering, Dr. AIT, (1997 – 2001)

### Subjects taught

Basic Electronics, Analog Electronic Circuits, Digital Electronic circuits, Electronics Instrumentation, Control systems, Network Analysis, Linear Integrated Circuits & Applications, Satellite communication, Wireless Communication, Power Electronics, Digital VLSI Design, Nano Electronics, Design of Analog and Mixed mode VLSI.

### Research Experience Details:

#### M.E:

Designed a Power supply using active clamp concept, this power supply was designed for a satellite application and the work was carried out in transformer core Division, Bharat Electronics Limited, Bangalore in 2004.

#### Ph.D:

PEDOT-PSS a conducting polymer was characterized for strain gauge applications, as a consequence rectifying contacts was identified and three simple methods of achieving ohmic contacts to copper and tin was developed. Strain gauges were built and characterized to study the issues that need solution for making a good strain gauge with high gauge factor. We measured gauge factor of pristine

PEDOT-PSS, DMSO doped and graphite dispersed films for low strains. In this work it has been shown that the relative permittivity of pristine PEDOT-PSS is very high at low frequency and may be used in super capacitor applications. However the relative permittivity decreases at higher frequency. This work provides valuable inputs for making flexible strain gauges.

#### **Academic Positions and other Responsibilities (Institute Level):**

1. **Member, Organizing Committee**, Workshop on “MATLAB”, BNM Institute of Technology, Bengaluru during April – May 2018.
2. **Member, Organizing Committee**, Workshop on “Machine Learning” at BNM Institute of Technology, Bengaluru during April – May 2018.
3. **Chief Superintendent** at BNMIT, Bangalore from 11-06-2018 to 23-06-2018 for the conduction of May 2018 B.E. examinations of VTU, Belgavi.
4. **Editor** of Alumni Directory, (2017-2018).
5. **Editor** of BNMIT @ a Glance, (2018-2019)
6. **Chief Superintendent** at BNMIT, Bangalore from 12-06-2017 to 21-06-2017, for the conduction of June 2017 B.E. examinations of VTU, Belgavi.
7. **Member, Organizing Committee**, Symposium on Nanotechnology, Wireless Communication & Internet of Things “Tech treat on Emerging Technologies” BNM Institute of Technology, Bengaluru on 4<sup>th</sup> - 5<sup>th</sup> August 2016.
8. **Pre-Conference Tutorial Coordinator** for International Conference on Power and Advanced Control Engineering **ICPACE-2015**.
9. **Technical session Coordinator** for International Conference of VLSI, Communication, Advanced Devices, Signals & Systems and Networking (**VCASAN-2013**) conducted by ECE & TCE in the year 2013.
10. **Member**, Antiragging Committee, BNMIT (2016-17).
11. **IEEE-BNMIT Student Branch Counselor**

#### **Experimental/ Computational/ Any other Skills:**

1. Calculation of depletion layer thickness in thin films
2. Measurement of Interfacial capacitance for thin films
3. Separation of bulk and contact resistance in PEDOT-PSS films
4. Abrading of graphite-clay on copper, a simple technique to form ohmic contacts to PEDOT-PSS, first to report in literature.

#### **B. Characterization Techniques**

- **Probe station**, Impedance analyzer, Agilent 4294.
- **Impedance analyzer**, Keithley.
- **Sputtering Unit**.
- **SEM**

#### **Instruments Developed/Handled**

- **Developed** a 4- Point bend set up for deflection measurements for strain gauge applications.
- **Developed** a temperature controlled Box using Bang-Bang control required for research work.

### **Awards/ Achievements/Memberships:**

- **Secured** Second rank in M.E. Power Electronics, 2004, Bangalore University, Bangalore.
- **First prize** for presenting the paper entitled “Powering Robots” In the National level conference, Vemana Institute of Technology, Bangalore on 15<sup>th</sup> and 16<sup>th</sup> October 2008.
- **Cambridge Certification** for effective Teaching process, 2010.

### **Professional Memberships:**

- **Life Member**, Indian Society for Technical Education (ISTE), LM 50228.
- **IEEE Membership**, No:93803757
- **EXECOM Member**, IEEE Nano Technology Bangalore council

### **Workshops /Seminars Organized:**

1. **Organizing Committee Member** for a Workshop on “**MATLAB**” conducted in association with IEEE- BNMIT and IEEE Bangalore Section at BNM Institute of Technology, Bengaluru during April – May 2017.
2. **Organizing Committee Member** for a Workshop on “Machine Learning” in association with IEEE- BNMIT and IEEE Bangalore Section at BNM Institute of Technology, Bengaluru during April – May 2018.
3. **Organizing Committee Member** for a Workshop on “Research Methodology” in association with IEEE- BNMIT and IEEE Bangalore Section at BNM Institute of Technology, Bengaluru during 3<sup>rd</sup> – 4<sup>th</sup> October 2018.

### **Research Publications:**

#### **I. In National & International Journals**

##### **International Journals:**

1. **Bindu.S**, Vaishnavi R.K, Sheik Chandbasha “Design and Verification of APB Protocol by using System Verilog and Universal Verification Methodology” International Research Journal of Engineering and Technology (IRJET), e-ISSN: 2395-0056, p-ISSN: 2395-0072, Volume: 06 Issue: 06 , June 2019
2. **Bindu S**, Rekha P, Subodh Kumar Panda, “ An active device-JFET for sensing Jasmine aroma”, International Journal of Computer Sciences and Engineering, Vol.-7, Issue-4, April 2019 E-ISSN: 2347-2693
3. **Bindu S**, Lakshmi Bhaskar, Ashwini Savanth, “Smart Agriculture with Conducting Polymers using UDP”, Journal of Emerging Technologies and Innovative Research, ISSN : 2349-5162, Volume 5 Issue 12 , December-2018.  
DOI: <https://doi.org/10.26438/ijcse/v7i4.10541059> | Available online at: [www.ijcseonline.org](http://www.ijcseonline.org)
4. Shruthi H, **Bindu S**, “A Highly Secure Algorithm to Encrypt a Data Using a Low Area AES Implementation”, Perspectives in Communication, Embedded-Systems and Signal-Processing (PiCES) , ISSN: 2566-932X, Vol. 2, Issue 3, June 2018.
5. **Bindu S**, Priya R Sankpal, Lakshmi Bhaskar, “A Survey on Smart Materials to Mitigate Spacecraft Charging”, International Journal of Innovative Research in Science, Engineering and Technology.10.15680/IJRSET.2017.0607171
6. **Bindu S**, M S Suresh, “Bindu S, M S Suresh Electric Field Induced Resistance Change in PEDOT-PSS Films”, British Journal of Applied Science & Technology, Science domain

international. 20(6): 1-10, 2017; Article no.BJAST.33159, ISSN: 2231-0843, NLM ID: 101664541.

7. **Bindu S**, M S Suresh, “Ohmic contact formation to PEDOT-PSS films using graphite-clay”, British Journal of Applied science & Technology, Science domain international. 6(4): 342-349, 2015, Article no.BJAST.2015.093,ISSN: 2231-0843.
8. **Bindu S**, M S Suresh, “Measurement of Bulk Resistance of Conducting Polymer Films in Presence of Rectifying Contacts”, International Journal of scientific and Research Publication, Volume 4 , Issue 8, August 2014, ISSN 2250- 3153.

#### **National Journals:**

1. M S Suresh, Veena S Murthy, **Bindu S**, “Design Considerations, National conference on Modern Trends in communications, Vemana Institute of Technology, Oct (15-16) 2008, Bangalore.

#### **II. In National/International Conference Proceedings**

1. Bhagyalaxmi D Somayaji, Vinayak R Pai, **Bindu S**, “ Spacecraft Charging and its hazards”, National Conference on “Space ready Educational Institutions- A dream come true” on 20<sup>th</sup> April 2016, Dayananda Sagar College Of Engineering, Bengaluru
2. Bindhiya Shree V, Chandra Mohan B S, **Bindu S**, “Space Charge Mitigation using PEDOT: PSS”, National Conference, “Space ready Educational Institutions- A dream come true” on 20<sup>th</sup> April 2016, Dayananda Sagar College Of Engineering, Bengaluru.
3. **Bindu S**, M S Suresh, Anil Kumar, “Development of Technique for making ohmic contacts for PEDOT-PSS”, International Conference on VLSI, Communication, Advance Devices, Signals & Systems & Networking at BNMIT, Bangalore from 17<sup>th</sup> to 19<sup>th</sup> July 2013.
4. **Bindu S**, M S Suresh, “Short term variation of resistivity of conducting polymers and its dependence on electric field”, International Symposium on Physics and Technology of Sensors, March 8<sup>th</sup> to 10<sup>th</sup> 2012, Pune, India.

#### **Invited Talks Delivered:**

1. “**Getting Started with MATLAB**”: at BNMIT, Bengaluru, During MATLAB workshop conducted in Association with IEEE-BNMIT Student Branch and IEEE Bangalore section during April-May 2017.
2. “**Research Methodology and Current Trend Applications**” at BNMIT, Bengaluru, During Research Methodology Workshop conducted by IEEE-BNMIT student branch in association with IEEE Bangalore Section on 3rd October 2018.

#### **Chairmanships at National/International Conference/Seminars:**

1. Co-Chairperson of the Technical session III: C, International Conference on Fluid Dynamics and its Applications, during 12<sup>th</sup> -17<sup>th</sup> July, 2017 at B.N.M. Institute of Technology, Bangalore.

#### **Participation in Training courses/Seminars/Workshops**

1. Transcending Language skills, BNMIT, Bengaluru, 15<sup>th</sup> to 25<sup>th</sup> July 2019.
2. IoT based Project Design and Development, BNMIT, Bengaluru, 24<sup>th</sup> to 29<sup>th</sup> July 2019.
3. Thin Films and its Applications, RVCE, Bengaluru, 4<sup>th</sup> to 9<sup>th</sup> February 2019.
4. Training on Disaster management and CPR, UVCE, Bengaluru, 14<sup>th</sup> October, 2018.

5. All India student- young professional- women in engineering, Congress ,VVIT, Mysuru, 28<sup>th</sup> to 30<sup>th</sup> September 2018.
6. New Model curriculum for first year BE/B.Tech-CBCS Detailed syllabus ( 2018-19) as per outcome –based education(OBE) format including course outcomes(CO) and Bloom’s taxonomy, MSRIT, Bengaluru, 14<sup>th</sup> May, 2018.
7. Patenting, Bengaluru, 11<sup>th</sup> April, 2018
8. Modern Materials and their Applications, Bengaluru, 16<sup>th</sup> to 20<sup>th</sup> January, 2018
9. MSP 430 Microcontroller and its Applications, BNMIT, Bengaluru, 31<sup>st</sup> to 5<sup>th</sup> August, 2017
10. Physical Design challenges in DSM Node VLSI Systems, BNMIT, Bengaluru, 16<sup>th</sup> to 21<sup>st</sup> January, 2017.
11. Tech Treat on Emerging Technologies, BNMIT, Bangalore, 4<sup>th</sup> & 5<sup>th</sup> August 2016.
12. Innovative Teaching Methods, BNMIT, Bangalore, 18<sup>th</sup> to 23<sup>rd</sup> July 2016
13. Wireless Communication- Agilent Technologies, 3<sup>rd</sup> September 2013
14. International conference on VLSI, Communication, Advanced Devices, Signals & Systems and Networking VCASAN, 17<sup>th</sup> to 19<sup>th</sup> July 2013, BNMIT
15. International Symposium on Physics and Technology of Sensors, Pune, India, 8<sup>th</sup> to 10<sup>th</sup> March 2012
16. Student Satellite Training Program (SSTP) organized by the team STUDSAT at NMIT, Bangalore, 6<sup>th</sup> & 7<sup>th</sup> August 2010
17. Mission 10X workshop at BNMIT, Bangalore 19<sup>th</sup> to 23<sup>rd</sup> July 2010
18. COMSOL Conference held at ITC Windsor Manor, Bangalore, 13-14<sup>th</sup> Nov 2009
19. Awareness and auditors program on “ISO 9001:2008 Quality Management System at BNMIT, 25<sup>th</sup> September 2009
20. National level conference on “ Modern Trends in Communication” at Vemana Institute of Technology, Bangalore, 15<sup>th</sup> & 16<sup>th</sup> Oct. 2008
21. State Level Seminar on “Telecom Scenario-current & future” at DSCE, 27<sup>th</sup> Nov. 2006
22. FDP on MSP 430 Microcontroller and its Applications, BNMIT, Bengaluru, 31<sup>st</sup> to 5<sup>th</sup> August 2017.
23. FDP on Physical Design challenges in DSM Node VLSI Systems, BNMIT, Bengaluru, 16<sup>th</sup> to 21<sup>st</sup> January 2017
24. FDP on Modeling and Simulation of Thin Film Devices, R V College of Engineering, Bangalore, 11<sup>th</sup> to 16<sup>th</sup> July 2016
25. FDP on ARM CORTEX M3 (Practically Intensive) 8<sup>th</sup> to 14<sup>th</sup> January 2016, BNMIT.
26. Work shop on “Preparation for Accreditation by NBA”, 3<sup>rd</sup> to 5<sup>th</sup> December 2015, BNMIT
27. Two Day Workshop on “Plagiarism” at VTU Regional office, 16<sup>th</sup> & 17<sup>th</sup> October 2015, Bangalore.
28. One week faculty Development program on Electronics Communication and trends, 19<sup>th</sup> to 23<sup>rd</sup> Jan. 2015, BNMIT.
29. One day workshop on “Nano Metrology & Materials Characterization” Central Manufacturing Technology Institute Tumkur Road, 25<sup>th</sup> June 2014, Bangalore.
30. Wireless Communication- Agilent Technologies, 3<sup>rd</sup> September 2013
31. FDP on Innovative Teaching & Effective Communication at BNMIT, 18<sup>th</sup> to 20<sup>th</sup> July 2012
32. Two days workshop on Research Methodologies & Latex at SJBIT, Bangalore, 9<sup>th</sup> & 10<sup>th</sup> May 2011
33. FDP on Emerging Trends and Technologies in RF Design at AMC Bangalore, 17<sup>th</sup> to 19<sup>th</sup> Jan 2011

34. Five days development program “Mission 10X Learning Approach Practitioners Certificate” at BNMIT , 27<sup>th</sup> & 28<sup>th</sup> September 2010
35. One day Symposium on “Current Trends in Photonics its Applications at BNMIT, Bangalore, 20<sup>th</sup> March 2010
36. FDP on MEMS at MSRIT, 21<sup>st</sup> to 26<sup>th</sup> Dec 2009
37. Faculty Training Program “Cellular Technology” at UTL Technologies Ltd Bangalore, 14<sup>th</sup> Aug 2008
38. Two day workshop on “Power system over voltages & theirs mitigation” at MCE, Hassan, 27<sup>th</sup> -28<sup>th</sup> April 2007
39. Short Course on “Instructional Design and Delivery” at BNMIT by National Institute of Technical Teachers Training & Research, 9<sup>th</sup> to 14<sup>th</sup> Aug. 2004
40. Three days workshop on VLSI Design labs at BIT, 7<sup>th</sup> to 9<sup>th</sup> Aug. 2004

**Personal Details:**

- **Date of Birth:** 31<sup>st</sup> July
- **Gender:** Female.
- **Marital status:** Married and two daughters

**3<sup>rd</sup> August 2019**

**Bindu S**