Resume

Name	Dr. N. SHESHAPRASAD	
Address	#1354, 25th Main, Banashankari 2nd stage, Bengaluru-560070.	
Qualification	• Ph.D (2022), Department of Electronics and Communication Engg, BMSCE, VTU. • M.Tech. (2002), Department of Electronics and Communication Engg, BMSCE, VTU, 2nd Rank. • B.E. (1998), Department of Electronics and Communication Engg, BMSCE, VTU. • M.A (Kannada)	
Current Designation at BNMIT	Professor (ECE Dept) HoD, Dept of Humanities. Head-student affairs (Cultural)	
Area of specialization	Antennas, Communication and Music Technology	
Experience @ BNMIT	23years	
Experience@BMSCE	2 years	
Mobile Number	9845096630	
e-mail	nspbnmit@gmail.com	
No. of years of Experience	Teaching: 25 years Industry: 1 years Research: 20 years	
Date of Birth **Age**	25 - 02 –1976 **49 years**	
Social media handles	**LinkedIn:** https://www.linkedin.com/in/sheshaprasadn/ **YouTube:** @sheshaprasad4354 **Instagram:** shesha.prasad.9 **Research gate:** https://www.researchgate.net/profile/N-Sheshaprasad	

Objective:

Seeking a suitable position to utilize my skills & abilities. To be an integral part of your prestigious organization, which would help me grow both on the intellectual and personal front while contributing to the growth and success of the organization.

Academic Qualifications

- **Ph.D** (2022), Department of Electronics and Communication Engg, BMSCE**,** VTU.
- **M.Tech.** (2002), Department of Electronics and Communication Engg, BMSCE**,** VTU, **2nd Rank.**
- **B.E.** (1998), Department of Electronics and Communication Engg, BMSCE**,** VTU**.**
- **M.A** (2022), Kannada, Karnataka State Open University, Mysore.

Awards/ Achievements:

1. **2nd Rank in M.Tech**, VTU, 2002
2. **"The Best Outgoing Student of BMS College of Engineering"**.
3. **First Rank** in Junior and Senior Carnatic Classical Music Vocal exams conducted by Karnataka secondary Education Board.
4. **First Rank** in "Gamaka Kaavya Vaachana Paareena" Conducted by Karnataka Gamaka Kala Parishad.
5. **First Runner up** in E - TV Yede Thumbi Haduvenu Competition Conducted by **Sri. S. P. BALASUBRAHMANIAM** in 2005 and in "**Voice of Bangalore season 4**" conducted by Garuda Mall in 2010.
6. **B High Grade artist in AIR and Dooradarshan**.
7. Participated in **"Madhura maduravee manjulagaana**" a popular programme conducted by **Dooradarshan Chandana** Channel.
8. Done trekking at Kodachadri, Yana, Jog Falls, Kudremukh, Muthodi, avalanche and Thirupathi**. on bare foot, Left Leg being affected by POLIO.**
9. Conducted Cultural Programs at National and International Level Workshops.
10. Rendered voice for various CDs and Cassettes and also for various kannada TV serials.
11. Team Manager for Inter University South Zone Youth Cultural Festival in 2005.
12. Chaired many IEEE international Conferences

Work Experience Details:

1. Working as HoD, in the Dept of Humanities at B.N.M Institute of Technology, from 11-5-2022 till date.
2. Working as Professor, in the Dept of Humanities at B.N.M Institute of Technology, from 14-6-2023 till date.
3. Worked as Associate professor at B.N.M Institute of Technology, in the department of Electronics and Communications from 5-3-2012 to 14-6-2023.
4. Worked as Assistant Professor at B.N.M Institute of Technology, in the department of Electronics and Communications, from 1-1-2007 to 4-3-2012.
5. Worked as Lecturer at B.N.M Institute of Technology, in the department of Electronics and Communications, from 1-8-2002 to 31-12-2006.
6. Worked as Lecturer at BMS College of Engineering in the department of Electronics and Communications from 06-10-1999 to 31-01.2001.
7. Worked as Lecturer at BMS College of Engineering in the department of Telecommunications from 27-03-2001 to 01-08.2002.
8. Worked as R & D Engineer at PRIYARAJ ELECTRONICS, Bangalore, from 01-09-1998 to 30-09- 1999

Research Experience Details:

Ph.D:
Department of Electronics and Communication, BMSCE, VTU in the field of "**Microstrip antenna design for human body communication**".

Wireless Body Area Network (WBAN) is a type of communication system in which multiple sensors with integrated transmitters are put on to the human body to monitor the various physiological parameters such as temperature, blood pressure, EEG, ECG etc. The devices will be required to communicate with each other, and with a central node. The body-centric wireless communication devices are used in a variety of other settings including the military and entertainment. Many of these applications need antennas operating in different frequency regimes, and the antennas' characteristic

parameters such as gain, directivity, SWR, SAR etc., get often degraded since they operate in close vicinity of the human body. In this context, research works to investigate the effects of the highly dispersive human body on the antenna characteristics has attracted the interest of several researchers.

In this research, three microstrip antennas are designed, fabricated and tested in both simulation and real environments to cover the ISM (2.4GHz), UWB (3.1 to 10.6GHz), ISM Band (5.8GHz) and the 5G frequency Band (23 to 30GHz) for on and off human body communication. The three antennas studied in this work and the gist of results are presented next.

(i) A novel antenna structure is derived from ***CROSSWORD*** shaped radiating patch with a partial ground plane that can operate both in the ISM (2.4GHz) and UWB (3.1 to10.6GHz) frequencies. The proposed antenna is designed, and subsequently fabricated on Rogers RT Duroid 5880 substrate and measurements are made both in free-space and on the human body. A comprehensive study on the characteristics of human body tissues in the UWB frequency range for the body's four outermost tissue layers (skin, fat, muscle and bone) is performed. The thickness of the tissue layer had an effect on antenna performance, as evaluated by the return loss, efficiency, radiation pattern, and SAR. The maximum SAR measured is within the ICNIRP and IEEE C95.1 standard limits of 1.6W/Kg making the designed wide band Crossword antenna mostly suitable for WBAN applications.

(ii) A compact ***flexible antenna*** is proposed using Kapton polyimide as substrate material at 5.8GHz in ISM Band for wearable devices. The antenna's study revealed good agreement between simulated and measured values in free space. Bending in free space is studied in two planes, xz and yz, with bending angles ranging from 0 to 180 degrees. According to bending analysis in the xz plane, the performance of the antenna gets degraded when it is bent in the direction that affects its resonance length. On the other hand, the yz-plane bending had no significant effect on resonance frequency, gain, efficiency, main lobe orientation, 3dB beam width, or return loss. To evaluate the antenna's operability in a real environment, a set of comparison findings of the antenna in free space, 3-layer tissue model, and CST voxel model are made. Finally, by placing the antenna on a real human hand, the on-body implementation of the developed antennas is evaluated. The SAR results are noted to be within the ICNIRP and IEEE C95.1 standard limits of 1.6W/Kg, making the proposed flexible antenna suitable for WBAN in on-body communication.

(iii) Design and analysis of a novel ***inset fed*** antenna proposed to be suitable for smartwatches and other fitness bands is performed with wide band operation from 23 to 30GHz, using Roger 5880 substrate. The SAR for 10g of tissue was tested at this frequency band under three instances by placing it: (i) on the author’s hand (wrist) in real, (ii) on the three tissue layers of tissue model and (iii) adjacent to the CST Voxel model. The antenna compliance with FCC standards was evaluated. The maximum SAR findings obtained from a 3mm separation for an input power of

125mW, reveal compliance values below the 4 W/kg limitation for the hand (wrist) model, and values below the 2 W/kg limitation for the CST Voxel head model (Gustav).

Government Funded Projects:

Title: Virtual Eye
Students: Pruthvi. S, Shama.M.S, Hitesh. V. Harithas, Sandesh. S. Chiploonkar of 8th Sem ECE, 2018.
Funding Agency: NSTEDB, DST, Govt of India, New Delhi
Amount: 2 Lakhs
Duration: 01 years (August 2017 – August 2018)

Subjects taught:

Internet of Things (IoT), Basic Electronics, Analog Electronic Circuits, Digital Electronics, Microprocessors, Antenna and Wave Propagation, Microwaves and Radar.

Academic Positions and other Responsibilities (University Level):

1. Head- student affairs (Academics and Cultural)
2. Team Manager for University Youth Cultural Festivals.
3. Academic Coordinator.
4. Social Connect Responsibility.
5. Student Forum in charge.
6. Web site in charge for Cultural and Nature Club.
7. Cultural and Sports Chief coordinator.
8. NBA and NAAC, Head for Criteria 9

Academic Positions and other Responsibilities (Institute Level):

1. **HoD**, Dept of Humanities.
2. **Chairman, Board of Studies,** for the Dept of Humanities.
3. **Chairman, Board of Education,** for the Dept of Humanities.
4. **Member, Board of Studies,** for the Dept of ECE.
5. **Member, Board of Education,** for the Dept of ECE.
6. **Head**, Kalabhageerathi, BNMIT Cultural Club.
7. **Head**, BNM Friends of Nature Club.

Professional Memberships:

- **Execom Member IEEE Photonics, IEEE-99811652**
- **Life Member, Indian Society for Technical Education (ISTE) LM50246.**
- **Vidwan-ID : 235784**
- **ORCID ID: 0000-0003-4842-8391**
- **Google Scholar Id: I7PfHGoAAAAJ**

Workshops /Seminars Organized:

1. Actively participated in organizing International Conference on VLSI, Communication, Advanced devices, signals & systems and Networking – "VCASAN" from 17th to 19th July 2013.
2. Actively participated in organizing International Conference on Power and advanced control Engineering– "ICPACE" from 12th to 14th August 2015.
3. Actively participated in organizing An International conference on Fluid Dynamics and its application at BNMIT from 12th to 14th July 2017.
4. Actively participated in organizing International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE) at BNMIT from 27th to 28th January 2023.

Research Publications:

In National & International Journals / Conferences

1. N.Sheshaprasad & Dr.Rameshwar Rao, **"Design and development of a system for generating Carnatic Music from Brain Signals"**, 52nd congress of Indian Society of Theoretical & Applied Mechanics (ISTAM) – An International Meet, in association with IIT Kharagpur from 14th to 17th December 2007.
2. N.Sheshaprasad & Dr.Rameshwar Rao, **"Music of the Brain - A Mathematical Model"**, 55th congress of Indian Society of Theoretical & Applied Mechanics (ISTAM) – An International Meet, from 20th to 25th Jan 2010.
3. Kiran koli & N.Sheshaprasad, "**Implementation of Interleaver address generator for multimode communication in WLAN"** International Journal of Engineering Research and Technology, IJERTV4IS051286, 2-6-2015.
4. N.Sheshaprasad & Meghana Mohan, "**Design and Implementation of IoT Based Integrated Model for Warehouse Inventory Management and Environment Monitoring**", in IJMTER, Volume3, Issue 6, June 2016 International Journal of Modern Trends in Engineering Research (IJMTER) ISSN(Online): 2349-9745, page 2393-8161. Impact Factor 3.518.
5. N.Sheshaprasad & Meghashree D, " **LTE Handover Parameter Optimization for self configuring and self healing networks ",** in IRJET, Volume4, Issue 5, May 2017 International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056, p-ISSN:2395-0072. Impact Factor 5.181.
6. N.Sheshaprasad, " **Design and performance analysis of UWB linearly polarized coaxial fed circular patch antenna for biomedical applications** ", in IJERR, Volume 6, Issue 2, April-June 2018 International journal of Research and Reviews, ISSN: 2348-697x(online), pp 36-39.
7. N.Sheshaprasad, S. B. Bhanu Prashanth "**Studies on feed dependent characteristics of Patch antenna for wireless body area networks** ", in ICNEWS 2018, International Conference on Networking, Embedded and wireless Systems, 27-28 December 2018 at BMSCE. doi: 10.1109/ICNEWS.2018.8903955. **BEST PAPER AWARD. IEEE Paper. doi: 10.1109/ICNEWS.2018.8903955,** https://ieeexplore.ieee.org/document/8903955
8. N.Sheshaprasad, S. B. Bhanu Prashanth "**A Study of UWB Microstrip Antenna parameters for wireless applications**", in IConDSC 2019, International Conference on Data Science and Communication, 1-2 March 2019 at Christ University. **DOI:** 10.1109/IconDSC.2019.8817014 **IEEE Paper.** https://ieeexplore.ieee.org/document/8817014
9. N Shesha Prasad, Adithya B R, and Adithya N Simha, "**Design and Implementation of Ultra-Wide Band Microstrip Antenna**," International Research Journal of Advanced Engineering and Science, Volume 4, Issue 2, pp. 470-473, 2019. IMPACT FACTOR 5.23..
10. N Shesha Prasad, Aishwarya J, Apoorva S M, Deepika R, and Navya H N**, "Design of an Ultra-Wide Band Fractal Antenna for Various Wireless and IoT Applications,"** *International Research Journal of Advanced Engineering and Science*, Volume 5, Issue 2, pp. 196-200, June 2020. IMPACT FACTOR 5.23. http://irjaes.com/wp-content/uploads/2020/10/IRJAES-V5N2P211Y20.pdf

11. N. Sheshaprasad , Chandrashekar C , P A Vijaya , Basavaraj I Neelgar, **"Analysis of a printed UWB antenna and the effects of human body in WBAN applications",** Journal of University of Shanghai for Science and Technology, Volume 23, Issue 6, June -2021. ISSN: 1007-6735**.** https://jusst.org/analysis-of-a-printed-uwb-micro-strip-antenna-and-the-effects-of-human-body-in-wban-applications/
12. N. Sheshaprasad, Aditi Rao, Bhoomika R, Eva D. Saglani, **"Design of UWB Antenna for Human Body Communication",** Journal of University of Shanghai for Science and Technology, Volume 23, Issue 6, June -2021. ISSN: 1007-6735**.** https://jusst.org/design-of-uwb-antenna-for-human-body-communication/
13. N. Sheshaprasad, S. B. Bhanu Prashanth, "**The Design of an Inset Fed Wide Band Antenna Operating from 23 to 30 GHz for Wearable Smart Watch Applications**", International Journal of Science of Research (IJSR), Volume 10, Issue 11, November 2021, 819 – 824. https://www.ijsr.net/get_abstract.php?paper_id=SR211115222851
14. N. Sheshaprasad, S. B. Bhanu Prashanth, "**Studies on human body effects on a printed UWB microstrip antenna, and SAR analysis in WBAN applications**." International Journal of Engineering Science Invention (IJESI), Vol. 10(11), November 2021, PP 08-17. Journal DOI-10.35629/6734. http://www.ijesi.org/papers/Vol(10)i11/Ser-2/B1011020817.pdf
15. N Sheshaprasad, Kiran K N, Sumathi A, "A 28 GHZ 5G HIGH GAIN MIMO ANTENNA ARRAY SYSTEM FOR HUMAN BODY COMMUNICATION", International Journal of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Volume.10, Issue 7, pp.a482-a486, July 2022, Available at :http://www.ijcrt.org/papers/IJCRT2207059.pdf
16. N. Shesha Prasad, Bhavana V, Abhiram C, Anshika Philo Nivedha K, "THE SYNTHESIS OF BIO ACOUSTIC MUSIC USING PLANTS", International Journal of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Volume.10, Issue 7, pp.c23-c26, July 2022, Available at : http://www.ijcrt.org/papers/IJCRT2207266.pdf
17. N. Shesha Prasad, Bindu. S, Kiran K. N and P. A. Vijaya, "Detection of Human Brain Tumors Using an UWB Patch Antenna at 28GHz," 2023 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE), Bengaluru, India, 2023, pp. 96-100, doi: 10.1109/IITCEE57236.2023.10090949.
18. Dr. N Shesha Prasad, Nikhil Sharma, Puneeth Shenoy, Sumit Kumar Shukla, "skin cancer detection using microstrip antenna" International Journal of Scientific Research in Engineering and Management (IJSREM) Volume: 07 Issue: 05 | May - 2023 Impact Factor: 8.176 ISSN: 2582-3930.DOI:10.55041/ijsrem21813. https://ijsrem.com/download/skin-cancer-detection-using-microstrip-antenna/
19. Dr. N Sheshaprasad, Kumar A C, Niranjan C, Yashas Gowda C P, "A Review on Unlocking the Potential of Microstrip Antennas: A Promising Approach for Non-invasive Testicular Cancer Detection" GIS SCIENCE JOURNAL, VOLUME 11, ISSUE 5, May – 2024 ISSN NO : 1869-9391 PAGE NO: 460-469 https://drive.google.com/file/d/1j5wqIWcWFGSZQZmY-YiVDSh5eW0KlXhF/view

Participation in Training courses/Seminars/Workshops

1. National Workshop on " Recent Advances in Renewable Energy Technologies " in association with ASTRA, IISc Bangalore, in 2003
2. National Workshop on " Advanced Communication Technologies " in association with ISRO, in 2004
3. National Workshop on " Technology Trends in Mobile Computing & Communications" in association with Indian Institute of Information Technology, Bangalore (IIITB), in 2005
4. National workshop on " Advanced Signal Processing Technologies" in association with IEEE Signal Processing Society, Bangalore Chapter, in 2006
5. National workshop on "Wireless Communication" in association with International Institute of Information Technology, Bangalore (IIITB), in 2007
6. 52nd congress of Indian Society of Theoretical & Applied Mechanics **(ISTAM)** – An International Meet in association with IIT Kharagpur in Dec 2007.

7. International Conference on VLSI, Communication, Advanced devices, signal & systems and Networking – "VCASAN" in July 2013
8. An International conference on Power and advanced control engineering "ICPACE 2015" during August 12th – 14th 2015.
9. An International conference on Fluid Dynamics and its application at BNMIT from 12th to 14th July 2017.
10. Workshop on Research Methodology & Latex, organized by VTU e – learning Centre, Bangalore from 18th to 20thMarch 2015.
11. 6 day workshop on Trends in RF microwave and sensor network Technologies at MSRIT from 1st to 6th June 2015
12. FDP program on VLSI Design Using Cadence Tools at KSIT from 29th June to 3rd July 2015.
13. One week FDP on ARM cortex at BNMIT from 8th to 14thJan 2016.
14. An Intensive workshop on COMSOL from 19th to 21st Jan 2016.
15. One week workshop on Computer and Wireless Networks at BNMIT from 11th to 16th July 2016.
16. FDP on Innovative Methods of Teaching at BNMIT from 18th to 23rd July 2016.
17. One week FDP on Physical Design Challenges in DSM Node VLSI Systems at BNMIT from 16th to 21st Jan 2017.
18. 3 day National level workshop on Micro strip antennas and measurements held at ECE dept, Christ University, Bangalore from 5th to 7th July 2018.
19. One day workshop on Internet of Things organized by BNMIT as part of AICTE Initiative – Share and Mentor Margadarshan Scheme on 22nd September 2018.
20. 5 Day Skill Enhancement program for mentors, teachers and counselors on "Helping our students get through college" from 21st to 25th January 2019 conducted at Global Academy of Technology in association with VTU and NIMHANS.
21. NPTEL course on Antennas conducted by Dr. Girish Kumar, IITB. 93% with Gold+Elite Award. May 2019.
22. 5 Day workshop on "Computational Methods for Partial Differential Equations Using MATLAB" organised by Maths Dept, BNMIT in association with BITES, 10th to 14th June 2019.
23. 5 Day FDP on "IoT based Project Design and Development" organised by ECE Dept, BNMIT, 24th to 29th June 2019.
24. 5 Day FDP on "Working Model Industry 4.0" from 8th July to 12th July 2019 held at Nettur Technical Training Foundation (NTTF), Bangalore.
25. 5 Day FDP on "Digital Design flow using Xilinx and MATLAB tools for Image Processing Applications" from 20th to 24th January 2020, organised by ECE Dept, BNMIT.
26. **"3 days Webinar series on satellite and automation",** organised by GSSIETW IEEE student branch in association with IEEE Bangalore section and CAS Bangalore chapter from 11th to 13th May 2020.
27. **"2 Days Webinar on 3D EM Simulation Involving CST Software ",** Organized by Department of Electronics and Communication Engineering, Sri Venkateswara College of Engineering, Sriperumbudur on 18.05.2020 and 19.05.2020.
28. **"1 day webinar on Microstrip antennas, future trends and New applications"** organised by IETE ECE BIT in association with IEEE CAS bangalore chapter on 13th June 2020.
29. **"6 days Webinar series ",** organised by BNMIT IEEE student branch in association with IEEE Nano technology council from 27th May to 3rd June 2020.
30. **"*2 day webinar series on "Risk & Compliance Management Information Security and Speech Processing"* organized by *Institution of Engineers India Students' Chapter, Dept. of ECE, BNMIT*, at B.N.M. Institute of Technology,Bengaluru-560070 on *4th* and *5th* June, 2020.**
31. *"***6 days Webinar** *on Advanced Antenna Design and Development for RF Communication Systems",* Jointly Organized by The Institution of Electronics and Telecommunication Engineers (IETE) Bangalore and Antenna Test & Measurement Society of India (ATMS) held during 20th to 25th July 2020.

32. **Perfect Tenses and Modals** - University of California, Irvine and offered through Coursera – 5/7/2020
33. **COVID-19: What You Need to Know (CME Eligible)** - Osmosis and offered through Coursera 15/7/2020
34. **Introduction to Programming with MATLAB** - Vanderbilt University and offered through Coursera – 17/7/2020.
35. **Programming for Everybody (Getting Started with Python)** - University of Michigan and offered through Coursera – 26/7/2020.
36. **Python Data Structures** - University of Michigan and offered through Coursera – 1/8/2020.
37. **Structuring your article correctly** - Researcher Academy - 25-8-2020
38. NPTEL course on Appreciating Carnatic Music by Dr. Lakshmi Sriram, IITMadra. 92% with Gold+Elite Award and Topper. Jan 2020.
39. One week online FDP on "Antenna Design and Printing for Practical Applications", Organized by ECE Dept, BNMIT, Funded by NewGen-IEDC, DST, Govt. of India, from 25th to 30th June 2021.
40. Two days International Webinar series on "Electric Vehicles and Autonomous cars", organized by "ISTE students chapter-BMMIT" on 6th and 7th July 2021.
41. Three days faculty Development workshop on "Innovative Teaching –Learning Methodologies" organized by the Teaching-Learning Centre, BNMIT, from 27th to 29th September 2021.
42. One day "Panel discussion on National Education Policy implementation in Higher Education" organized by BNMIT, on 20th November 2021.
43. Animation Foundations: Fundamentals- LinkedIn Learning-Course completed on Nov 25, 2021.
44. Google Sites Essential Training- LinkedIn Learning- Course completed on Dec 02, 2021
45. Learning Audacity- LinkedIn Learning- Course completed on Dec 03, 2021
46. Learning MATLAB- LinkedIn Learning- Course completed on Nov 25, 2021
47. Learning Microsoft Power Apps- LinkedIn Learning- Course completed on Dec 05, 2021
48. Learning PowerPoint for the Web (Office 365/Microsoft 365)- LinkedIn Learning- Course completed on Nov 24, 2021.
49. Microsoft Power Apps: AI Builder- LinkedIn Learning- Course completed on Dec 04, 2021
50. One week FDP on ""Design of Intelligent IOT using Node MCU" organized by BNMIT in association with SST Technologies, from 10th to 15th October 2022.
51. One week FDP on "IoT with Raspberry Pi4 and Python", organized by BNMIT in association with Cranes Varsity, from 8th to 13th May 2023.
52. One week FDP on "Cocoon-Nurturing the hidden potential to unleash it" organized by BNMIT from 7th to 11th August 2023.
53. **Programming for Everybody (Getting Started with Python)** - University of Michigan and offered through Coursera – 12/11/2023.
54. **Python Data Structures** - University of Michigan and offered through Coursera – 28/11/2023
55. **Using Python to Access Web Data**- University of Michigan and offered through Coursera – 2/12/2023.

Extra Curricular Activities:

1. Singing.
2. Trekking.
3. Adventure and Water Sports.
4. Counseling.
5. Organizing National Level Workshops.

Personal Details:

- **Date of Birth:** 25 - 02 –1976**;** **Sex**: Male.
- **Family Details:** Wife, One son and One daughter
- **Passport Number:** C6228163(valid till 15/12/ 2034)