

Faculty Profile

Name of Faculty	Dr. Basavaraj I Neelgar
Department	Electronics & Communication Engineering
Qualification	B.E, M. Tech, Ph.D
Designation	Professor
Area of specialization	Low Power VLSI Design ,Antenna Arrays, Signal Processing
Date of Joining BNMIT	26-07-2017
Nature of Association (Regular/Contractual/Adjunct)	Regular
e-mail	basavarajineelgar@bnmit.in, basneelgar@gmail.com
No. of years of Experience	Teaching:29 years Industry :4.5 years Research:4 years



Academic Qualifications

- **Ph.D.** (2015), Department of ECE, JNTU Hyderabad, India.
- **M. Tech.** (1995), Department of ECE, Mangalore University, India (Distinction).
- **B.E.** (1984), BVBCET, Hubli, Karnataka University (Dharawad district) (Distinction).

Working Experience Details

- **Professor**, Dept. of ECE, BNMIT, Bengaluru, India, (2017 – Till date).
- **Professor & Head**, Dept., of ECE, Dayananda Sagar University, Bengaluru (2015-2017)
- **Professor & HOD**, Dept. of ECE, GMRIT, Rajam, AP, India, (2006 – 2015).
- **Assistant Professor**, Dept. of ECE, RVCE, Bengaluru India, (2005-2006).
- **Assistant Professor, Senior Lecturer, Lecturer**, Dept. of ECE, KLECET, Belagavi, India, (1990-2005).
- **Engineer (R & D)**, Kirloskar Warner Swasey Ltd. Hubli, India, (1988-1990).
- **Engineer EDP**, Automobile Corporation of GOA Ltd. GOA, India, (1986-1988).

Courses taught

UG : Engineering Electro-Magnetics, Field Theory, Electro-Magnetic Waves and Transmission lines, VLSI Design, Digital IC Applications, Basic Electronics, C Programming, PASCAL Programming, Pulse and Digital circuits, VHDL, Operating systems, VLSI circuits, Telecommunication Networks and Switching, Electronic devices

PG : Synthesis and Optimization of Digital Circuits, VLSI Testing and Testability, VLSI Technology, Advanced VLSI design, Low Power VLSI design, Testing of VLSI circuits, VHDL, CMOS RF design

Research Experience Details:

The Ph.D work was on “**Investigations on frequency dependent and frequency independent antennas for their Comprehensive characteristics**”. There are several types of antenna arrays with varied applications. Two of the most widely used antenna arrays are Yagi-Uda and Log-Periodic antenna arrays. Though they are much popular, a thorough analysis is not available in the open literature. In view of these facts, investigations are carried out to bring out their complete

characteristics. These include variation of gain, radiation characteristics, self and mutual impedances of the above arrays. The data on self and mutual impedances of Yagi-Uda and Log-Periodic antennas is essential for the estimation of their performance. These parameters are theoretically obtained and verified experimentally.

Also, the radiation patterns were numerically computed and plotted as a function of operating frequency and length of directors. The height of the antenna above the ground is also considered and the radiation patterns are simulated for different ground conditions. The analysis for power gain with height of antenna from ground is also carried out. The results of the thesis are extremely useful for the design of the above arrays for a given application.

Research Supervision

Sl.No.	Name of the student	Ph.D / M.Phil	University	Year of completion	Title of Research Topic
1	Yojna Bellad (5VZ16PEJ01)	Ph.D.	VTU, Belagavi	Pursuing	Analysis And Development Of Quality Medical Images Using Different Techniques And Methods
2	Shridhar H (5VW16PEJ64)	Ph.D.	VTU, Belagavi	Pursuing	Novel Algorithm And Architecture For Image/Video Mosaicing.
3	Chandrashekar C)	Ph.D.	VTU, Belagavi	Pursuing	Memory Bist For System- On- Chip (Soc)
4	Priyadarshini K Desai	Ph.D.	VTU, Belagavi	Pursuing	Multiple Antenna System Analysis For Small Base Station In 5g

Academic Positions and other Responsibilities (University Level):

1. Member, LIC Committee, VTU, Belagavi
2. Member, Board of Examiners (BoE), VTU, Belagavi for the year 2018-19.

Academic Positions and other Responsibilities (Institute Level):

1. **Chairman, Board of Studies (BoS)**, Department of Electronics and Communication Engineering, School of Engineering, Dayananda Sagar University, Kudlu Gate, Bengaluru.
2. **Chairman, Board of Examination (BoE)**, Department of Electronics and Communication Engineering, Dayananda Sagar University, Kudlu Gate, Bengaluru.
3. **Chairman, Board of Studies (BoS)**, Department of Electronics and Communication Engineering, GMR Institute of Technology, Rajam-532127.
4. As an **External faculty** to teach M.Tech (VLSI design) Subjects at Visvesveraya Technological University (V.T.U) PG center, Belgaum.
5. Worked as **NBA coordinator** for Outcome Based Education Workshop from NBA, New Delhi to conduct “**Training for Resource Persons and Evaluators on Outcome Based Accreditation**” during 3rd and 15th -17th February, 2014 at the NBA- Nodal center GMR Institute of Technology, Rajam.
6. Worked as **NBA coordinator** as Institute level on the new guidelines of Outcome Based Accreditation and got reaccredited all departments for third time. Was successful in getting ECE programme accredited for 5 years under new OBE-NBA guidelines in Tier-1 w.e.f July 2015.
7. As a HOD/Coordinator for **MODROBS** received a grant of **Rs. 11 Lakhs** from AICTE in Jan., 2010 for modernization for Microwave laboratory.

Academic Positions and other Responsibilities (Department Level):

1. **Coordinator**, NBA, BNMIT
2. **Coordinator**, NAAC, BNMIT
3. **Member**, IQAC, BNMIT (2018-20).
4. **PAAC member**, BNMIT.

Hardware/Software handled:

- Gbasic, FORTRAN, PASCAL, C and C++, MATLAB, VHDL, Verilog
- Xilinx synthesis tool, CADENCE VIRTUSO, Microwind, Mentor Graphics
- FPGA CPLD, SPARTON kits

Professional Memberships:

- Life Member, Indian Society for Technical Education (ISTE) **LM10547**
- Fellow Institute of Electronics and Telecommunication Engineers (IETE) **F-198402**.

Workshops /Seminars Organized:

1. Convener for two days International Conference on “**Wearable Technologies-ICOWT-2017**”, conducted on 22-23rd July, 2017 by Dept. of ECE, SoE, DSU Bengaluru.
2. Organizing Secretary, Pre-conference workshop on “**Trends in Healthcare Technologies-Sensors, Networks and Protocols**”, on 24th August, 2016, at SoE, DSU Bengaluru.
3. Organizing Secretary, National Conference on “**e-Solutions for Sustainable Development (NCESSD -2015)**” on 17th Dec, 2015 at SoE, DSU Bengaluru.
4. Two days National workshop on “**Embedded systems and RTOS**” during 16th -17th November, 2012, GMRIT, Rajam.
5. Two days National Workshop on “**Advances Communication systems and Networks**” during 18th -19th November, 2011, GMRIT, Rajam.
6. Two days National workshop on “**FPGA based DSP Implementation using Xilinx**”, during 26th -27th November, 2010, GMRIT, Rajam.

Research Publications:

I. In National & International Journals

International Journals:

1. Ms Priyadarshini K Desai, **Dr Basavaraj I Neelgar**, “*Patch Antenna for 5G Sub-Band Frequency Range of 6 GHz.*”, International Journal of Composition Theory, ISSN: 0731-6755, pp: 68-72, Volume XII Issue VI JUNE 2019, UGC Approved Journal with Sl. No, 18482.
2. Megha Patil, **Dr. Basavaraj I Neelgar**, “*Double Precision Trigonometric Calculator using CORDIC Algorithm*”, International Journal of Scientific Research and Review”, ISO: 7021-2008, ISSN-2279-543X, Vol 8, Issue 5, May 2019.
3. Mr. Praneet R Shah, Dr. Sunil Chavan, **Dr. Basavaraj Neelgar**, “*Study and Refinement in Throughput of Stream Ciphers for Data Security*” IOSR Journal of Engineering (IOSRJEN), ISSN (e) : 2250-3021, ISSN (p) : 40-46, Vol 08, Issue 10 October, 2018 ||V(I)|| PP 40-46, UGC Approved Journal with Sl. No, 3240 Journal no: 48995.

4. Priyadarshini K Desai, **Basavaraj Neelgar**, Keerti Kulkarni, Reena Kulkarni, “*Antenna Types for Small Cells Base stations*”, International Journal of Science and Research (IJSR), ISSN-2319-7064 (Impact factor-7.296), Volume 7, Issue 9, September, 2018
5. Raksha H.R, **Dr. Basavaraj N**, “*Video processing Algorithm to detect Air Gesture to Assist Wheelchair Bound People*”, International Journal on Perspectives in Communication, Embedded Systems and Signal Processing (PiCES), (ISSN-2566-392X), Volume 2, Issue 3, June 2018.
6. Yojna B, Dr. Basavaraj Neelgar, “*An overview of Medical Image Analysis*” in International Journal of Electronics, Electrical and Computational System -ISSN 2348-117X-(UGC Approved Journal) Vol. 6 Issue 12, December 2017.
7. Nayana H.C., **B. I. Neelgar**, “*Object Detection and Classification Vehicle ADAS*”, in International Journal of Engineering Science and Computing, ISSN 2250-1371, Volume 7, Issue 6, June, 2017. (Impact factor = 5.611).
8. P.Ramesh, **B. I. Neelgar** “*Image Compression, ECG Data Compression and Image Encryption by Binary versions of Discrete Cosine Transform, Haar Transform and Discrete Hartley Transform*”, in International Journal of Applied Engineering Research ISSN 0973-4562 Volume 10, Number 18 (2015) pp 38638-38642 (Scopus Indexed) (SJR = 0.15).
9. G.Sudheerkumar, **B. I. Neelgar**, “*Development and Porting of FFT Algorithm on ARMS based COTS Hardware*”, International Journal of Trends in Research and Development, Volume 1(2), Nov-Dec, 2014 (Impact factor = 3.686).
10. J. Suman, D. Jignesh, **B.I. Neelgar**, “*Design of digital FIR filter based MCMAT for 12 bit ALU using DADDA and WALLACE Tree Multiplier*” published in International Journal of Hybrid Information Technology, Vol 7, NO.6 (2014), pp. 325-336.
11. K.B.V. Babu, **B.I. Neelgar**, “*Design of Energy efficient logic using Adiabatic Technique*” in International Journal of Research in Computer and Communication Technology, IJRCCCT, Vol 2 No.9, September 2013. (Impact factor = 6.577).
12. **B.I.Neelgar**, Dr.G.SN. Raju “*Field Components of Yag-Uda Antenna*” was accepted for publication in the Journal of Technology Spectrum, ISSN 0974-6854.
13. **B.I.Neelgar**, Dr.G.SN. Raju “*Radiation and Gain Characteristics of Log-Periodic Antenna*” was accepted for publication in the International Journal of Communication, Antenna and Propagation, ISSN 2039-5086, June, 2011 volume 1 No. 3. (Impact factor = 1.164).
14. **B.I.Neelgar**, Dr.G.SN. Raju “*Impedance Characteristics of Log-Periodic Antenna*”, International Journal of Computer Applications (0975-8887), Volume 21, No.1 May, 2011 (Impact factor =0.55 in 2011 and 0.26 in 2016).
15. **B.I.Neelgar**, Dr.G.S.N.Raju “*Impedance Characteristics of Yagi-Uda Antenna*” in International Journal of Electronics and Communication Engineering, ISSN 0974-2166, Volume 4, Number 1, February 2011, pp. 115-130. (Impact factor =0.85 in 2011 and 8.26 in 2016).
16. **B.I.Neelgar**, Dr. Prabhu Benakop, “*Analysis of Segmentation of Femur by filtering Techniques*” (VOL 4)” in Indian Journal of Science and Technology (International), September 2008..
17. **B.I.Neelgar**, Dr. Prabhu Benakop, “*Reduction Of Power Dissipation In Sequential Circuits*” (Vol.3) in Indian Journal of Science and Technology (International), August 2008.

II. In National/International Conference Proceedings

1. Megha P Patil, **Dr Basavaraj I Neelgar**, “*Application of CORDIC algorithm in Rotation mode*”, International Conference on Recent Trends in Industrial Innovation, Value Engineering & Management Sciences, ICIVMS'19-**Jury Best Paper Award**, ISBN 978-93-5346-737-1, at Dayananda Sagar College of Engineering, Bengaluru during 28th – 30th March, 2019.

2. Shridhar H, **Basavaraj Neelgar**, R. Premanada, “*An Improved Image Fusion Technique based on Wavelet and Edge Gradients to Augment Spatial Prominence of Image Features*”, International conference on Electrical, Electronics, Communication, Computer technologies and Optimization techniques (ICEECCOT-2018) IEEE sponsored, at GSSS Institute of Engineering & Technology for women, Mysore during 14th – 15th, December, 2018
3. Nayana H.C., **B. I. Neelgar**, “*Digitalized Genetic Chips*”, in International conference on Wearable Technology- ICOWT-2017, at School of Engineering, Dayananda Sagar University, Bengaluru, during 22nd-23rd June, 2017.
4. Nayana H.C., **B. I. Neelgar**, “*Object Detection and Classification using Embedded Platform for Vehicle ADAS*”, in International Conference on Applied Science Engineering and Technology – ICASET-2017), at Sri Sairam College of Engineering, Anekal, Bengaluru during 18th – 19th May, 2017.
5. Remya, **B. I. Neelgar**, Shibu R.M. “*GNU based BIST for SDR Performance measurement*” in International Conference on High Performance Computing and Applications (ICHPCA) at C. V. Raman College of Engineering, Bhubaneswar, (Technically sponsored by IEEE Kolkatta region & CSI) during 22nd -24th, December, 2014.
6. V. Venkataramana, B. I. Neelgar, “*A Lossless Image Recovery scheme for visible water marking*” coauthored in International conference Innovation in Electronics & Communication Engineering organized by GNIT Hyderabad during 20-21st July, 2012.
7. Durga Kameswari, **B. I. Neelgar**, “*Hybrid Image Compression uses DWT and Neural Networks*” coauthored in International Conference of Machine Intelligence, Power Systems, Communication Controls – MIPSCCON -2011, 7th-9th April, 2011 at GMRIT Rajam, Andhra Pradesh.
8. **B.I.Neelgar**, Dr.G.SN. Raju, “*Equivalent Network Parameter of new Radiating Transducer*” in National Symposium on Instrumentation (NSI-33) at Andhra University, Visakhapatnam, held on 8th – 10th, December, 2008.
9. **B.I.Neelgar**, Dr. Prabhu Benakop, “*Analysis of Segmentation of Femur by filtering Techniques*” in International Conference on Cognition and Recognition (ICCR), P.E.S. College of Engg., Mandya, Karnataka held on 10th – 12th April 2008.
10. **B.I.Neelgar**, Dr. Prabhu Benakop, “*Reduction of Power Dissipation in Sequential Circuits*” in International conference on Embedded Systems & VLSI Design at P.D.V.V.P. College of Engineering, Ahmed Nagar, Maharashtra state held on 20th -21st March 2008

Invited Talks Delivered:

1. Resource person for the workshop on “**Mixed VLSI Design**” at AICTE sponsored Staff Development Program (SDP), ICTE sponsored, conducted at Aurora Engineering College, Bhuvanagiri, and Hyderabad, held from 18-06-2007 to 20-6-2007.
2. Resource person for the workshop on “**VLSI Design and Testing**” conducted by Dept., of ECE, GMRIT, Rajam, AP February, 2005.

Chairmanships at National/International Conference/Seminars:

1. **Project evaluator, Project Open House Expo-2018**, RNSIT, Bengaluru on 14th May, 2018.
2. **Jury Member, Robotics and IoT, Talent research – 2017** at Dayananda Sagar University, Kudlu gate, Bengaluru, on 14th December, 2017

Participation in Training courses/Seminars/Workshops

1. Attended 6 days Faculty Development Programme on “IoT based Project Design and Development” from 24th-29th June, 2019 organized by Department of ECE, BNM Institute of Technology, Bengaluru.
2. Attended workshop on “Examination Reform Workshop” on 8th May, 2019 at Gopalan college of Engineering and Management, Sonnenahalli, Hoodi Village, Bengaluru.

3. Attended four days Faculty Development Programme on **“System Design using System Verilog”**, from 24th – 27th April, 2018, organized by Department of VLSI design and Embedded Systems, Center for PG Studies, VTU, Belagavi.
4. Attended one workshop on **“Patenting”** on 11th April, 2018 at EDC, BNMIT, Bengaluru.
5. Attended a five days Faculty Development Programme on **“MSP430 Microcontroller and Its Applications”** during 31st July, 2017 to 5th August, 2017, organized by B N M Institute of Technology Bengaluru.
6. Attended a three day workshop for **“Training Resource Persons on Outcome Based Accreditation –Phase – II”** during 26th to 28th Sept, 2013 conducted by NBA Nodal centre, JNTUK College of Engineering, Vizainagram.
7. Attended a one day workshop for **“Training Resource Persons on Outcome Based Accreditation –Phase – I”** on 13th Sept, 2013 conducted by NBA Nodal centre, JNTUK College of Engineering, Vizainagram.
8. Attended a one day workshop for **“Training Resource Persons on Outcome Based Accreditation –Phase – I”** on 29th April, 2013 conducted by NBA Nodal centre, JNTUK, Kakinanda.
9. Three days National workshop on **“Advance Optimization Techniques for Engineering and Management”** during 5th-7th April, 2013.
10. Attended three day National Workshop on **“Quality Initiatives in Technical & Higher Educational Institutions (In compliance with NBA, NAAC & ABET Accreditation)”** conducted by Engineering Staff College of India from 28th -30th, August, 2012 at Hyderabad
11. Attended **“1st World Summit on Accreditation – Achieving excellence through Accreditation”** organized by National Board of Accreditation (NBA) New Delhi, during March 25th - 28th March, 2012.
12. Two days National workshop on **“Embedded systems and RTOS”** during 16th -17th November, 2012
13. Two days National Workshop on **“Advances Communication systems and Networks”** during 18th -19th November, 2011
14. Two days National workshop on **“FPGA based DSP Implementation using Xilinx”**, during 26th -27th November, 2010.
15. Attended two weeks AICTE Sponsored SDP on **“Evolving Challenges in Energy and Environment (ECEEE2K-10)”** during 19th April to 1st May, 2010.
16. Worked as Coordinator for DST Sponsored two day work shop on **“Advanced signal processing applications in Electronics and Telecommunications”** at GMRIT from 19th-20th Feb., 2010.
17. Attended a two day skill building workshop in **“Insight 09”** conducted by Infosys, Hyderabad during 6th and 7th April, 2009.
18. Two days National workshop on **“Optimization Techniques in Engineering Applications”** during 12th – 13th March, 2009
19. Two days’ National workshop on **“EDC and Circuit Analysis for young faculty”** during 28th -29th November, 2008
20. Coordinator for two days national workshop on **“Applications of Microprocessors and Microcontrollers”** during 18th-19th Feb, 2008.
21. Worked as Coordinator for AICTE Sponsored Short Term Training Programme on **“Advances in DSP”** at GMRIT, from 26th – 30th March, 2007.
22. Two days workshop on **“Recent Trends in Nano - Electronics”**, Dept. of Electronics, GMR Institute of Technology, Rajam. on 8-9th September 2006.
23. Workshop on **“Embedded ‘C’ for 8051”**, lattice semiconductor, VLSI Design Tools at VTU Belgaum from 4-6th feb, 2005.
24. Two days training program on **“CADENCE tools”** at BIT Bangalore from 25-26th August, 2003.
25. Organized 4 days Faculty training Program **“MEDIA”** at KLECET, Belgaum from 22-25th October 2002.
26. Undergone a training programme on **“VLSI Design”** for 2 months conducted by KARMIK,

Manipal during July – August 2002. Presented a paper on “*Design & Implementation of 8253 programmable peripheral Interface chip using CMOS technology*” at the “Dumyoyee Internal consortium (Sahachintane)” conducted by KARMIC Manipal on 9th and 10th Oct 2002. at KLECET,. Belgaum.

27. Two days training program on “*XLINX tool*” at SIMS Bangalore from 9 – 10th June 2001.

28. Two days on “*VHDL*” at M. S. Ramaiah School of Advanced studies, Bangalore from 18 – 19th May 2001.

Personal Details:

- **Date of Birth:** 02 - 07 –1961
- **Gender:** Male.
- **Marital status :** Married; two sons

31st July 2019

BASAVARAJ I NEELGAR