

## Dr. B T Venkatesh Murthy

Assistant Professor, E and C Department, Siddaganga Institute of Technology, Sree Sree Sivakumara Swamiji Road, Tumakuru-572103

Contact:9741568963

Email:btv\_murthy@sit.ac.in

Vidwan ID: 90945

Scopus ID:57091272200

OrcID: 0000-0002-3636-2367

Faculty ID:SIT0161

### Education

	Degree	Year	Institute	Specialization
1	B E	1999	SJM Institute of Technology, Chitradurga	Electronics and Communication
2	MTech	2005	PDA College of Engineering, Gulbarga	Communication Systems
3	PhD	2016	VIT University, Vellore	RF and Microwave Circuit Design

### Professional Experience

	Date (from-to)	Designation	Organization
1	January 2011 to Till Date	Assistant Professor	Siddaganga Institute of Technology, Tumakuru
2	August 2006 to January 2011	Lecturer	Siddaganga Institute of Technology, Tumakuru
3	February 2005 to August 2006	Lecturer	SJC Institute of Technology, Chickballapur

### Positions held

1. *Spandana Coordinator*
2. *Halcyon Coordinator*
3. *Coordinator Exhibition Committee*
4. *NAAC Coordinators*
5. *NBA Coordinators*
6. *Graduation ceremony co-ordinator*
7. *Strategic Plan Co-ordinator*
8. *Test Co-ordinator*
9. *Industrial Training Co-ordinator*

10. *BoE Member*
11. *BoS Member*
12. *Technical Seminar Co-ordinator*

#### Affiliations of Professional organizations

- *MIE (Member of Institute Engineers)*

#### Awards and Honors

- ***Best Major Project Award*** secured for titled “*Design of MMIC based Ka-Band Power Amplifier for Satellite Communication*” for the academic year 2022-23 by Department of Electronics and Communication Engineering, SIT, Tumakuru-572103
- ***Best Paper Award*** at IEEE ICDSIS, 29-30th July 2022, in association with IEEE Bangalore section and IEEE Mysore subsection for the paper titled” *IoT and Solar Energy Based Multipurpose Agriculture Robot for Smart Farming*” at Malanadu College of Engineering, Hassan.
- ***Best Project Award*** at 5th National Level IEEE Project Competition 2021, Mysore for the paper titled “*Solar Power Based Agriculture Robot for Pesticide Spraying, Grass Cutting, and Seed Sowing*” at GSSSIETW Mysore, 26th June 2021.
- ***Best Paper Award*** at ICKCE-2014, Coimbatore for the paper titled “ *Design of Highly Linear Low Noise Amplifier for Wind Profiling Radar*” at Kathir College of Engineering, Jan 24- 25th, 2014.

#### Courses Taught

##### Undergraduate Courses

- *Basic Electronics*
- *Fields, Lines and Waves*
- *Transmission Lines and Wave Guides*
- *Wireless Communication*
- *Optical Fiber Communication*
- *Satellite Communication*
- *Digital Electronics Circuits*
- *Analog Communication*
- *Information Theory and Coding*
- *Microwave Engineering*
- *Antennas and Propagation*
- *Communication Channels and Microwave Engineering*

- *Introduction to C Programming*
- *Communication Systems -II*
- *RF and Microwave Engineering*
- *Universal Human Values*

#### Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
1.	Nil		

#### Research Areas

- *RF and Microwave active circuits like low noise amplifier, power amplifier, oscillator, mixer, duplexer and passive circuits like BandPass Filter, SIR filters, filter design with resonators and power dividers*
- *MMIC Circuits*
- *MilliMeter Wave Circuits (mm Wave)*
- *Antenna design such as Yagi- Uda, Log Periodic, Ultra Wide Band, MIMO and Multi configurable antennas*
- *Automated Irrigation using Wireless Sensor Networks*

#### Sponsored Projects

##### Ongoing Projects:

1. Title: To set up the state-of-the-art Laboratory for Advanced RF, Microwave, Millimeter Wave Circuits and Antennas Design  
Funding Agency: Vision Group on Science and Technology (VGST)  
Amount: Rs. 30 Lakhs  
Duration: 2 Years  
Role: Principal Investigator

#### Publications

##### Journals

- B.T. Venkatesh Murthy, and I. Srinivasa Rao, "High gain sub-decibel noise figure low noise amplifier for atmospheric radar," *Microwave & Optical Technology Letters*, Vol. 58, No.7, pp. 1618-1622, July 2016.
- B.T. Venkatesh Murthy and I. Srinivasa Rao, "Highly linear dual capacitive feedback LNA for L- band atmospheric radars," *Taylor & Francis Journal of Electromagnetic Waves and Applications*, Vol. 30, No.5, pp.612-625, Feb. 2016.

- B.T.Venkatesh Murthy, and I. Srinivasa Rao, "Design of narrow band UHF Low Noise Amplifier for Wind Profilers," *Microwave and Optical Technology Letters*, Vol.57, No. 3, pp. 600 - 603, March 2015.

### Conference Proceedings

- B. T. Venkatesh Murthy, P. Bindiya, N. Choudhary, S. Raj and U. Singh, "Design of Bandpass Filter at 3 GHz for S-Band Radar Application," *2024 First International Conference on Software, Systems and Information Technology (SSITCON)*, Tumkur, India, 2024, pp. 1-6, doi: 10.1109/SSITCON62437.2024.10796018.
- K. C. Kiran, H. N. Rithin, K. Sathwik, L. S. Shreya and B. T. Venkatesh Murthy, "Smart Autonomous Agriculture Robot for Multipurpose Farming Application," *2024 Second International Conference on Networks, Multimedia and Information Technology (NMITCON)*, Bengaluru, India, 2024, pp. 1-7, doi: 10.1109/NMITCON62075.2024.10699197.
- B. T. V. Murthy, T. M. Manjushree, N. Meghana, H. G. Ramya and V. Vaishnavi, "A High Efficient Solid State Power Amplifier at 3.5 GHz for Wireless Communication," *2024 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2024, pp. 1-5, doi: 10.1109/ICSSES62373.2024.10561249.
- B. T. V. Murthy, T. M. Manjushree, N. Meghana, H. G. Ramya and V. Vaishnavi, "A millimeter Wave MMIC Power Amplifier using 0.15 um GaN for Space Communication Systems," *2024 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2024, pp. 1-6, doi: 10.1109/ICSSES62373.2024.10561334.
- B. T. Venkatesh Murthy, A. H. P, B. K. S, K. G. M and P. D, "Design of MMIC Based Ka-Band Power Amplifier Using 0.15um GaN for Satellite Communication," *2023 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2023, pp. 1-5, doi: 10.1109/ICSSES58299.2023.10200470.
- A. Kumar, A. Raj, K. Singh, R. Sarkar and B. T. V. Murthy, "Solar Power Based Multipurpose Agriculture Robot with Leaf-Disease Detection," *2023 International Conference on Smart Systems for applications in Electrical Sciences (ICSSES)*, Tumakuru, India, 2023, pp. 1-6, doi: 10.1109/ICSSES58299.2023.10200593.
- L. Harshitha, K. N. D. Sindhu, C. Rekha, S. Ramya and B. T. V. Murthy, "Implementation of Noise Cancellation using Adaptive Algorithms in GNU Radio," *2022 IEEE International Conference on Data Science and Information System (ICDSIS)*, Hassan, India, 2022, pp. 1-5, doi: 10.1109/ICDSIS55133.2022.9915931.
- A. G. Meti, K. S. Biradar, G. H. Manoj, P. N. Rayangoudra, V. Kumar and B. T. V. Murthy, "IoT and Solar Energy Based Multipurpose Agricultural Robot for Smart Farming," *2022 IEEE International Conference on Data Science and Information System (ICDSIS)*, Hassan, India, 2022, pp. 1-6, doi: 10.1109/ICDSIS55133.2022.9915810.
- Bysani Yashwanth, Darshan R S, Pavan H, Srinivasa D B and B T Venkatesh Murthy, "Smart Safety and Security Solution for Women using kNN Algorithm and IoT," in *IEEE Third International Conference on Multimedia Processing*,

Communication & Information Technology[MPCIT 2020] held at Shivamogga, during 11th and 12th December 2020.

- B. T. Venkatesh Murthy, et al., "Ultra Low Noise Figure, Low Power Consumption Ku-Band LNA with High Gain for Space Application," in IEEE 5th International Conference on Communication and Electronics Systems [ICCES - 2020] held at Coimbatore, during 10-12, June 2020.
- B.T.Venkatesh Murthy, et al., "Resistive Feedback Cascaded Ultra Low Noise Figure and High Gain Ku- Band LNA for Space Application," in IEEE 5th International Conference on Communication and Electronics Systems [ICCES - 2020] held at Coimbatore, during 10-12, June 2020.
- Karthik S, Devaraj B N, Keshav Kashyap A, Avinash M, and B T Venkatesh Murthy, "Dynamic Load Shedding Management for Optimizing Power Distribution," in IEEE 4th International Conference on Communication and Electronics Systems [ICCES - 2019] held at Coimbatore, during 17-19, July 2019.
- Ranjitha B, Nikhitha M N, Aruna K, Afreen, and B T Venkatesh Murthy, "Solar Powered Autonomous Multipurpose Agricultural Robot Using Bluetooth/Android App," in IEEE International Conference on Electronics and Communication and Aerospace Technology [ICECA 2019] held at Coimbatore, during 12-14 June 2019.
- Pavan Kumar U and B.T.Venkatesh Murthy, "Implementation of Stereo Visual Odometry Estimation for Ground Vehicles", International Conference on Signal, Image processing Communication and Automation -ICSIPCA-2017, 18th May 2017.
- Venkatesh Murthy B.T., and I.Srinivasa Rao, "Design of Ultra Low Noise & High Gain Low Noise Amplifier Using Capacitive Shunt Feedback for UHF Wind Profiling Radar Application," in IEEE International Conference on Emerging Technology Trends in Electronics, Communication & Networking ET2ECN-2014, Saradara Vallabhabai Patel National Institute Technology (NITK) , Surat , Gujarat, December 26th -27th , 2014.
- Venkatesh Murthy B.T., and I.Srinivasa Rao, " Design of Low Noise Amplifier Using Common Gate Current Reused Topology For Wind Profiling Radar," in IEEE International Conference on Emerging Trends and innovations in Technology INDICON 2014, Yashada, Pune, December 11th -13th, 2014.
- Venkatesh Murthy B.T., and I. Srinivasa Rao, "Design and Analysis of Low Noise Amplifier Using Active Feedback For Boundary Layer Radar," IEEE International Conference on Advances in Electronics, Computers and Communications ICAECC 2014, Reva Institute of Technology and Management Bangalore, October 10th – 11th, 2014.

#### **Book Chapters**

- Sai Yaswanth, B., Raj, N.P., Rahul, B.P., Moger, V.M., Murthy, B.T.V. Solar Power Based Agriculture Robot for Pesticide Spraying, Grass Cutting and Seed Sowing. Distributed Computing and Optimization Techniques. Springer Lecture Notes in Electrical Engineering. 2023; 903: 795-805. doi: [https://doi.org/10.1007/978-981-19-2281-7\\_73](https://doi.org/10.1007/978-981-19-2281-7_73)

- Journal of Atmospheric Science Research (JASR)
- American Journal of Science, Engineering and Technology (AJSET)

#### Reviewer of Journals

- IETE Journal of Research
- IET Microwaves, Antennas & Propagation
- Elsevier Microelectronics Journal
- Springer Nature Indian Journal of Physics
- IEEE Electronic Letters
- John Wiley Microwave and Optical Technology Letters
- Measurement and Control

#### Patents

- A Solar Powered Agriculture Apparatus for detecting Leaf Disease - Filed

#### Invited Lectures

- 02 November 2018, Microwave Amplifier and its research issues, Department of E&C, KSIT, Bangalore.