Faculty Profile

Currently working as an Associate Professor in Electronics and Telecommunication Engineering Department of RVCE.

My research areas are RF VLSI, Antenna design, MMIC Power amplifiers, Machine Learning algorithms for RF circuits, Communication controllers for Electric vehicles, serving as Coordinator For Centre of Competence in MG-RVCE Electric vehicle Technology and Certified trainer for EV Certification course under the center.

Personal Information

- **Name:** Dr.Shanthi P
- **Designation:** Associate Professor
- **Department:** Electronics and Telecommunication Engineering
- **Email:** shanthip@rvce.edu.in
- **Phone:** 9845456967

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ORCID: https://orcid.org/my-orcid?orcid=0000-0003-4775-6182

Domain of Expertise

RF VLSI, Antenna design, RF and MMIC Active and Passive circuit designs, Analog and Digital communication, GaAs and GaN Microwave Power amplifiers, Machine Learning algorithms for RF circuits. Electronic Control units and Communication controllers for Electric vehicles.

Research Focus

- **Primary Area:** MMIC and RF Circuit Design, Antennas
- **Allied Areas:**
  - Biomedical Antennas, Metasurface antennas, Microwave filter designs,
  - Tera-Hertz Systems, Low Noise Amplifier and Power amplifier Designs
  - Electric Vehicles, communication controller designs in EVs
  - AI in RF circuit Optimization, Flexible Electronics.

Academic Qualifications

- **Ph.D.**:, Visvesvaraya Technological University, 2020 - Linearization of MMIC Power amplifiers

  M.Tech: VLSI Design and Embedded Systems, Visvesvaraya Technological University, 2006

B.E./B.Tech: Electronics and Communication Engineering, Bharathiyar University,1999

- **Postdoctoral Research:** NA
- **Professional Experience**

Experience			
S.No	**Institute/College/Industry**	**Job Title**	**Duration (From- To)**
1.	Sapthagiri Engineering College,Bengaluru	Associate Professor	2004-2011
2.	Bangalore college of Engineering and Technology, Bengaluru	Lecturer	2002-2004

Publications & Patents

Journal Publications

1. AV Goutham Kumar, SR Shruthi, K Sreelakshmi, P Shanthi "Design and simulation of multiband power amplifier," International Journal of Electrical and Electronic Engineering & Telecommunications, Vol.3(3) pp.no 75-81,2013.
2. M.K.Subramanian P. Shanthi, Mallikarjun Yelameli, "Flash /No-Flash Sensor Denoising and Deblurring Using Guided Image Filter," International Journal of scientific & Engineering Research (IJSER), Vol.4(6) pp.no 75-81,2013
3. Shanthi.P, Jagan Chander, Shreyasi S.Kushal S" Analysis of Different matching Techniques for Microwave amplifiers," International Journal of Science and Engineering Applications, Vol.9(14) pp.no 1-8,2014.
4. Shreyasi Srivastava, RK Manjunath, P Shanthi" Design, simulation and fabrication of a microstrip bandpass filter," International Journal of Science and Engineering Applications, Vol.3(5) pp.no 154-158,2014.
5. Sharath Babu Kamsali, P Shanthi" Design and Simulation of 3.5 GHz MMIC Power Amplifier Using GaAs Technology," International Journal of Computer Application, Vol.2(4) pp.no 143-148,2014.
6. Ruchita Shanthi.P , Aadil Rafeeque KP, Jitendra Kumar Sinha, Mohammed Maaz Kampli" Design and Fabrication of Tunable Frequency Magnetic Loop Antenna," International Journal of Science and Engineering Applications, Vol.3(7) pp.no 246-249,2015.
7. Shanthi P ,K S. Jasmine, Yashaswini P, K. Sreelakshmi, J. Usha" Design and analysis of RF power amplifier using thin film passive components at 3.5 GHz," International Journal of Advanced Research, Vol.4(3) pp.no 154-158,2016.

8. Shanthi P Soundarya S, Meghana S" Design of Dual Band Microstrip Antenna for 2.4 GHz and 3.6 GHz," International Journal of Recent Technology and Engineering (IJRTE), Vol.8(1) pp.no, 2404-2406,2019.
9. Siddharoodha C A Shanthi P , Yashvi Mehul Shah" Design and Analysis of 1x2 Circular Patch Antenna Array for 2.4 GHz Applications International Journal of Recent Technology and Engineering (IJRTE), Vol.8(4) pp.no 463-466,2019.
10. P Shanthi, JS Baligar,"Design of MMIC class-E power amplifier with adaptive bias control and built-in linearizer using 0.5 µm pHEMT technology", 2017 Progress in Electromagnetics Research Symposium-Fall (PIERS-FALL) Proceedings,pp.no1557-1562,2017.
11. Shanthi P, Adish RK "Modelling & optimization of Signals using Machine Learning Techniques", Lecture Notes on Data Engineering and Communications Technologies book , (LNDECT,volume 166), 27 May 2023.
12. Krishna, C.V., Rohit, H.R., Shanthi, P. Design of slotted microstrip patch Antenna for 5G communications, Lecture Notes on Data Engineering and Communications Technologies, 2020, 46, pp. 134–139
13. Dickshaw, D., Shanthi, P., Performance analysis of digital predistortion on orthogonal frequency division multiplexing systems, Lecture Notes on Data Engineering and Communications Technologies, 2020, 39, pp. 183–190.
14. Shanthi P and Karthik B R, Design of Slotted Hexagonal Microstrip Patch Antenna With Improved Bandwidth, Vidyabharati International Interdisciplinary Research Journal ISSN: 2319-4979, Special Issue on Recent Research Trends in Management, Science and Technology (August 2021) 1265-1271
15. Shanthi P, J.S.Baligar,"Design of Broadband 1.9 GHz GaAs MMIC Switching Power Amplifier for PCS Communication Services", International Journal of Recent Technology and Engineering, ISSN: 2277-3878, Vol-9,Issue-1, May2020
16. Prathiksha Ramesh, Shanthi P," Design and Simulation of Wideband Planar Antenna for Microwave and Millimeter Wave Applications", International journal of Innovative science and research technology, ISSN:2456-2165, Vol.5, Issue-6,Pg.No-46-49
17. Shanthi P, J.S.Baligar High Linearity class-E Power amplifier using linear-mode Predistorter at 1.9 GHz, RV Journal for Science Technology Engineering Arts and Management (RVJSTEAM), Issue 3, Feb. 2021
18. Nishanth Paramesh, Shanthi P, Design and Simulation of Band Pass Filter employing Signal Interference Technique, RV Journal for Science Technology Engineering Arts and Management (RVJSTEAM), Issue 3, Feb. 2021
19. Shanthi, P. Manjunath, P. Sharma, D.," Design of 4 × 4 Butler Matrix for 5G High Band of 26 GHz, Cognitive Science and Technology, 2023, pp. 21–36,

Conference Papers

1. Mittal Kartik Lalit, Harshitha B, Alok Chandra Joshi, ShanthiP, Debdeep Sarkar, "Multi Band Implantable Antenna with U-shaped Slot for Biotelemetry" presented in URSI-RCRS 2024, ARIES/GEHU, Bhimtal, India, 22 - 25 October, 2024

2. Shanthi P, Manoj SH, Priyanka ,"Quantum Antenna Behavioral Analysis Using Quantum Tunneling", presented in 8th International Conference on 'Computational Systems and Information Technology for Sustainable Solutions (CSITSS — 2024), Nov7-9 ,2024
3. Karthik Mittal, Shanthi P, Sreelakshmi K,"Dataset creation for Analyzing Horn Antenna Performance: Exploring Frequency and Aperture Angle Variations with Python", 7th IEEE International Conference on Computational Systems and Informational Technology for Sustainable Solutions RVCE, Bengaluru on 2-4th November 2023,
4. Adithi Patil,Chinmay.B.Raju, Shreya Harish, Shanthi P, "Patch Antenna Optimization using Machine Learning- SVM and ANN",7th IEEE International Conference on Computational Systems and Informational Technology for Sustainable Solutions RVCE, Bengaluru on 2-4th November 2023.
5. Naveen Kumar N,Shanthi P, "Design and Development of Multi band Omni Directional Antenna", 7th IEEE International Conference on Computational Systems and Informational Technology for Sustainable Solutions RVCE, Bengaluru on 2-4th November 2023.
6. Skanda S, Shreya Satish, Arjun.N, Shanthi P ," Design of Shark-fin antenna for 5G and GPS applications", 7th IEEE International Conference on Computational Systems and Informational Technology for Sustainable Solutions, RVCE, Bengaluru on 2-4th November 2023 .
7. Adish K, Shanthi P, Suraj Rao, Anant Devi, Joe Sivasamy, Dipanjan Gope, "A Simulation-Based Approach for Boost Converter System Level EMC Analysis", 2023 IEEE International Symposium on Electromagnetic Compatibility, Signal and power Integrity ,Michigan, USA, 3rd Aug,2023
8. Shanthi P, Atul Sai S S, Dipesh Pareriya N," Deep Learning Approach for Radiation Pattern Synthesis of an Antenna" 6th International Conference on "Computational Systems and Information Technology for Sustainable Solutions [CSITSS – 2022]" RVCE,02-03,December,2022 .
9. Shanthi P, Manjunath P," Design of Comb line Cavity Diplexer for Two Channel Ultra High Frequency Bands" IEEE International Conference on Mobile Networks and Wireless Communications (ICMNWC-2022), 02-03 December 2022.
10. Chaman Jayaram, Shanthi P, Design and Implementation Of Flexible Microstrip Patch Antenna Using Machine Learning Algorithm, presented in 7th International Conference on Microelectronics, Computing & Communication Systems (MCCS-2022), July 9 -10th, 2022.
11. Karthik, B.R, Shanthi, P," Dielectric Coupled Microstrip Patch Multilayered Antenna for wide scan application" International Conference on Smart Generation Computing, Communication and Networking,SMARTGENCON 2022.
12. P Shanthi, S Tatachar, Review on AUTOSAR MemStack.2021 IEEE-Proceedings of Asian Conference on Innovation in Technology (ASIANCON), 1-4, Pune India, Aug 28-29.2021
13. Adithi Prasad,P Shanthi, Automotive Electronic Control Unit Reprogramming Using Delta Method-A Review, IEEE-Proceedings of Asian Conference on Innovation in Technology (ASIANCON) Pune, India. Aug 28-29, 2021,1-6,2021
14. Adish, Chaman Jayaram; Shanthi P," Design of GaN HEMT based Doherty Power Amplifier for 5G Applications, 2021 IEEE International Conference on Mobile Networks and Wireless Communications (ICMNWC), 3-4 Dec. 2021
15. P Manjunath; Shanthi P," Microwave Single Ring Resonating Sensor for Food Sensing, 2021 IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS), 16-18 Dec. 2021.

16. Aishwarya Erappa Lagalur; P Shanthi," Design and Implementation of Microwave Sensor for Material Identification," 2021 IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS), 16-18 Dec. 2021.
17. Shanthi P, Shantanu B S, Srivaths S, Sudarshan B, "Design of circularly polarized Square Patch Antenna Array on different substrates", 2021 2nd Global Conference for Advancement in Technology (GCAT), Bangalore, India. Oct 1-3, 2021.
18. Shanthi P and Karthik B R, "Design of Slotted Hexagonal Microstrip Patch Antenna With Improved Bandwidth", Vidyabharati International Interdisciplinary Research Journal, ISSN: 2319-4979, Special Issue on Recent Research Trends in Management, Science and Technology (August 2021) Pp.No:1265-1271.
19. Nishanth P, Aishwarya Erappa Lagalur; P Shanthi, "Linearity Enhancement of Class-AB, S-Band HEMT PA Using Balanced Configuration," 2021 6th International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT).), August 27th & 28th 2021
20. Chandrakala J, Shanthi P," Design and Simulation of Microstrip Comb-Line Array Antenna at 78.5GHz for Automotive Radar Applications", ISSN:1001-1749 Vol-16 Issue-6 ,pg.no112-117, June2020
21. Ramya, K., Shanthi, P.,Design of Class-AB Power Amplifier using GaN HEMT Technology,2018 4th International Conference for Convergence in Technology, I2CT 2018
22. Shanthi P. ,Baligar, J.S., Design of MMIC class-E power amplifier with adaptive bias control and built-in linearizer using 0.5 μm pHEMT technology, Progress in Electromagnetics Research Symposium 2017-November, pp. 1557–1562
23. Shanthi, P., Baligar, J.S. ,Linearization of class e power amplifier using diode-based techniques,2016 IEEE Annual India Conference, INDICON 2016, 2017,
24. Pavan, K.B., Karthik, S., Shanthi, P., Gobbur, S.,Design and implementation of aperture coupled stacked microstrip patch antennas for satellite TT&C applications,2016 IEEE International Conference on Recent Trends in Electronics, Information and Communication Technology, RTEICT 2016 - Proceedings, 2017, pp. 251–255,
25. Shanthi, P., Baligar, J.S. ,Linearity enhancement of 0.5μm E/D pHEMT class E power amplifier for PCS applications, International Conference on Communication and Signal Processing, ICCSP 2016 pp. 407–411,
26. Girish, K., Shanthi, P., Singh, H.,Parametric analysis of radar cross section of metamaterial coated cylindrical surface, Proceedings of the 2016 IEEE International Conference on Wireless Communications, Signal Processing and Networking, WiSPNET 2016, pp. 90–94,
27. Yashaswini, P., Shanthi, P.,Overlay cognitive radio using MIMO reconfigurable filtenna, Proceedings of the 2016 IEEE International Conference on Wireless Communications, Signal Processing and Networking, WiSPNET 2016, pp. 2017–2021

Books/Book Chapters

1. RF Front End Circuits for Wireless Communication Systems", Dr.Shanthi.P,Prof.Kavitha Devi .C.S in Recent Developments in Electronics, Computing and Mechanical Sciences-CRECM 2020, Nov.2020, pg.no32-54, ANVI Books and publishers, New Delhi
2. Shanthi P, Adish RK, Machine Learning Methods in Radio Frequency and Microwave Domain

in book Modeling and Optimization of Signals Using Machine Learning Techniques, ISBN: 978-1-119-84768-7 September 2024, Wiley -Scrivener Publishers

Patents [Filed / Published / Granted]

1. , [Patent No.], [Year].

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

Analysis and Assessment of 6G Electromagnetic Exposure and Absorption –A study on Biological Aspects"- Funding Agency: VTU, Duration: 2024-26.

PI: Dr. Shanthi P, Co PI: Dr. Vidya Niranjan, Dr. Bhuvaneshwari, Dr. Sasmita, Dr. Baligar JS

Ongoing & Completed Consultancy Projects

Training program on Electrify Your Expertise: A Comprehensive 3-Day Training Program on Electric Vehicle Technology – Funding Agency: Vitesco Technologies

Duration: 3-days in a Month from April 2024- Dec 2025, Role: PI

Professional Memberships

1. IEEE SENIOR MEMBER

2. Fellow IETE

3. Faculty Advisor for RVCE IEEE Student branch of Antenna and Propagation society (2023-2025)

3. EXECOM MEMBER of IEEE MTT and AP-S SOCIETY, Bengaluru section (2024-25)

Awards & Recognitions

- BEST Project award for the project "Advanced 2×2 MIMO Antenna Array with Dense 16-Port Configuration for Next-Gen 6G Mid-Band Mobile Applications" was presented under the Theme 3: Smart Technology and 5G/6G Communication on National Techno Exhibition held at Dr. AIT, Bangalore on April 13th, 202, 21st-22nd June 2023.
- Certificate of Excellance Award , SAMSUNG PRISM Worklet ,2024
- Best paper award for Design of Slotted Hexagonal Microstrip Patch Antenna With Improved Bandwidth in 4th National Conference on VLSI, Communication and Signal Processing

(NCVCS-2021) organized by the Department of Electronics and Communication Engineering, Raja Rajeswari College of Engineering on 18th August 2021

- Attending the International Conference at NTU, Singapore for paper publication of "Design of MMIC Class-E Power Amplifier with Adaptive Bias Control and Built-in Linearizer Using 0.5µm pHEMT Technology" Presented in Progress in Electromagnetic research symposium, PIERS2017, Nanyang Technological University (NTU), Singapore, Honoured by RSST in the 2017

Student Supervision

- **Ph.D. Candidates:** Nil
- **M.Tech/M.Sc. Students:** 20
- **Undergraduate Research Mentees: 30**

Professional Roles

- **Editorial Board:** NA
- **Chair/Committee Member:** Reviewer for IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions (CSITSS-2025) will be held from 20th to 22nd November 2025, 2024,2023
- Session Chair for International Conference on Smart Generation Computing, Communication and Networking (SMARTGEN) 2021.
- **Industry Advisor:** NA

Teaching

Core Courses:

- EI362AI Antenna Theory and Design
- EI262AI Linear Integrated Circuits and Applications
- 21ET54 Microwave Engineering

- Advanced/Lab Courses:
- EI362AI Antenna Theory and Design
- Antenna and RF skill lab

Professional Roles

Responsibilities

- **Academic:** Time table Coordinator, Skill lab Coordinator
- **Administrative:**
- Coordinator for MG-RVCE Centre of Competence in Electric vehicle Technology
- Member in Center of Excellence in Integrated circuits and Systems
- Member of Board of studies in ETE department.

External Connect

- Member of BoE in Dr.Ambedkar Institute of Technology , for PG –VLSI and Embedded systems