Dr. Duvvada Ram Sandeep

Associate Professor

Department of Electronics & communication Engineering

Raghu Engineering College, Dakamarri, Visakhapatnam, AndhraPradesh-531162, INDIA

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Interests: Implantable and medical antennas, remote health care technologies, body-centric wireless sensors, flexible textile antennas, multi-band reconfigurable textennas, MIMO antennas, optimization of microwave circuits and device modelling, IoT and wireless communications and biomedical engineering and allied fields

Course Taught Previously

UG.

- Modern Digital Communications.
- VLSI design.
- Embedded Systems
- Computer architecture and organization
- Switching Theory and Logic Design.
- Wireless Cellular Communications.
- Digital Electronics
- Electronic Devices and circuits
- Antenna and Wave propagation
- Radar Communications
- **Laboratories Handled**
- Digital Electronics Lab.
- Microprocessor Lab
- VLSI Lab

- Electronic Devices Lab (Designing circuits using BJT, FET & CE CC Amplifiers)
- Digital & Analog Integrated Circuits Lab (741 Op-amp applications, Designing of various Digital
- Multiplexer, counters Shift registers, Comparator, A/D, D/A convert)
- Antenna modelling through HFSS.

Publications

International Journals

1. D. Ram Sandeep, B. T. P. Madhav, Sudipta Das, Niamat Hussain, Tanvir Islam, and Moath Alathbah. "Performance Analysis of Skin Contact Wearable Textile Antenna in Human Sweat Environment." IEEE Access (2023). I.F. 3.557 (SCI).
2. Ram Sandeep, D., N. Prabakaran, B. T. P. Madhav, K. L. Narayana, and P. Rakesh Kumar. "Systematic investigation from material characterization to modeling of jute-substrate-based conformal circularly polarized wearable antenna." Journal of Electronic Materials 49 (2020): 7292-7307. I.F. 2.1. (SCI)
3. D. Ram Sandeep, N. Prabakaran, B. T. P. Madhav. "Semicircular shape hybrid reconfigurable antenna on jute textile for ISM, Wi-Fi, Wi-MAX, and W-LAN applications." International Journal of RF and Microwave Computer-AidedEngineering 30, no. 11 (2020): e22401. I.F. 1.987. (SCI)
4. D. Ram Sandeep, Prabakaran, N., and Madhav Boddapati TP. "Circularly Polarized Jute Textile Antenna for Wi-MAX, WLAN and ISM Band Sensing Applications." The Applied Computational Electromagnetics Society Journal (ACES) (2020): 1493-1499. (SCI)
5. Syed, S. & Madhav, B.T.P. & Khan, H. & Duvvada, R.S. & Manchala, S. & Mani, M.K.S. & Somepalli, R. & Gorantla, K.S.. (2022). Performance Enhancement of Dual-Element MIMO Antenna Using Adaptive Multi-Objective Algorithm (AMOA) Technique for IOT Applications. International Journal of Microwave and Optical Technology. 17. 224-233.
6. D. Ram Sandeep, B. T. P. Madhav. " Design and analysis of a Smart Circularly Polarized Wearable Textile Antenna for Body Wireless Communication Applications" "Planar Antenna: Design, Fabrication, Testing, and Application"ISBN: 978-1-53619-898-0, 2021.
7. Priyadharshini, B., Madhav, B.T.P., Ram Sandeep, D., Charishma Nag, B., Krishna Sai, G., Salma, S. & Rao, M.C. 2020, "Design and analysis of monopole antenna using square split ring resonator", International Journal of Advanced Science and Technology, vol. 29, no. 4 Special Issue, pp. 2022-2033.
8. Priyadharshini, B., Madhav, B.T.P., Ram Sandeep, D., Charishma Nag, B., Sai, G.K., Amulya, M., Swamy, K.A., Salma, S. & Rao, M.C. 2020, "Design and simulation of multiband operating single element antenna for Wi-Fi, ISM and X band applications", International Journal of Advanced Science and Technology, vol. 29, no. 4 Special Issue, pp. 2011-2021.

9. Salma, S., Khan, H., Madhav, B.T.P., Narasimha Reddy, K.R.V., Mahidhar, D., Ram Sandeep, D. & Rao, M.C. 2020, "Design and analysis of circularly polarized dual element MIMO antenna with DGS for satellite communication, fixed mobile, ISM, and radio navigation applications", International Journal of Advanced Science and Technology, vol. 29, no. 4 Special Issue, pp. 1982-1994.
10. Salma, S., Khan, H., Madhav, B.T.P., Neha Reddy, B., Uma Maheswari, G., Rama Prathyusha, K., Ram Sandeep, D. & Rao, M.C. 2020, "Design and analysis of circularly polarized MIMO antenna with defective ground structure for maritime radio navigation, Wi-MAX and fixed satellite communication applications", International Journal of Advanced Science and Technology, vol. 29, no. 4 Special Issue, pp. 1995-2010.
11. H., Madhav, B.T.P., Salma, S., Neha Reddy, B., Uma Maheswari, G., Rama Prathyusha, K., Ram Sandeep, D. & Rao, M.C. 2020, "Design and analysis of monopole antenna for ISM, C, and X-band applications", International Journal of Scientific and Technology Research, vol. 9, no. 3, pp. 5157-5162.
12. Khan, H., Madhav, B.T.P., Salma, S., Reddy, K.R.V.N., Mahidhar, D., Jayachandra, D., Sandeep, D.R. & Rao, M.C. 2020, "Design of monopole antenna with l-shaped slits for ISM and WIMAX applications", International Journal of Scientific and Technology Research, vol. 9, no. 3, pp. 5151-5156.

Book Chapters

1. Ram Sandeep, D., B. T. P. Madhav, S. Salma, and L. Govinda. "Design and Analysis of an All-Textile Antenna Integrated Within Human Clothing for Safe Bio-medical Wireless Communication." In Internet of Things Enabled Antennas for Biomedical Devices and Systems: Impact, Challenges and Applications, pp. 91-100. Singapore: Springer Nature Singapore, 2023.
2. D. Ram Sandeep, B. T. P. Madhav. " Design and analysis of a Smart Circularly Polarized Wearable Textile Antenna for Body Wireless Communication Applications" "Planar Antenna: Design, Fabrication, Testing, and Application"ISBN: 978-1-53619-898-0, 2021.
3. Salma, S., Habibullah Khan, B. T. P. Madhav, D. Ram Sandeep, and Ramani kannan. "Advanced Tapered-Fed Compact Two-Port Circularly Polarized MIMO Antenna for IoT Wireless Communication Applications." In Internet of Things Enabled Antennas for Biomedical Devices and Systems: Impact, Challenges and Applications, pp. 25-35. Singapore: Springer Nature Singapore, 2023.

Patents

1. "Design and Analysis of Implantable Miniaturized Circularly Polarised Jute Textile antenna for WLAN and ISM band applications" (India. Patent No. 202041053617 A, Dated 18/12/2020), OFFICIAL JOURNAL OF THE PATENT OFFICE, (2020) Page no. 62635. http://ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4935_1/Part-1.pdf.

2. "Design and analysis of a flexible MIMO Antenna with a defected ground structure for ISM, Wi-MAX, and WLAN applications. (India. Patent No 202041053616 A).
3. "Internet of Things Controlled Octahedron Frequency Reconfigurable Filtering Antenna for CDAC applications. (India. Patent No 202041048946 A).

Conference Proceedings

1. D. R. Sandeep, et al., "Humanoid Shaped Compact Monopole Textile Antenna for Wi-MAX and X-band Applications," 2022, IEEE First International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT), Trichy, India, 2022, pp. 01-05, doi: 10.1109/ICEEICT53079.2022.9768595.
2. D. Ram Sandeep, et al. "SAR Analysis of Jute Substrate based Tri-band Antenna for Wearable Applications." In Journal of Physics: Conference Series, vol. 1804, no. 1, p. 012203. IOP Publishing, 2021.
3. D. Ram Sandeep, N. Prabakaran, and B. T. P. Madhav. "Washing Durability: A Study on brush painted JuteMaterial based Monopole Antenna for On-body Communication Applications." In Journal of Physics: Conference Series, vol. 1804, no. 1, p. 012204. IOP Publishing, 2021.
4. D. Ram Sandeep, et al. "Sequential Nonlinear Programming Optimization for Circular Polarization in Jute Substrate-Based Monopole Antenna." In International Conference on Intelligent and Smart Computing in Data Analytics: ISCDA, vol. 1312, p. 215. Springer Nature, 2021.
5. D. Ram Sandeep, et al. "Bending Assessment and On-body Investigation of a Textile Antenna for Body-Centric Wireless Communication Applications." In IOP Conference Series: Materials Science and Engineering, vol. 1258, no. 1, p. 012053. IOP Publishing, 2022.
6. D. Ram Sandeep, et al. "SAR Analysis of Body wearable Frequency Reconfigurable Textile Patch Antenna." International Conference on Smart Grids, Structures and Materials: ICSGSM. Springer Nature. Article in Press (SCOPUS).
7. D. Ram Sandeep, et al. "Effects of Human Sweat on the Performance of Reconfigurable Frequency Wearable Jute Textile Antenna." International Conference on Smart Grids, Structures and Materials: ICSGSM. Springer Nature. Article in Press (SCOPUS).
8. D. Ram Sandeep, et al. "An Investigation of a Frequency Reconfigurable Circular Polarised Textile Antenna Bending Effects for On-Body Communication applications." International Conference on Smart Grids, Structures and Materials: ICSGSM. Springer Nature. Article in Press (SCOPUS).

Projects

Sponsored R & D, Consultancy Projects:

S. No	Title of Project	Funding Agency	Financial Outlay	Project Period	Project Status
1.	Design and development of textile antenna-based body fluid sensor for medical and military on-body wireless communication applications	SERB-SURE	30 Lakh	3 Years	Under Review

Additional Responsibility

RESPONSIBILITIES WITHIN THE INSTITUTE:

1. Innovation Activity Coordinator of 'Institution's Innovation Council (IICs)'

POSITIONS HELD OUTSIDE THE INSTITUTE:

1. Member - International Association of Engineers
2. Member - The society of digital information and wireless communications
3. Reviewer for Second International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT 2022)