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ACADEMIC PERFORMANCE

- 2013-2019 **Ph.D. in RF & Microwave Engineering**
Indian Institute of Technology (B.H.U), Varanasi, India
- 2010-2012 **M.Tech. in Digital systems**
Motilal Nehru National Institute of Technology Allahabad, India
- 2004-2008 **B.Tech. in Electronics and Communication Engineering,**
GIET, Rajahmundry, JNTU Hyderabad, India
- 2002-2004 **Intermediate (12th)**
Board of Intermediate Education Andhra Pradesh, India
- 2001-2002 **S.S.C. (10th)**
Board of Secondary Education Andhra Pradesh, India

PROFESSIONAL EXPERIENCE

- Currently working as an **Assistant Professor** in the ECE Department, at IIIT Surat since November 04th, 2022.
- Worked as a **Research Associate** in the ECE Department, at NIT Patna from 13/03/20 to 11/10/2022, in the DRDO funded project entitled “**Applied Design Studies on HPM oscillator – MILO**”.
- Worked as an **Assistant Professor** in the ECE Department at DIT college of Engineering, Dehradun from 28/07/2012 to 17/05/2013.

PROJECT WORK(S)

Ph.D. (RF & Microwave Engineering, Electronics Engineering)

Thesis Title: **Design Studies of Fixed and Tunable Frequency Gyrotron Oscillators**

Supervisors: Dr. P. K. Jain (Professor, Indian Institute of Technology (B.H.U), Varanasi) and Dr. M. Thottappan (Associate Professor, Indian Institute of Technology (B.H.U), Varanasi)

M.Tech. (Digital Systems, Electronics and Communication Engineering)

Dissertation Title: **A Reliable and Robust SVD Based Digital Image Watermarking Scheme Using Particle Swarm Optimization**

Supervisor: Dr. V. K. Srivastava (Professor, Motilal Nehru National Institute of Technology Allahabad, India)

RESEARCH PUBLICATIONS

International Journals

1. **Sivavenkateswara Rao V.** and Pradip Kumar Jain. "Design, Analysis, and Simulation Studies of TE_{10,4} Mode, 100-kW W-Band Gyrotron Oscillator." *IEEE Transactions on Plasma Science*, vol. 49, no. 6 (2021): 1794-1803. [10.1109/TPS.2021.3081501](https://doi.org/10.1109/TPS.2021.3081501)
2. Mohit Singh, **Sivavenkateswara Rao V.**, Manpuran Mahto, and Pradip Kumar Jain. "Axially Partitioned Dual Band Magnetically Insulated Line Oscillator." *IEEE Transactions on Plasma Science*, vol. 50, no. 5 (2022): 1198-1205. [10.1109/TPS.2022.3165939](https://doi.org/10.1109/TPS.2022.3165939)
3. Garima Dubey, **Sivavenkateswara Rao V.**, Manpuran Mahto, and Pradip Kumar Jain. "Analysis of the Dual Side-Coupled RF Cavities for the HPM Devices - An Equivalent Circuit Approach." *IEEE Transactions on Electron Devices*, vol. 69, no. 4 (2022): 2051-2057. [10.1109/TED.2022.3152473](https://doi.org/10.1109/TED.2022.3152473)
4. Subash Chandra Yadav, **Sivavenkateswara Rao V.**, and S. P. Duttgupta. "A Novel Unidirectional High-Gain Cascaded Square Ring Antenna for WLAN Base Station Applications." *Radioengineering*, vol. 30, no. 4 (2021): 631-638. [10.13164/re.2021.0631](https://doi.org/10.13164/re.2021.0631)
5. Subash Chandra Yadav, **Sivavenkateswara Rao V.**, and S. P. Duttgupta. "Analysis of a Low-Cost, High-Gain, Horizontally Polarized Square Ring Antenna." *IETE Journal of Research*, (2022): 1-9. [10.1080/03772063.2022.2055663](https://doi.org/10.1080/03772063.2022.2055663)
6. Gargi Dixit, **Sivavenkateswara Rao V.**, and Pradip Kumar Jain. "Equivalent Circuit Approach for Beam-Wave Interaction Analysis of MILO." *IEEE Transactions on Plasma Science*, vol. 49, no. 9 (2021): 2709-2717. [10.1109/TPS.2021.3103933](https://doi.org/10.1109/TPS.2021.3103933)
7. **Sivavenkateswara Rao V.**, Muthiah Thottappan, and Pradip Kumar Jain. "Design Modifications in RF Interaction Cavity of a 140 GHz Gyrotron to Achieve Wide Tunable Bandwidth for DNP NMR Applications." *International Journal of Engineering and Advanced Technology*, vol. 9, no. 1 (2019): 6456-6462. [10.35940/ijeat.A2241.109119](https://doi.org/10.35940/ijeat.A2241.109119)
8. **Sivavenkateswara Rao V.**, Muthiah Thottappan, and Pradip Kumar Jain. "Thermo-Mechanical Analysis and Its Effect on RF Behaviour of a Tapered Cavity of the W-Band Gyrotron Oscillator." *International Journal of Innovative Technology and Exploring Engineering*, vol. 8, no. 1 (2019): 1170-1178. [10.35940/ijitee.I8037.078919](https://doi.org/10.35940/ijitee.I8037.078919)

International Conferences

1. Anshu Sharan Singh and **Sivavenkateswara Rao V.** "Electromagnetic Study of Ethylene Glycol and FC-75 for an RF Window." **2020 XXXIIIrd General Assembly and Scientific Symposium of the International Union of Radio Science**, (2020):1-2.
2. Sivavenkateswara Rao V. and Pradip Kumar Jain. "PIC Simulation of a W-band Gyrotron Oscillator." National conference on emerging trends in Vacuum Electronic Devices& Applications, 3-5 December, Bangalore, India (2015):1-4.
3. **Sivavenkateswara Rao V.**, Rajendra S. Shekhawat, and V. K. Srivastava. "A DWT-DCT-SVD Based Digital Image Watermarking Scheme Using Particle Swarm Optimization." **2012 IEEE Students' Conference on Electrical, Electronics and Computer Science**, (2012):1-4.
4. **Sivavenkateswara Rao V.**, Rajendra S. Shekhawat, and V. K. Srivastava. "A Reliable Digital Image Watermarking Scheme Based on SVD and Particle Swarm Optimization." **2012 Students Conference on Engineering and Systems**, (2012):1-6.
5. Rajendra S. Shekhawat, **Sivavenkateswara Rao V.**, and V. K. Srivastava. "A Robust Watermarking Technique Based on Bi-Orthogonal Wavelet Transform." **2012 Students Conference on Engineering and Systems**, (2012):1-6.
6. Rajendra S. Shekhawat, **Sivavenkateswara Rao V.**, and V. K. Srivastava. "A Biorthogonal Wavelet Transform Based Robust Watermarking Scheme." **2012 IEEE Students Conference on Electrical, Electronics and Computer Science**, (2012):1-4.

Patents

1. **Title:** An Improved Electromagnetic Radiator Based on Integration of Sectoral Plates in Coaxial Horn Antenna (Application No.:202131036858). (Indian -- Published)
2. **Title:** A Dual Band Magnetically Insulated Line Oscillator (Application No.: 202131033815). (Indian -- Published)

RESEARCH INTEREST

- DESIGN AND ANALYSIS OF HIGH POWER MICROWAVE SOURCES
- RF AND THERMAL ANALYSIS OF FIXED AND TUNABLE FREQUENCY FAST WAVE DEVICES
- METAMATERIALS FOR HPM APPLICATIONS
- DIGITAL IMAGE PROCESSING, BIO-MEDICAL SIGNAL PROCESSING

ACHEIVEMENTS AND CO-CURRICULAR ACTIVITIES

- Recipient of MHRD Academic fellowship by Government of India during M.Tech. and Ph.D. program.
- Qualified GATE-2010 with 606 score and secured an All India Rank of 1645 in ECE.
- Secured 2nd position in the college of Class XIIth.