CURRICULUM VITAE

(Dr.) Sudarshan Kumar Jain
B.E (Electronics & Communication)
M.B.A (Finance & Marketing)
M.TECH (Digital Communication)
Ph.D. (Optics/Solar Cells)

S/o Sh. D.P. Jain
50/470, Pratap Nagar
Sanganer, Jaipur (Raj.)

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OBJECTIVE

To secure a challenging position where I can effectively contribute my technical and research skills and abilities in a creative environment, which will help me to explore fully and realize my potential that offers professional growth while being resourceful, innovative, and flexible.

QUALIFICATION

- **Ph.D.** from **Malaviya National Institute of Technology (MNIT)**, Jaipur **in 2024**
  Thesis Title- Design and Analysis of Heterojunction Solar Cells with Nanostructures.
- **M.Tech (Digital Communication)** from **Rajasthan Technical University**, Kota with **71.31% in 2014.**
  Thesis Title- Performance Analysis of Rectangular Microstrip Antenna using Slotted Substrate Structure and Hybrid Substrates
- **MBA** from **Department of Management Studies, Malaviya National Institute of Technology, Jaipur, in 2011, CGPA = 7.58**
- **Bachelor of Engineering (Electronics & Communication)** from **the University of Rajasthan, Jaipur,** with **74.39% in 2009.**
- Intermediate from Govt. Higher Secondary School, Tonk with **81.08%**
- High school from Vivekanand Secondary School, Tonk with **80.83%**

WORK EXPERIENCE

- 1st January 2025 – Till Date, **Associate Professor** (ECE Deptt**.)** and **TPO at Jaipur Engineering College and Research Centre (JECRC), Jaipur (Total: 4 Months)**

- 1st April 2021 – 31st December 2024, **Assistant Professor** (ECE Deptt**.)** and **TPO at Jaipur Engineering College and Research Centre (JECRC), Jaipur (Total: 3 Years 9 Months)**

- 5th January 2015 – 30th March 2021, **Assistant Professor** (ECE Deptt**.) Jagannath Gupta Institute of Engineering and Technology (JNIT), Jaipur (Total: 6 Years 3 Months)**

PUBLICATIONS

[1] S. K Jain, V. Janyani and N.D Gupta, "Optical analysis of thin film cadmium telluride solar cell using nanoparticles for efficiency enhancement," *Optical and Quantum Electronics,* vol. 55, no. 8, p. 665, 2023**.**

[2] S. K. Jain, "Performance Analysis of Rectangular Patch Antenna using Variation in Width of Conducting Patch", International Journal of Electrical and Electronics Engineering, Volume 3 Issue 11, November 2016, ISSN 2348 – 8379.

[3] S. K. Jain, "Design and Analysis of Multilayer Substrate Structure Microstrip Patch Antenna", SSRG International Journal of Electronics and Communication Engineering, Volume 2 Issue 11, November 2015, ISSN 2348 – 8549

[4] S. K. Jain, S. Toshniwal, and Dr. R. Purohit, "Design and Analysis of Rectangular Microstrip Antenna using Slotted Substrate Structure to Minimize Fabrication Error", International Journal of Engineering Trends & Technology*,* Volume 15, Issue 9, September 2014, ISSN: 2231-5381.

[5] S. K. Jain, S. Toshniwal, "Gain and Bandwidth Enhancement Analysis of Slotted Circular Microstrip Antenna", International Journal of Engineering Research and Technology, Volume 2 Issue 9, September 2013, ISSN 0974 –3154

[6] S. K. Jain, "Bandwidth Enhancement in Microstrip Rectangular Patch Antenna using Defected Ground Plane", International Journal of Science, Engineering and Technology Research (IJSETR), Volume 4, Issue 11, November 2015, ISSN 2278-7798.

[7] S. K. Jain, "Comparative Analysis of Microstrip Rectangular Patch Antenna Using Different Height Substrates", International Journal of Advanced Research in Computer and Communication Engineering**,** Vol. 4, Issue 11, November 2015, ISSN 2278-1021.

[8] S. K. Jain, S. Toshniwal and Dr. R. Purohit, "Performance Analysis of High Gain Wide Band Rectangular Patch Antenna using Hybrid Structure", International Journal of Science, Engineering, and Technology Research, Volume 3, Issue 10, October 2014, ISSN: 2278-7798.

[9] S. K. Jain, "Design and Analysis of Microstrip Rectangular Patch Antenna using different permittivity substrate", International Journal of Advanced Research in Computer and Communication Engineering, Volume-5, Issue -11, November 2016, ISSN 2278-1021.

[10] S. K. Jain, S. Toshniwal, "Design and Analysis of High Gain Multiband Microstrip Patch Antenna using Hybrid Substrates", International Journal of Advanced Research in Electronics and Communication Engineering, Volume 2, Issue 9, September 2013, ISSN: 2278-909X.

PAPER PRESENTED AT NATIONAL/INTERNATIONAL CONFERENCES

[1] S. K Jain, V. Janyani and N.D Gupta, "Design and Numerical Study of Cadmium Telluride Thin Film Solar Cell using Diffraction Grating and Distributed Bragg Reflector," in ***Solar Energy and Light-Emitting Devices, 2023***: **Optica Publishing Group**, p. SW3D. 3**. (SCOPUS INDEXED)**

[2] S. K Jain, V. Janyani and N.D Gupta, "Optical Studies of Cadmium Telluride based Solar Cell using Photonic Crystal as a Back Reflector," in *2022* ***Workshop on Recent Advances in Photonics (WRAP)*****, 2022**: **IEEE**, pp. 1-2. **(SCOPUS INDEXED)**

[3] S. K Jain, V. Janyani and N.D Gupta, "Performance analysis of CdTe solar cell using copper telluride back surface field for efficiency enhancement," in ***CLEO: Applications and Technology*****, 2021**: **Optica Publishing Group**, p. JW1A. 135. **(SCOPUS INDEXED)**

[4] S. K. Jain, G. Sharma, and S. Vyas, "Influence of hole interface layer on the performance of cadmium telluride-based thin film solar cell," ***Materials Today: Proceedings***, vol. 74, pp. 231–233, **Jan. 2023**, doi: https://doi.org/10.1016/j.matpr.2022.08.058. **(SCOPUS INDEXED)**

[5] S. K. Jain, N. D. Gupta, and V. Janyani, " Enhancing Absorption in Cadmium Telluride Solar Cells using Ti Nanoparticles," Solar Energy and Light-Emitting Devices, 2024: **Optica Publishing Group**, p. JTu1A.52.**(SCOPUS INDEXED)**

[6] S. K. Jain, S. Toshniwal "Design and Analysis of Dual-band Microstrip Circular Patch Antenna" in International Conference on "Futuristic Trends in Computer and Electronics Engineering" at Kautilya Institute of Technology and Engineering, Sitapura, Jaipur on **March 22, 2014**.

[7] S. K. Jain, A. Saxena **"**MMIC Components used in J and K band for communication systems" in 8th International Conference on "Microwave, Antenna, Propagation & Remote Sensing (ICMARS 2012)" at International Centre for Radio Science (ICRS), Jodhpur, India on **Dec 11, 2012**.

[8] S. K. Jain, A. Saxena "Ultra-Wide Band Using Hermite" in National Conference on "Recent Advancements in Intelligent Computing System (RAICS-2012)" at Jagannath Gupta Institute of Engineering & Technology, Jaipur on **November 2-3, 2012**.

BOOK CHAPTERS

[1] G. Sharma, S. K Jain, S. Vyas, and A. Nayyar, "Reconfigurable Intelligent Surface-Enabled Energy-Efficient Cooperative Spectrum Sensing," ***Springer,*** Lecture notes in networks and systems, pp. 159–168, Jan. 2023, doi: https://doi.org/10.1007/978-981-99-1479-1_12.

[2] S. Vyas, G. Sharma, S. K Jain, R. Zafar, and A. Nayyar, "Supercontinuum Generation in Dispersion-Tailored Tetrachloroethylene Filled Photonic Crystal Fibers," ***Springer,*** Lecture notes in networks and systems, pp. 95–104, Jan. 2023, doi: https://doi.org/10.1007/978-981-99-1479-1_7.

[3] G. Sharma, S. K Jain, S. Vyas, A. Nayyar and V. Upadhyaya, "Performance Improvement for Energy-Efficient CSS with Optimized Cognitive Users Over Fading Channels," ***Springer Nature,*** International Conference on Advanced Network Technologies and Intelligent Computing, pp. 3-13, Dec. 2023, doi: https://doi.org/10.1007/978-3-031-64076-6_1

SHORT-TERM COURSES/FACULTY DEVELOPMENT PROGRAM ATTENDED

[1] Short-term course on "Power Electronics" held from Feb 23-27, 2015 at Department of Electrical Engineering JECRC, Jaipur

[2] Short-term course on 'MATLAB, A Tool in Research' held from December 24-28, 2015, at Malaviya National Institute of Technology, Jaipur

[3] Short-term course on 'Biometric-based Authentication and De-identification for Privacy Protection' held from December 19-25, 2016 at Malaviya National Institute of Technology, Jaipur

[4] Short-term course on 'Introduction to antenna designing using HFSS' held from Feb 06-10, 2017 at National Institute of Technical Teachers Training & Research, Chandigarh

[5] One week Faculty Development Programme on 'Computation Techniques in Optics and Photonics' held from Aug 20-25, 2018 at Malaviya National Institute of Technology, Jaipur

[6] One week Faculty Development Programme on 'Signal Processing and Data Mining Techniques for Research using MATLAB' held from March 27-31, 2019 at Malaviya National Institute of Technology, Jaipur

[7] An advanced course on 'Principles of Biophotonics' (Under the aegis of GIAN) was held from 24th June to 05th July 2019 at Malaviya National Institute of Technology, Jaipur

[8] Faculty Development Programme on 'Research Methods and Innovative Teaching Methods' held from August 06-07, 2019, at Jagannath University, Jaipur

[9] One week Faculty Development Program on "Recent Trends in Research and Applied Statistics" from June 13-19, 2020, at Sunrise University, Alwar.

[10] Faculty development Program on "MIMO antennas for 5G communications using CST studio suite" held from June 5-6, 2020, organized by the Department of Electronic Science, University of Delhi South Campus, New Delhi.

[11] Faculty Development Program on "Moodle: An online E-Learning Platform" on May 30, 2020, organized by the Department of Computer Science and Information Technology, CDGI, Indore.

[12] Faculty Development Program on "Recent Trends in Material Science and Engineering (RTMSE-2020)" held from August 20-21, 2020 at SKIT, Jaipur.

[13] Faculty Development Program on "Machine Learning and Smart Electronic System (MLSES)-2020" held from 03 to 05 Sept 2020 by the Department of Electronics and Communication, SKIT, Jaipur.

[14] Faculty Development Program on "Nanotechnology-Based Green Energy Solution for Solar Cells (NGESS-2020)" held from September 10-14, 2020, at SKIT, Jaipur.

[15] Faculty Development Program on “Emerging Trends in Nano-Electronics (ETNE 2020)" held from September 21-25, 2020 at SKIT, Jaipur.

[16] Faculty Development Program on “Application of Artificial Intelligence on VLSI and Communication Technology (AAIVCT-2022)” held from 07/03/2022 to 11/03/2022 at Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

[17] AICTE recognized the Faculty Development Program on “Outcomes-based Education” held from 19/09/2022 to 23/09/2022 at Jaipur Engineering College and Research Centre, Jaipur.

[18] Faculty Development Program on “Signal Processing and Artificial Intelligence towards various Engineering Applications” held from 16/05/2023 to 20/05/2023 at Arya College of Engineering, Kukas, Jaipur

PROFESSIONAL BODIES AFFILIATIONS

- **IEEE**-Member of the Institute of Electrical and Electronics Engineers, since November 2018.
- **SPIE**-Member of the Society of Photo-Optical Instrumentation Engineers, since October- 2018
- Member of the **OPTICA**, formerly **Optical Society of America (OSA),** since March 2021.

CONFERENCE ORGANIZED

- 2nd International Conference on Advances in Materials Science, Communication and Microelectronics **(ICAMCM-2022)**, June 17-18, 2022 at JECRC, Jaipur **(SCOPUS INDEXED)**

STUDENTS SUPERVISED

- U.G. Students (B.Tech.) – 8

ACHIEVEMENTS

- Received **Internation Travel Grant from the Science & Engineering Research Board (SERB), Department of Science and Technology, Government of India** for presenting the research paper entitled **“Enhancing Absorption in Cadmium Telluride Solar Cells using Ti Nanoparticles”** at the Advanced Photonics Congress, held at the **Centre des congrès de Québec in Québec City, Québec, Canada**, from **28 July to 01 August 2024**.

ACADEMIC ROLES AND RESPONSIBILITIES

- Coordinated in establishment of the laboratories of the Electronics & Communication Department.
- Looked after the **Examination Cell**
- Worked as a **timetable coordinator.**
- Worked as the coordinator in cultural programs and Tech Fest at a college campus.
- Worked as the coordinator of the conveyance facility being provided by the college.
- Worked as a member of the **Internal Quality and Assurance Cell (IQAC).**

- Working as a **Training and Placement officer (TPO) since July 2022**.
- **NBA Criteria in charge** for the department.
- Working as **Virtual lab coordinator** for the ECE Department **since May 2021**.

EXTRACURRICULAR ACTIVITIES

- Participated in different essay and debate competitions and won prizes.
- Awarded with a silver medal in BE 1st Year.

PERSONAL SKILLS

Optimistic, adaptable to changes, Curious about learning, Believes in teamwork, Having leadership quality, good management, and Communication skills

HOBBIES

Playing Badminton, Listening Music, and Watching Hindi Movies

PERSONAL INFORMATION

Date of Birth : 3rd, August 1986
Marital status : Married
Nationality : Indian

Date: **Sudarshan Kumar Jain**

Place: Jaipur