

Shaheed Rajguru College of Applied Sciences for Women University of Delhi Faculty Profile

Name	Dr. Reshma Sinha	
Designation	Assistant Professor	
Email	reshma.sinha@rajguru.du.ac.in	
Degree	Institution	Year
Ph.D. (Electronics and Communication Engineering)	Indira Gandhi Delhi Technical University for Women, New Delhi	2025
M.Tech (VLSI Design)	Indira Gandhi Delhi Technical University for Women, New Delhi	2015
B.Tech (Electronics and Instrumentation Engineering)	Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal	2009
Areas of Interest / Specialization		
Spintronics, VLSI Design, Nano Technology, Neuromorphic Computing, MCG-MEG		
Publications Profile		
- Sinha, R., Kaur, J. Noise processing and diagnostics of a spintronic-based IOT sensor for magnetocardiography application using SpintronCardioNet. Multimed Tools Appl 84, 11753-11774 (2025). https://doi.org/10.1007/s11042-024-19378-3 - Sinha, R., Kaur, J. Enhanced Transport Parameters of Transition Metal Dichalcogenide-Based Double-Barrier Magnetic Tunnel Junction. J. Electron. Mater. 53, 5505-5518 (2024). https://doi.org/10.1007/s11664-024-11267-7 R. Sinha and J. Kaur, "Enhanced Performance Parameters of Magnetic Tunnel Junction with Composite Dielectric Barrier," 2023 36th International Conference on VLSI Design and 2023 22nd International Conference on Embedded Systems (VLSID), Hyderabad, India, 2023, pp. 290-294, doi: 10.1109/VLSID57277.2023.00066		

- Emarishi, Sinha, R., Kaur, J. (2024). Analysis of the Electronic and Optical Properties of MoS₂ and WSe₂ Using the First-Principles Density Functional Theory. In: Mehta, G., Wickramasinghe, N., Kakkar, D. (eds.) Innovations in VLSI, Signal Processing and Computational Technologies. WREC 2023. Lecture Notes in Electrical Engineering, vol 1095. Springer, Singapore. https://doi.org/10.1007/978-981-99-7077-3_32
- Sinha, R., Kaur, J. Analyzing the Impact of Different Composite Dielectrics on Performance Parameters of a Magnetic Tunnel Junction Memory Device. J. Electron. Mater. 51, 5686-5703 (2022). <https://doi.org/10.1007/s11664-022-09841-y>
- Gautam, H. et al. (2023). Synthesis of Curcumin-Loaded Mesoporous Silica Nanoparticles for Anti-cancer Drug Delivery. In: Khan, Z.H., Jackson, M., Salah, N.A. (eds.), Recent Advances in Nanotechnology. ICNOC 2022. Springer Proceedings in Materials, vol 28. Springer, Singapore. https://doi.org/10.1007/978-981-99-4685-3_69
- R. Sinha and J. Kaur, "A Study on Low Power Spintronics," 2020 International Conference on Advances in Computing, Communication & Materials (ICACCM), Dehradun, India, 2020, pp. 310-315, doi: 10.1109/ICACCM50413.2020.9213013
- Y. Pratap, R. Sinha, P. Pal, S. Malik, S. Kabra and S. Kumar, "Performance Analysis of Metalloid Source/ Drain GaAs-FinFET For Analog/RF Applications," 2018 4th International Conference on Devices, Circuits and Systems (ICDCS), Coimbatore, India, 2018, pp. 219-222, doi: 10.1109/ICDCSyst.2018.8605159
- Sinha, A. K., & Sinha, R. (2018). Design of stair-climbing Rocker-Bogie mechanism. Int J Innov Res Sci Eng Technol, 7, 8316-8323.
- S. Sharma, R. Sinha and S. Kaila, "Power reduction strategies for DRAM used in data-centric applications," 2015 IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), Coimbatore, India, 2015, pp. 1-4, doi: 10.1109/ICECCT.2015.7226151
- J. Chhikara, R. Sinha and S. Kaila, "Implementing Communication Bridge between I2C and APB," 2015 IEEE International Conference on Computational Intelligence & Communication Technology, Ghaziabad, India, 2015, pp. 235-238, doi: 10.1109/CICT.2015.19

Awards and Distinctions

- Utility Patent granted for an invention entitled "A Device, Method, and System for Remote Health Monitoring". Indian Patent No. 573591, 11th November 2025.
- Utility Patent granted for an invention entitled "A Magnetic Tunnel Junction Device for Spintronic Applications". Indian Patent No. 593771, 30th June 2026.
- Commendable Research Award Presented for Excellence in Research Issued by IGDTUW, New Delhi · May 2025.
- Commendable Research Award Presented for Excellence in Research Issued by IGDTUW, New Delhi · Mar 2023.
- Best Paper Award for the paper entitled "Enhanced Performance Parameters of Magnetic Tunnel Junction with Composite Dielectric Barrier" Issued by the 36th International Conference on VLSI Design & 22nd International Conference on Embedded Systems at HICC, Novotel, Hyderabad · Jan 2023.
- Best poster award for the poster entitled "Understanding DRAM Power Reduction through Simulating Low Power Modes" at the 5th IEEE International Advanced Computing Conference 2015. (June 2015).