



FacultyDetailsProformaForCollegeWeb-site



Title	Dr	First Name	Renu	Last Name	Photograph
Designation	Assistant Professor (Physics)				
Address	Department of Physics, Daulat Ram College, 4, Patel Marg, Maurice Nagar, New Delhi, Delhi-110007				
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Residence					
Mobile No.	9034686308				
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Educational Qualification					
Degree	Institution				Year
B.Sc. (NM)	R.K.S.D.(PG) College, Kurukshetra University Kurukshetra				2014
M.Sc. (Physics)	Kurukshetra University Kurukshetra				2016
Ph.D. (Physics)	Kurukshetra University Kurukshetra				2022
Career Profile					
• Assistant Professor (Permanent), Daulat Ram College, University of Delhi from 4th Oct., 2022 to till date. • Senior Research Fellow, Kurukshetra University Kurukshetra from 1st Oct., 2020 to 2nd Dec., 2021. • Junior Research Fellow, Kurukshetra University Kurukshetra from 20th Sept., 2018 to 30th Sept., 2020. • Junior Research Fellow, DRDO, Ministry of Defence Govt. of India from 8th May, 2017 to 17th January, 2018.					
Administrative Assignments					
• Member, Time Table Committee (2022-2023), Physics Department, Daulat Ram College, University of Delhi. • Member, Website Committee (2023), Daulat Ram College, University of Delhi. • Member, Prize Committee (2023), Daulat Ram College, University of Delhi. • Convenor, Student Grievance Committee (2023), Daulat Ram College, University of Delhi. • Convenor, College Grievance Committee (2023), Daulat Ram College, University of Delhi. • Member, Entrepreneurship and Innovation Cell (2023), Daulat Ram College, University of Delhi. • Member, Students Amenities Committee (2023), Daulat Ram College, University of Delhi. • Member, Website Committee (2024), Daulat Ram College, University of Delhi. • Member, Skill Development Committee (2025), Daulat Ram College, University of Delhi. • Member, Young Scientist Committee (2025), Daulat Ram College, University of Delhi. • Member, Zeinth & Encore Committee (2025), Daulat Ram College, University of Delhi.					
Areas of Interest / Specialization					
Quantum Mechanics and Applications, Solid State Physics, Nuclear and Particle Physics, Light and Matter, Electricity and Magnetism, Mechanics, Statistical Mechanics, Mathematical Physics, Advance Mathematical Physics, Numerical Analysis, Waves and Oscillations, Thermal Physics, Analog Systems and Applications and Digital Electronics					

Subjects Taught
Advance Mathematical Physics, Mathematical Physics-I, Mathematical Physics-III, Statistical Mechanics, Advance Quantum Mechanics-I, Advance Statistical Mechanics.
Research Guidance
Guided 7 students of B.Sc Physics Honours IV year for Academic Projects/Dissertation in 2025.
Publications Profile
- Renu Singla, Sarvesh Kumar, Timothy A. Hackett, Ali H. Reshak and Manish K. Kashyap, Genesis of magnetism in graphene/MoS₂ van der Waals heterostructures via interface engineering using Cr-adsorption, Journal of Alloys and Compounds, 859 (2021) 157776. - Renu Singla, Timothy A. Hackett, Sarvesh Kumar, Jayotsna Sharma and Manish K. Kashyap, Curie temperature engineering in novel 2D analog of Iron ore (Hematene) via strain, Nanoscale Advances, 2(12), (2020) 5890-5896. - Renu Singla, Jyoti Thakur, Priti Rani, Sarvesh Kumar, Timothy A. Hackett and Manish K. Kashyap, "Emergence of magnetic behavior in AB-stacked bilayer graphene via Fe-doping", Vacuum 182, (2020) 109685. - Renu Singla and Manish K. Kashyap "Half metallicity and long range magnetic order in Graphene/Hematene van der Waals heterostructure" Indian Journal of Physics, 96(7), (2022) 1963-1968. - Priti Rani, Manish K. Kashyap, Renu Singla, Jyoti Thakur, Ali H. Reshak, "Magnetism and magnetocrystalline anisotropy of tetragonally distorted L10-FeNi: N alloy" Journal of Alloys and Compounds, 835, (2020) 155325. - Priti Rani, Renu Singla, Jyoti Thakur, Ali H Reshak, Manish K Kashyap, "Enhancement in magnetic parameters of L10-FeNi on Pd-substitution for permanent magnets" Indian Journal of Physics, (2021) 1-6. - Renu Singla, Rahul Singla, Sarvesh Kumar, Timothy A Hackett, Manish K Kashyap, "Signature of magnetism in 2D-chromia: 2D analog of the natural α-Cr₂O₃ mineral and its heterostructure with graphene" Materials Advances (2023). - Rahul Singla, Renu Singla, P Kumar, Y Chauhan, GSS Saini, MK Kashyap, Tuning of Magnetism and Band Gap in 2D-Chromia via Strain Engineering, Indian Journal of Pure and Applied Physics, (IJPAP) 61 (11), 915-918, (2023). - Parvesh K Deendyal, Shweta Dhakla, Ankur Taya, Renu Singla, Harpreet Singh, Sarvesh Kumar, Timothy A Hackett, Manish K Kashyap, Dania Ali, Ali H Reshak, Chronological evolution of stability in hybrid halide perovskite solar cells, Solar RRL 8 (6), 2300957 (2024). - Supriya Kshetrapal, Nilesh Ugemuge, Renuka Nafdey, Renu Singla, Manish K Kashyap, SV Moharil, Electronic structure analysis of Bi₂WO₆ and observation of near infrared emission on Nd³⁺ doping, Journal of Alloys and Compounds 985, 173966 (2024). - Pankaj Kumar, Rahul Singla, Renu Singla, Sarvesh Kumar, HS Saini, MK Kashyap, Robust strain-mediated ferromagnetism of 2D-Mn₂O₃: A DFT study, MRS Communications 15 (2), 265-270 (2025). - Pankaj Kumar, Rahul Singla, Renu Singla, Sarvesh Kumar, HS Saini, MK Kashyap, Defect mediated electronic properties and robust magnetism of two dimensional ϵ-Mn₂O₃, Next Materials 7, 100639 (2025). - Priti Rani, Ali H Reshak, Renu Singla, Jyoti Thakur, Sarvesh Kumar, Timothy A Hackett, Dania Ali, Manish K Kashyap, Assessment of magnetism and magnetocrystalline anisotropy of (Mn Fe) P Si (x, y= 0 or 1/3) compounds for permanent magnets, Scientific Reports 15 (1), 20546 (2025). - PK Deendyal, S Dhakla, Ren Singla, A Taya, MK Kashyap, Perovskite Solar Cells Without Hole and Electron Transport Layers, Perovskite Solar Cells: Reshaping the Future Energy Landscape, 73-94 (2025). - Rahul Singla, Pankaj Kumar, Renu Singla, S Kumar, MK Kashyap, GSS Saini, Assessment of magnetic response in graphene/Cr₂Ge₂Te₆ van der Waals heterostructure for spintronics, The European Physical Journal B 99 (3), 31, 2026.

Book Chapters:

- Manish K Kashyap, Renu Singla (2021) Beyond 3D-traditional materials thermoelectric materials, Woodhead Publishing, 163-193, (2021) ISBN No.: 978-0-12-819984-8.
- Induced half metallic ferromagnetism in non-magnetic oxides, (2023) ISBN No.: B978-0-323-90907-5.00002-6

Conference Organization / Presentation (in the last three years)

- Paper presented in the International Conference “Recent Developments on Materials, Reliability, Safety and Environmental issues-2021” organised by Dr B R Ambedkar National Institute of Technology, Jalandhar during 25th-27th, June, 2021.
- Resource Person for the In-House Skill Development program “Enhancing Online Learning through ICT Tools ” organized by Physics Department, Daulat Ram College, University of Delhi, online via Google-Meet from 26-27th November, 2022.

Research Projects (Major Grants/Research Collaboration)

- Research Project titled “Development of Computational Design of 2D van der Waals heterostructures for rechargeable batteries, electrolysis, magnetism and catalytic applications” funded by National PARAM Supercomputing Facility (CDAC-PUNE) provided free access of 1024 cores and 15 TB storage for period of one year

Awards and Distinctions

- Awarded POSE Scholarship of Rs 6000/- per month for entire 2-year M.Sc. by DST Haryana Government for being among 1% toppers in Haryana starting from metric to graduation.

Association with Professional Bodies

Not Applicable

Other Activities

- Attended Faculty Induction Programme organized by Guru Angad Dev Teaching Learning Centre, A centre of Ministry of Education under (PMMMNMST) from 25th Feb, 2023 to 27th March, 2023.

