




DEPARTMENT OF PHYSICS

DYAL SINGH COLLEGE, UNIVERSITY OF DELHI

FACULTY DETAIL



Title	Dr	First Name	Neha	Last Name	Gupta	Photograph
Designation		Assistant Professor				
Address		Dyal Singh College Lodhi Road Pragati Vihar New Delhi – 110003				
Phone No	Office	011-24367819, 011-24365948				
Residence						
Mobile		+91 8527579123				
Email		nehagupta.physics@dsc.du.ac.in				
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
Ph.D		Jagiellonian University Krakow Poland Europe			2018	
B.Ed		Maharshi Dayanand University			2009	
M.Sc		University of Delhi			2008	
B.Sc (Hons.)		Maitreyi College, University of Delhi			2006	
Career Profile						
<ul style="list-style-type: none">July 2023-Till date: Assistant Professor : Dyal Singh College, University of DelhiFeb-May 2023: Assistant Professor (Guest): Bhaskaracharya College of Applied Sciences, University of DelhiJan 2019-May 2022: Assistant Professor (Guest): Maitreyi College, University of DelhiJune 2011-May 2012: Trained Graduate Teacher (TGT): Queens Valley School, DelhiOct 2009 -June 2011: Research Intern: Temperature standard, National Physical Laboratory, Delhi						
Administrative Assignments (From 1 st July 2018 onwards)						
<ul style="list-style-type: none">July 2024: Member of Admission Committee, B.Sc(Prog) with Computer Science, Dyal Singh College, University of DelhiJuly 2024: Member of Anti-Ragging Committee, Dyal Singh College, University of DelhiJuly 2024: Member of Women Advisory Committee, Dyal Singh College, University of DelhiJuly 2024: Member of Energy Audit Team of Sustainability Forum, Dyal Singh College, University of DelhiJuly 2024: Member of COSMOS, Physics Society of Physics Department, Dyal Singh College, University of DelhiJuly 2023-Till date: Member of mentor-mentee group of Physics Department, Dyal Singh College, University of DelhiJuly 2023-July 2024: Member of Happiness Workshop Team, Dyal Singh College, University of Delhi						
Areas of Interest / Specialization						
Experimental Nuclear Physics						
Subjects Taught						
<ul style="list-style-type: none">B.Sc(Hons) : Mechanics, Electricity and Magnetism, Solid State Physics (GE), Electrical Circuit Analysis, Nuclear & Particle PhysicsB.Sc(Prog): Electricity and Magnetism, Digital & Analog ElectronicsSkill Enhancement Course: Programming Using Python, Document Preparation & Presentation SoftwareValue Added Course: Digital Empowerment						

Research Guidance
NA
Publications Profile
<ol style="list-style-type: none"> 1. Feasibility studies for imaging e⁺e⁺ annihilation with modular multi-strip detector: S.Sharma, L.Povolo,...,N. Gupta et al. (2024), Nuclear Instrument and Method in Physics Research A, 1062, 16912. 2. Efficiency determination of J-PET: first plastic scintillators-based PET scanner: S.Sharma,...,N. Gupta-Sharma et al. (2023). EJNMMI Phys.,1-20. 3. Synchronization and calibration of the 24-modules j-pet prototype with 300-mm axial field of view : P.Moskal, ...,N. Gupta-Sharma et al. (2021). IEEE-TIM, 1–10. 4. Estimating relationship between the time over threshold and energy loss by photons in plastic scintillators used in the j-pet scanner : S. Sharma, ...,N. Gupta-Sharma et al. (2020). EJNMMI Phys., 1–15. 5. Hit-time and hit-position reconstruction in strips of plastic scintillators using multi-threshold readouts :N. Gupta-Sharma, ...,et al. (2020). IEEE Trans. on Rad. and Plasma Med. Sci., 528–537. 6. Estimation of the nema characteristics of the j-pet tomograph using the gate package : P. Kowalski, ..., N. G.Sharma et al. (2018). Phys. Med. Biol. 63, 165008. 7. Evaluation of single-chip, real-time tomographic data processing on fpga - soc devices : G. Korcyl, ..., N. G.Sharma et al. (2018). IEEE, 1–10. 8. Feasibility study of the time reversal symmetry tests in decays of metastable positronium atoms with the j-pet detector : A. Gajos, ..., N. Gupta-Sharma et al. (2018). Advances in High Energy Physics, 1–15 9. Calculation of the time resolution of the j-pet tomograph using kernel density estimation : L. Raczynski, ...,N. G. Sharma et al. (2017). Physics in Medicine and Biology, 5076–5097. 10. Measurement of gamma quantum interaction point in plastic scintillator with wls strips : J. Smyrska,...,N.Gupta-Sharma et al. (2017). Nucl. Instrum. Meth. A 851, 39–42. 11. Multichannel fpga based mvt system for high precision time (20 ps rms) and charge measurement : M.Pałka, ..., N. G. Sharma et al. (2017). Journal of Instrumentation, 1–12. 12. Novel scintillating material 2-(4-styrylphenyl)benzoxazole for the fully digital and mri compatible j-pet tomograph based on plastic scintillators : A. Wieczorek, ..., N. G. Sharma et al. (2017). PLOS One, 1–16. 13. Application of the compress sensing theory for improvement of the tof resolution in a novel j-pet instrument : L. Raczynski,...,N. Gupta-Sharma et al. (2016). Nukleonika 61, 35–39. 14. Determination of the 3-gamma fraction from positron annihilation in mesoporous materials for symmetry violation experiment with j-pet scanner : B. Jasinska,...,N. G. Sharma et al. (2016). Acta Phys. Polon. B 47,453. 15. A feasibility study of ortho-positronium decays measurement with the j-pet scanner based on plastic scintillators : D. Kaminska,...,N. Gupta-Sharma et al. (2016). Eur. Phys. Jour. C 76, 445. 16. Time resolution of the plastic scintillator strips with matrix photomultiplier readout for j-pet tomograph : P. Moskal,...,N. Gupta-Sharma et al. (2016). Phys. Med. Biol. 61, 2025–2047. 17. Trilateration-based reconstruction of ortho-positronium decays into three photons with the j-pet detector : A. Gajos,...,N. G. Sharma et al. (2016). Nucl. Instrum. Meth. A 819, 54–59. 18. A novel method for the line-of-response and time-of-flight reconstruction in tof-pet detectors based on a library of synchronized model signals : P. Moskal,...,N. Gupta-Sharma et al. (2015). Nucl. Instr. and Meth.A 775, 54–62. 19. Reconstruction of hit-time and hit-position of annihilation quanta in the j-pet detector using the mahalanobis distance : N. Gupta-Sharma et al. (2015). Nukleonika 60, 765–769. 20. Novel method for hit-positon reconstruction using voltage signals in plastic scintillators and its application to the positron emission tomography: L. Raczynski, ..., N. Gupta-Sharma et al. (2014). Nucl. Instr. and Meth. A 764, 186–192 21. Assessment of platinum versus palladium thermocouple by comparison against photoelectric radiation pyrometer and noble metal thermocouples : A. Rani, N. Gupta et al. (2013). Indian Journal of Pure and Applied Physics, 41–43
Conference Organization/ Presentations (From 1 st July 2018 onwards)
Webinar - Organiser <ul style="list-style-type: none"> • National Webinar, June 30, 2021, Maitreyi College, University of Delhi, New Delhi, Title: Energy Efficient Innovations and Applications.

- International Webinar, March 4, 2021, Maitreyi College, University of Delhi, New Delhi, Title: Unravelling mysteries of the Universe with experts.

Conferences - ORAL presentations

- International Interdisciplinary e-Conference, February 24, Maitreyi College, University of Delhi, New Delhi, Title: Sustainable Future for Humanity: The New Learning Curve.
- II Symposium on Positron Emission Tomography, September 21-24, 2014, Kraków, Poland, Title: Line-of-response and time-of-flight reconstruction based on library of synchronized model signals.

Conferences - POSTER presentation

- Warsaw Medical Physics Meeting, May 14-15, 2015, Warsaw, Poland, Title: Time and hit position reconstruction in scintillator detectors based on library of model signals.
- 13th International Workshop on Meson Production, Properties and Interaction, May 29 - 3 June, 2014, Kraków, Poland, Title: Time and Hit Position Reconstruction in Scintillator Detectors Based on Library of Model Signals.

Conferences - PARTICIPATION

5th Jagiellonian Symposium on Advance in Particle Physics and Medicine, 29 June-7 July 2024, Jagiellonian University Krakow Poland

Workshop/Training/Summer School/Fair

- Organize a Science Fair 2024 on theme “Cutting Edge Science & Technology for Sustainable Future”, 28-29 February 2024, Dyal Singh College, University of Delhi
- Hadron Physics Summer School, Sep. 1-5, 2014, Germany.
- Training Course on Calibration of Glass Thermometers, December 3-4, 2009, National Physical Laboratory, New Delhi.

Research Projects (Major Grants/Research Collaboration) (From 1st July 2018 onwards)

NA

Awards and Distinctions (From 1st July 2018 onwards)

NA

Association With Professional Bodies

NA

Other Activities like MOOCs/ Patents etc. (From 1st July 2018 onwards)

NA

Signature of Faculty Member