

Name: Dr. Mandeep Kaur

Designation: Assistant Professor

Qualification: Ph.D, M.Phil, M.Sc (Hons), GATE Qualified

Area of Specialization: Theoretical Nuclear Physics



Teaching Experience: 05 years

- **Assistant Professor**, Post Graduate Government College for Girls, Sector 11 Chandigarh since, 16 August, 2017.

Courses Taught

M.Sc. (Physics)

- Quantum Physics I
- Quantum Physics II
- Particle Physics II
- Condensed matter Physics II

B. Sc. (Hons.)

- Analog and Digital Electronics
- Statistics and Numerical Techniques

B. Sc.

- Nuclear and Particle Physics
- Quantum Physics

Awards and Distinction:

- Gold Medalist in M.Phil Physics
- JRF in Basic Scientific Research (BSR) Meritorious fellowship by U.G.C (2012-14).
- SRF in Basic Scientific Research (BSR) Meritorious fellowship by U.G.C (2015-17).

Publications:

1. **Mandeep Kaur**, Sakshi Gautam, Rajeev K. Puri, “Fragmentation in isotopic and isobaric systems as probe of density dependence of nuclear symmetry energy”, Nuclear Physics A, Volume 955, 2016, Pages 133-144, ISSN 0375-9474, <https://doi.org/10.1016/j.nuclphysa.2016.06.008>.
2. **Mandeep Kaur** and Sakshi Gautam “Influence of the constant and density-dependent scaling of the scattering cross-section on reaction dynamics” Journal of Physics G: Nuclear and Particle Physics, Volume 43, 025103 (2016), ISSN: 0954-3899, <https://doi.org/10.1088/0954-3899/43/2/025103>

3. **Mandeep Kaur**, "In-medium effects via nuclear stopping in asymmetric colliding nuclei", AIP Conference Proceedings 1728, 020214 (2016), <https://doi.org/10.1063/1.4946265>
4. Yogesh K. Vermani and **Mandeep Kaur**, "Remarks on the non-equilibrium effects and collision dynamics in heavy-ion collisions", *Physica Scripta*, Volume 82, 045202, (2010), ISSN: 1402-4896, <https://doi.org/10.1088/0031-8949/82/04/045202>
5. **Kaur, M.**, Gautam, S. "On the isospin effects in the geometry of vanishing flow in heavy-ion collisions", *Phys. Part. Nuclei Lett.* **10**, 228–233 (2013), ISSN: 1547-4771 <https://doi.org/10.1134/S1547477113030084>
6. **Kaur, M.** Nuclear dynamics at the geometry of vanishing flow in heavy-ion collisions. *Phys. Part. Nuclei Lett.* **10**, 521–527 (2013), ISSN: 1547-4771 <https://doi.org/10.1134/S1547477113060149>

Papers Published in Conferences:

1. **Mandeep Kaur et al.**, Influence of in-medium effects via nucleon-nucleon scattering cross-section on transverse flow and nuclear stopping, Proceedings of the DAE Symposium On Nucl. Phys. **59**, 420 (2014).
2. **Mandeep Kaur et al.**, Influence of density dependent cross-section on charge distribution, Proceedings of the DAE Symposium on Nucl. Phys. **58**, 386 (2013).
3. **Mandeep Kaur et al.**, Density and thermalization in heavy-ion reactions at the geometry of vanishing flow, Proceedings of the DAE Symposium on Nucl. Phys. **57**, 708 (2012).
4. **Mandeep Kaur**, Study of collision dynamics in heavy-ion reactions, Proceedings of the DAE Symposium on Nucl. Phys. **56**, 808 (2011).
5. **Mandeep Kaur et al.**, Geometry of vanishing flow: effect of symmetry energy and isospin-dependent nucleon-nucleon cross-section, Proceedings of the DAE Symposium on Nucl. Phys. **56**, 806 (2011).

Papers Presented in Conferences:

1. Mandeep Kaur with title "Synthesis and characterization of Graphene and its oxides" in National Seminar on Recent Trends in Science and Technology organized by GTB Khalsa College held on March 7, 2018.
2. Gonika and **Mandeep Kaur** with title "Influence of structural effect via nuclear radius on thermalization in heavy-ion collisions" Vol. PP-13, p.29, Feb. 15-16, 2016 in National Conference on Recent Trends in Nuclear Physics, Aligarh Muslim University, Aligarh.
3. Gonika and **Mandeep Kaur** with title "Influence of nuclear charge radius on the sensitivity of nuclear stopping towards scattering cross section" , Vol. PP-61, p. 56, Feb. 29-March2, 2016 in 10th Chandigarh Science Congress, Physics Department Panjab University, Chandigarh.
4. Mandeep Kaur with title "In-medium effects via Nuclear Stopping in asymmetric colliding nuclei" in International Conference on Condensed Matter and Applied Physics ICC 2015, October 30-31, 2015.
5. M. Kaur *et al.*, with title "Influence of in-medium effects via nucleon-nucleon scattering cross-section on transverse flow and nuclear stopping" Vol. 59, p.420, Dec. 08-12, 2014, with an Orientation Course on Dec., 07,2014 at 59th DAE Symposium on Nuclear Physics, Banaras Hindu University.

6. **Mandeep Kaur** with title “Influence of in-medium nucleon-nucleon cross-section on thermalization in heavy-ion collisions” in National Conference on Emerging Challenges in Nuclear and Many-Body Physics (ECNMP-2014), Nov. 10-11, 2014 held at University of Jammu.
7. **M. Kaur et al.**, with title “Influence of density dependent cross-section on charge distribution” Vol. 58, p.386, Dec. 02-06, 2013, with an Orientation Course on Dec., 01, 2013 at International Symposium on Nuclear Physics, Bhabha Atomic Research Centre, Mumbai.
8. **M. Kaur et al.**, with title “Density and thermalization in heavy-ion reactions at the geometry of vanishing flow” Vol. 57, p.708, Dec. 03-07, 2012, at DAE Symposium on Nuclear Physics, Department of Physics and Astrophysics, University of Delhi.
9. **M. Kaur et al.**, with title “Geometry of vanishing flow: effect of symmetry energy and isospin-dependent nucleon-nucleon cross-section” Vol. 56, p.806, Dec., 26-30, 2011, at 56th DAE-BRNS Symposium on Nuclear Physics, Visakhapatnam, A.P., India.
10. **M. Kaur**, with title “Study of collision dynamics in heavy-ion reactions” Vol. 56, p.808, Dec. 26-30, 2011, at 56th DAE-BRNS Symposium on Nuclear Physics, Visakhapatnam, A.P., India.

Conferences/Workshops/Seminars attended:

1. Indo-French Seminar on “Multifragmentation, Collective Flow and Sub Threshold Particle Production in Heavy Ion Reactions”, Feb. 4-6, 2019 at Department of Physics, Panjab University, Chandigarh.
2. International Workshop on “Shock Waves in Science, Engineering & Medicine” organized by Post Graduate Govt. College for Girls, Sector-11, Chandigarh held on 23 -24 February, 2018.
3. One day Capacity Building Workshop on “Recent Trends in Science and Technology” held at Post Graduate Govt. College for Girls, Sec-11, Chandigarh on Feb. 28, 2018.
4. International workshop on “Recent Trends in Engineering and Material Sciences (ICEMS-2016)” organized by Jaipur National University, Jaipur during March 17-19, 2016.
5. Two-day Seminar Programme on “Trends in Frontiers of Physics” held at Department of Physics, Panjab University, Chandigarh during Feb. 15-16, 2011.
6. Three day National Theme Workshop on Nuclear Reaction Mechanism held at Department of Physics, Panjab University, Chandigarh during March. 17-19, 2010.
7. 4th Chandigarh science Congress (CHASCON 2010), 19-20 March, 2010 held at Department of Physics, Panjab University, Chandigarh.

Faculty Development Programme:

1. Two Weeks Faculty Development Programme on "QUANTITATIVE METHODS FOR DATA ANALYSIS" from August 12 - August 25, 2020 at Ramanujan College, University of Delhi and obtained grade A+.

Webinar attended:

1. Online Lecture on “THE MASS OF SMALL THINGS” organized by Indian Association of Physics Teachers Regional Council (Delhi & Haryana) held on 24th July 2021.
2. Two days seminar cum e-workshop on “Experimental Electronics” organized by Department of Physics, Hans Raj Mahila Mahavidalaya on 31st July to 1st Aug., 2020.
3. Two days International Webinar on “Redrawing the Domestic Paradigm: Family Bonding, Gender Concerns and Health Issues amidst COVID-19” organized by Post Graduate Govt. College, Sec-11, Chandigarh held on 16-17 July, 2020.
4. National Webinar on “Mentoring Teachers for Effective Online Teaching” organized by Department of Commerce, Daulat Ram College, University of Delhi, held on July 4, 2020.
5. Online Webinar on “Machine Learning and Techniques” organized by Department of Information Technology, Kings Engineering College, Chennai on 20th June, 2020.
6. Attended webinar on “ Nanoclay Application for Environment and Energy”organized by Department of Applied Science, Poornima Institute of Engineering and Technology held on June 18th,2020.
7. Online Webinar on “how to Develop Web Application” organized by Department of Computer Science and Engineering, KingsEngineering College, Chennai held on June 13, 2020.
8. One day International Virtual Conference on “Novel Corona and Novel Challenges:Life Ahead with Covid-19” organized by Sri Guru Gobind Singh College Sector 26, Chandigarh on June 03, 2020.
9. Webinar on Art and Science of Mentoring organized by Physics Department, Daulat Ram College, University of Delhi heldon June 1, 2020.
10. National Webinar on “Preventative healthcare diagnostic platforms based on Micro-Nanotechnologies” organized by Department of Science, Lady Irwin College on 30th May, 2020.