Shivaji College Faculty Details Proforma

Title	Dr.	First Name	Mayank	Last Name	Dimri	Photograph
Designation		Assistant Professor				
Address		62, Mahadev Apartments, Sector 23, Dwarka, Delhi-110075				
Office Phone No.						
Residence						
Mobile		8130337298				
Email		mdimri79kmc@gmail.com				
Web-Page						
Educational Qualifications						
Degree		**University/Institute**				**Year**
Ph.D.		University of Delhi				2024
M.Phil./M.Tech.						
PG		Kirori Mal College, University of Delhi				2017
UG		Kirori Mal College, University of Delhi				2015
Any Other Qualification						

Career Profile

- Working as an Assistant Professor (Permanent) in Shivaji College, University of Delhi, New Delhi from March 11, 2026 onwards.
- Worked as an Assistant Professor (Adhoc) in Kirori Mal College, University of Delhi, New Delhi from December 18, 2020 to October 17, 2022.

Administrative Assignments

- Member of the Standing Committee (2021-22) for Monitoring Admissions of Undergraduate Courses in Kirori Mal College, University of Delhi.
- Member of the Standing Committee (2022-23) for Monitoring Admissions of Undergraduate Courses in Kirori Mal College, University of Delhi.

Areas of Interest/Specialisation

- **Atomic Physics:** Atomic Structure calculations of complex atoms and ions using the configuration interaction technique (CIV3), multi-configuration Dirac-Fock method, etc. and collisional calculations of multi-charged ions using the state-of-art R-matrix methods.

- **Plasma Physics:** Influence of plasma screening on the ionization potential, energy levels and radiative properties of highly charged ions embedded in a plasma environment.

Subjects Taught

Electricity and Magnetism, Mechanics, Element of Modern Physics, Thermal Physics and Statistical Mechanics.

Innovation Project/Research Projects (Major Grants/Research Collaboration)

N.A.

Publications Profile (*Research Papers/Books)*

1. A. K. Singh, **M. Dimri**, D. Dawra, A. K. S. Jha and M. Mohan, Accurate study on the properties of spectral lines for Na-like Cr^{13+}, **Can. J. Phys.** 97, 436 (2018).
2. A. K. Singh, **M. Dimri**, D. Dawra, A. K. S. Jha, N. Verma and M. Mohan, Spectroscopic study of EUV and SXR transitions of Cu XIX with plasma parameters, **Radiat. Phys. Chem.** 156, 174 (2019).
3. A. K. Singh, **M. Dimri**, D. Dawra, A. K. S. Jha and M. Mohan, Relativistic R-matrix photoionization cross section calculations of Ne-like Co XVIII with resonance parameters, **J. Phys. B: At. Mol. Opt. Phys.** 52, 075002 (2019).
4. A. K. Singh, D. Dawra, **M. Dimri**, A. K. S. Jha and M. Mohan, Relativistic R-matrix calculations of photoionization cross sections of Cu XVIII, **Eur. Phys. J. D** 73, 85 (2019).
5. A. K. Singh, D. Dawra, **M. Dimri**, A. K. S. Jha, R. Sharma and M. Mohan, Relativistic photoionization cross section calculations and resonance parameters for Mg-like Se XXIII, **Radiat. Phys. Chem.** 168, 108447 (2020).
6. A. K. Singh, D. Dawra, **M. Dimri**, A. K. S. Jha and M. Mohan, Relativistic atomic structure calculations of Na-like Se XXIV with plasma parameters, **Phys. Plasmas** 26, 062704 (2019).
7. A. K. Singh, D. Dawra, **M. Dimri**, A. K. S. Jha, R. K. Pandey and M. Mohan,Plasma screening effects on the atomic structure of He-like ions embedded in strongly coupled plasma, **Phys. Lett. A** 384, 126369 (2020).
8. D. Dawra, **M. Dimri**, A. K. Singh, A. K. S. Jha and S. S. Singh, Effect of dense plasma environment on the spectroscopic properties of He-like Ca^{18+} ion, **J. At. Mol. Condens. Nano Phys.** 6, 103 (2019).
9. **M. Dimri**, D. Dawra, A. K. Singh, A. K. S. Jha, R. K. Pandey and M. Mohan, Atomic structure and radiative properties of He-like Ni^{26+} ion in dense plasma, **Can. J. Phys.** 99, 559 (2021).
10. D. Dawra, **M. Dimri**, A. K. Singh, A. K. S. Jha, R. K. Pandey and M. Mohan, Influence of dense plasma environment on the He-α and He-β transitions of He-like Cl^{15+} ion. **In Proceedings of the International Conference on Atomic, Molecular, Optical & Nano Physics with Applications** (pp. 85-104). Springer, Singapore.
11. **M. Dimri**, D. Dawra, A. K. Singh, A. K. S. Jha, R. K. Pandey, R. Sharma and M. Mohan, Fine structure calculations of excitation energies, lifetimes and radiative properties of S-like Kr XXI, **Radiat. Phys. Chem.** 189, 109756 (2021).
12. D. Dawra , **M. Dimri**, A. K. Singh, A. K. S. Jha, R. K. Pandey, R. Sharma and M. Mohan, Theoretical calculations of the photoionization cross sections for the ground and lowest two excited states of Ni XVIII ion, **Eur. Phys. J. D** 76, 1 (2022).
13. D. Dawra, **M. Dimri**, A. K. Singh, A. K. S. Jha, R. K. Pandey, R. Sharma and M. Mohan, Influence of strongly coupled plasma environment on photoionization of H-like O^{7+} ion, **Phys. Plasmas** 28, 112706 (2021).
14. **M. Dimri**, D. Dawra, A. K. Singh, A. K. S. Jha, R. K. Pandey, R. Sharma and M. Mohan, Electron impact excitation of Na-like Cu XIX using the Breit-Pauli R-matrix method, **Eur. Phys. J. D** 75, 1 (2021).

15. D. Dawra, **M. Dimri**, A. K. Singh, R. K. Pandey, A. K. S. Jha, P. Kumar and M. Mohan, Influence of strongly coupled plasma on the low-lying transitions of Be-like ions, **Eur. Phys. J. D** 76, 223 (2022).
16. Jagjit Singh, D. Dawra , Nupur Verma, A. K. S. Jha, Pradumn Kumar, **M. Dimri** and M. Mohan, Study of electron impact excitation of H-like Si^{13+} ion in dense plasma environment, **New Astron.** 101, 102001 (2023).
17. N. Verma, A. K. S. Jha, D. Dawra, **M. Dimri** and M. Mohan, Photoionization of Na-like Si IV using R-matrix method, **Eur. Phys. J. D** 77, 134 (2023).
18. A. K. S. Jha, **M. Dimri**, D. Dawra and M. Mohan, A Study of the Atomic Processes of Highly Charged Ions Embedded in Dense Plasma, **Atoms** 11, 158 (2023).
19. N. Kumar, Shivankar, A. K. S. Jha, **M. Dimri**, D. Dawra and M. Mohan, Relativistic atomic structure calculations, plasma and thermodynamic parameters for Ca X, **Eur. Phys. J. Plus** 138, 1155 (2023).
20. Shivankar, N. Kumar, A. K. S. Jha, **M. Dimri**, D. Dawra and M. Mohan, Effect of dense plasma environment and external magnetic field on atomic structure and radiative properties of Ar XVII, **J. Quant. Spectrosc. Radiat. Transf.** 321, 108991 (2024).
21. N. Kumar, Shivankar, A. K. S. Jha, **M. Dimri**, D. Dawra and M. Mohan, Relativistic calculations of photoionization cross-section of Mg-like Ca IX, **Eur. Phys. J. Plus** 139, 929 (2024).
22. Shivankar, N. Kumar, D. Dawra, **M. Dimri**, M. Mohan and A. K. S. Jha, Magnetic field effect on the atomic spectral properties of Cr XXI ion embedded in dense plasma environment, **Phys. Scr.** 100, 065403 (2025).
23. A. K. S Jha, N. Kumar, A. Sharma, **M. Dimri**, D. Dawra and M. Mohan, K-shell photoionization of plasma-embedded Li-like Fe XXIV, **Phys. Plasmas** 32, 122702 (2025).
24. Shivankar, N. Kumar, **M. Dimri**, D. Dawra, M. Mohan and A. K. S. Jha, Influence of plasma screening and external fields on the spectroscopic characteristics of Li-like Al XI ion, **Eur. Phys. J. D** 79, 150 (2025).
25. N. Kumar, Shivankar, D. Dawra, **M. Dimri**, M. Mohan and A. K. S. Jha, Plasma screening effects on the atomic structure and collision strength of He-like CV ion, **Chem. Phys.** 604, 113090 (2026).

Conference/Seminar/Faculty Development Programme/Workshop

- Poster presentation on "Accurate study on the properties of spectral lines for Na-like Cr13+", 13th Asian International Seminar on Atomic and Molecular Physics, IIT Bombay, Mumbai, India, December 03–08, 2018.
- Poster presentation on "Relativistic R-matrix photoionization cross sections calculations of Ne-like Co XVIII with resonance parameters", National Conference on "Recent Trends in Materials Science and Spectroscopy (RTMS-2019)", AMU, Aligarh, India, March 02–03, 2019.
- Poster presentation on "Relativistic atomic structure calculations of Cr XIV", National Conference on "Atomic, Molecular and Nano Sciences (NCAMNS-2019)", Aliah University, Kolkata, India, April 03–04, 2019.
- Poster presentation on "Plasma screening effects on the low-lying transitions of Be-like Si10+ and Fe22+ ions embedded in strongly coupled plasma", International Conference on Atomic, Molecular, Optical & Nano Physics with Applications (CAMNP-2019), Delhi Technological University, New Delhi, India, December 18–20, 2019.
- Poster presentation on "Plasma shielding effects on the atomic structure of He-like Ar16+ ion", International Conference on Atomic, Molecular, Material, Nano and Optical Physics with Applications (ICAMNOP-2023), Delhi Technological University, New Delhi, India, December 20–22, 2023.
- Oral presentation on "Atomic Structure and Collisional Calculations of Highly Charged Ions in a Dense Plasma Environment", International Conference on Atomic, Molecular, Nano & Optical Physics with Applications (IAMNOP-2025), School of Physical Sciences, Jawaharlal Nehru University, Delhi, India, December 17–19, 2025.
- Attended five-day Online Faculty Development Programme on Programming in Python from 06-10, December, 2021 organized by Kirori Mal College, University of Delhi in collaboration with Mizoram University under the aegis of Pandit Madan MohanMalviya National Mission on Teachers and Training Ministry of Education.

- Participated in the research-based course "Atomic Astrophysics and Spectroscopy with Computational Workshops on the SUPERSTRUCTURE and the R-matrix Codes" delivered by Prof. Sultana N. Nahar, conducted via Zoom with global participation and supported by OSU-USA, OSC-USA, and AMU-India, from October 16–31, 2021.
- Participated in the research-based course "Atomic Astrophysics and Spectroscopy with Computational Workshops on SUPERSTRUCTURE and the R-matrix Codes II" delivered by Prof. Sultana N. Nahar and Prof. Anil K. Pradhan, conducted via Zoom with global participation and supported by OSU-USA, OSC-USA, and AMU-India, from June 18–July 17, 2022.

Research Guidance (*Supervision of Doctoral Thesis/Dissertations*)

N.A.

Awards and Distinctions

Dec 2017: Qualified the Joint CSIR-UGC Test for Lectureship in Physics.
Dec 2018: Qualified the Joint CSIR-UGC Test for Lectureship in Physics.

Memberships

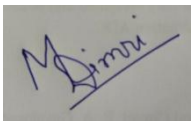
Member of the Atomic and Molecular Data Unit, International Atomic Energy Agency,Vienna, Austria (https://amdis.iaea.org/GNAMPP/groups/26).

Other Academic Activities

- Member of organizing committee for International Conference on Atomic, Molecular, Optical and Nano Physics with Applications (CAMNP-2019) held at Department of Applied Physics, Delhi Technological University, Delhi, India, 110042, December 18-20, 2019.
- Member of organizing committee for International Conference on Atomic, Molecular, Material, Nano and Optical Physics with Applications (ICAMNOP-2023) held at Department of Applied Physics, Delhi Technological University, Delhi, India, 110042, December 20-22, 2023.
- Member of organizing committee for International Conference on Atomic, Molecular, Nano & Optical Physics with Applications (IAMNOP-2025) held at School of Physical Sciences, Jawaharlal Nehru University, Delhi, India, 110067, December 17-19, 2025.

Cultural/Extracurricular Activities

N.A.



Signature of Faculty Member