



Faculty Details Proforma

Title	Dr	First Name	Pradeep	Last Name	Kumar
Designation	Associate Professor				
Address	Department of Physics Hansraj College University of Delhi Delhi-110007				
Phone No Office	011-27667458				
Email	pkumar@hrc.du.ac.in				
Teaching Experience					
Associate Professor in Department of Physics, Hansraj College, University of Delhi from 18th September, 2019 till date					
Assistant Professor in Department of Physics, Hansraj College, University of Delhi from 18th September, 2006 to 17th September, 2019					
Educational Qualifications					
Degree		Institution		Year	
Ph. D.		Department of Physics & Astrophysics, University of Delhi		2015	
M. Phil.		Vinayaka Mission University		2009	
M. Sc. (Physics)		School of Physical Sciences, Jawaharlal Nehru University		2005	
B. Sc. (H) Physics		Kirori Mal College, University of Delhi		2003	
Other Examinations					
NET-JRF		CSIR		2005	
GATE		IIT & IISC		2005	
GATE		IIT & IISC		2006	
Areas of Interest / Specialization					
Theoretical Condensed Matter Physics (DFT Calculations)					
Subjects Taught					
Theory Analog Systems and Applications, Digital Systems and Applications, Computer Fundamentals & Programming, Electricity & Magnetism, Electromagnetic Theory, Physics-II, Digital Electronics Mathematical Physics-I, Electromagnetics					
Practical Digital, Microprocessor and Computer Lab, Physics Lab, Physics & Electronics Lab, ELHP-305: Electronics Practical-V, Microprocessors & Computer Lab, Mechanics Lab, Electricity and					

Magnetism Lab, Electricity, Magnetism and EMT Lab, Digital Systems and Applications Lab, Analog Systems and Applications Lab, Mathematical Physics-II Lab, Solid State Physics Lab

Administrative Assignments

Teacher-In-Charge, Department of Physics & Electronics
Superintendent, Department Practical Examinations, Department of Physics & Electronics
Deputy Coordinator, Central Evaluation Center, Hansraj College, University of Delhi
Coordinator, IGNOU Study Centre- 29052, Hansraj College
Convener, Department Admission Committee, Department of Physics & Electronics
Convener, Departmental Student Society, Department of Physics & Electronics

Publications Profile

Journals Articles

Arvind Kumar, **Pradeep Kumar*** and Agnikumar G. Vedeshwar "Anisotropic excitonic absorption in SbI_3 films: Theory and experiment" *Materials Letters* 343, 2023, 134359.

Pradeep Kumar*, Arvind Kumar, Tanuj Dhawan and Agnikumar G. Vedeshwar "First principle calculation of structural, electronic, optical, elastic and thermodynamic properties of group IIA metal iodides: Structure-property correlation" *Journal of Physics and Chemistry of Solids* 175, 2023, 111195.

Ashish Kumar Sharma, **Pradeep Kumar***, Arvind Kumar, Kim Jungbog and Agnikumar G. Vedeshwar "Optical properties of InI_3 : Density functional theory calculations and experimental results" *Solid State Communications* 358, 2022, 115014.

Pradeep Kumar and Agnikumar G. Vedeshwar "Mapping the conduction band edge density of states of $\gamma\text{-In}_2\text{Se}_3$ by diffuse reflectance spectra" *Journal of Applied Physics* 123, 2018, 125107.

Pradeep Kumar and Agnikumar G. Vedeshwar "Optical Properties of Scintillator Material BaBr_2 films" *Materials Letters* 157, 2015, 318.

Pradeep Kumar and Agnikumar G. Vedeshwar "DFT calculations of structural, electronic, optical and elastic properties of scintillator materials BaCl_2 and BaBr_2 " *Journal of Physics D: Applied Physics* 48.10, 2015, 105301.

Pradeep Kumar and Agnikumar G. Vedeshwar "Pressure Dependence of Electronic Properties of BaI_2 " *AIP Conf. Proc.*, 1675, 2015, 020013.

Pradeep Kumar, Vikash Gulia, and Agnikumar G. Vedeshwar "Residual stress dependant anisotropic band gap of various (hkl) oriented BaI_2 films" *Journal of Applied Physics* 114.19, 2013, 193511.

Pradeep Kumar and Agnikumar G. Vedeshwar “First Principles Calculations of Electronic, Optical and Elastic Properties of Scintillator Material BaI₂” Conf. Proc., 2013, 84 ISBN: 978-93-83083-36-7.

Conference/ Symposium etc. Paper Presented

Oral Presentation in 4th National Conference on Advanced Materials and Radiation Physics, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur-148106, Punjab (13th March - 14th March, 2015).

Poster Presentation in International Conference on Recent Trends in Materials and Devices, Amity University, Noida-201301, Uttar Pradesh (30th October - 31st October, 2013).

Research Projects (Major Grants/Research Collaboration)

Project Investigator in innovation project on ‘In medium masses of the charmonium states in the isospin asymmetric strange hadronic matter and their implications in heavy ion collision experiments’ under Innovation Project 2015-16 schemes, University of Delhi.

Workshop/Seminar/Conference/Symposium/Webinar Organized

Physics & Electronics Department Coordinator for "INSPIRE Programme (DST)", Hansraj College, University of Delhi, Delhi, (12th December - 16th December, 2017).

Organized the Seminar on Radiation Hazards and Monitoring: Techniques and Materials, Department of Physics & Electronics, Hansraj College, University of Delhi (10th April, 2017).

Organized a Seminar cum Workshop on Quantum Entanglement and EPR paradox and Computer Interfaced Science Experiments using EXPEYES, Department of Physics & Electronics, Hansraj College, University of Delhi (30th March, 2017).

Organized Workshop in Characterization of Materials by X-Ray Diffraction, Department of Physics & Electronics, Hansraj College, University of Delhi, (23rd February - 24th February 2016).

MOOCs complete with e-certification

Learning Physics Through Simple Experiments conducted by Centre for Continuing Education, Indian Institute of Technology Kanpur. (2nd April – 10th June, 2020)

Refresher/Orientation course/Faculty Development Programme Attended

Faculty Development Programme on “Scilab” organized by Department of Science & Humanities in association with IIT-Bombay (Remote Learning Through Spoken Tutorial). (15th June – 19th June, 2020)

Faculty Development Programme on “LaTeX” organized by CMR Engineering College and Spoken Tutorial Project, IIT Bombay, funded by National Mission on Education through ICT, MHRD, Govt. of India. (1st June – 6th June, 2020)

Faculty Development Programme on “Spectroscopic and Analytical Techniques: Applications” organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi under PMMMNMTT of MHRD and Department of Chemistry, J. C. Bose University of Science and Technology, YMCA, Faridabad. (25th May - 29th May, 2020)

Faculty Development Program on “Experiential Learning- Gandhiji’s NaiTalim” organized by Faculty Development Centre, Mahatma Gandhi National Council of Rural Education, PMMMNMTT, MHRD, Govt. of India. (11th May – 15th May, 2020)

Faculty Development Programme on “Managing Online Classes and Co-creating MOOCS” organized by Teaching Learning Centre, Ramanujan College, University of Delhi under PMMMNMTT, MHRD, Govt. of India. (20th April – 6th May, 2020)

Faculty Development Program on “Transition Management for Higher Education during COVID-19 Pandemic – A Roadmap” organized by Chhatrapati Shahu Institute of Business Education & Research, Kolhapur under PMMMNMTT, MHRD, Govt. of India. (2nd May – 6th May, 2020)

Faculty Development Programme: National Webinar on “Towards Excellence in Higher Education in India in the 21st Century: Challenges and Opportunities” organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi under PMMMNMTT of MHRD, Govt. of India. (29th April, 2020)

Faculty Development Programme: National Webinar on “Roles of Teachers in Technology driven Higher Education” organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi under PMMMNMTT of MHRD, Govt. of India. (28th April, 2020)

Faculty Development Programme: National Webinar on “Re-engineering Higher Education: A Seamless Knowledge Management System for the University” organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi under PMMMNMTT of MHRD, Govt. of India. (22nd April, 2020)

Faculty Development Programme: National Webinar on “Development of Higher Education in India: An Overview” organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi under PMMMNMTT of MHRD, Govt. of India. (16th April, 2020)

Faculty Development Programme on "Emerging Trends in Research Methodology" organized by Mata Sundri College for Women in collaboration with Mahatma Hansraj Faculty Development Centre of MHRD, Hansraj College, University of Delhi, Delhi (7th October - 12th October, 2019).

Faculty Development Programme on "Challenges before the Academia in the era of Gadgets, E-communication & Artificial Intelligence" at Mahatma Hansraj Faculty Development Centre of MHRD, Hansraj College, University of Delhi, Delhi (15th December - 28th December, 2018).

Faculty Development Program cum Workshop on "Climate Across the Curriculum: Resources for Integrating Climate Topics in Discipline-Specific Teaching" organized by IQAC, Sri Venkateswara College, University of Delhi, in collaboration with TROPICSU, a Climate Education Project funded by International Council for Science (ICSU) & IISER, Pune, India (13th October – 14th October, 2018).

Orientation Programme on "ODL and Strengthening of SSS for Academic Counsellors" organized by IGNOU Regional Centre Delhi-2, Delhi on 27th April, 2018.

Faculty Development Workshop on "Introduction to Scilab" sponsored by DBT at Hansraj College, University of Delhi, Delhi, (22nd September – 23rd September, 2017).

Faculty Development Programme on "Digital Literacy: An Introduction to ICT Skills", Hansraj College, University of Delhi, Delhi, (15th September – 17th September, 2017).

Science Academies Refresher Course in "Experimental Physics", Department of Physics, Chandigarh, (25th September – 10th October, 2016).

Refresher Course in Physics, UGC-Human Resource Development Center, Jawaharlal Nehru University, New Delhi, (5th October – 30th October, 2015).

Orientation Programme-93, UGC-Academic Staff College, Jamia Millia Islamia, New Delhi (20th July – 16th August, 2010).

Workshop/Teacher Training Programme Attended

Science Academies' “Science Leadership Workshop”, Central University of Punjab, Bathinda (22nd June – 28th June, 2020)

Workshop on “The Bodhi Tree and SAFE Tools for Effective Online Teaching: A Hands On Workshop” organized by Teaching Learning Centre (ICT) at IIT Bombay funded by PMMMNMTT, MHRD, Govt. of India. (21st June, 2020)

Workshop (JNU-WETOM III) on “Online Assessment and Evaluation” organized by Jawaharlal Nehru University. (13th June – 14th June, 2020)

E-Learning Workshop on “Design, Development & Delivery of Online Course” organized online by the Special Centre for E-Learning (SCEL), JNU, New Delhi. (11th June – 12th June, 2020)

Workshop on “Effective and Efficient Online Teaching in the Age of Corona, A Hands on Workshop” organized by Teaching Learning Centre (ICT) at IIT Bombay funded by PMMMNMTT, MHRD, Govt. of India. (17th May, 2020)

Workshop on “Online Basic Training on Use of ICT in Teaching” organized by Teaching Learning Centre, Tezpur University under PMMMNMTT scheme, MHRD, Govt. of India. (22nd & 23rd April, 2020)

National Workshop on "Stress Management and Emotional Intelligence in Teaching-Learning Environment" at Guru Angad Dev Teaching Learning Centre of MHRD, SGTB Khalsa College, University of Delhi on 29th June, 2019.

National Workshop on "Advanced Excel For Teaching and Research: Data Management and Data Analysis" at Guru Angad Dev Teaching Learning Centre of MHRD, SGTB Khalsa College, University of Delhi on 23rd March, 2019.

National Workshop on "Pedagogy and ICT Tools for Assessments" at Guru Angad Dev Teaching Learning Centre of MHRD, SGTB Khalsa College, University of Delhi on 18th October, 2018.

Workshop on "Biologically Inspired Learning: Neural Networks and Artificial Intelligence" sponsored by DBT at Hansraj College, University of Delhi, Delhi, on 27th September, 2017.

Faculty Development Workshop on "Embedded System and Synthesis of Nano-materials", Hansraj College, University of Delhi, Delhi, (6th January – 7th January, 2017).

Workshop on "3D Printing" organized by Center for Science Education & Communication and Cluster Innovation Centre, University of Delhi, Delhi-110007 (28th February – 1st March, 2015).

"Partners in Learning Teacher Training Program" at ILL-CPDHE, University of Delhi, Delhi, (14th September – 25th September, 2009).

Workshop on "Experiments in Physics & Electronics" at Keshav Mahavidyalaya, University of Delhi, Delhi, (23rd July - 26th July 2008).

Conference/ Symposium/Seminar/Webinar Attended

Webinar on "Basic Documentation for Teachers" organized by IQAC, Hansraj College, University of Delhi, Delhi on 22nd June, 2020

E-international Symposium on "Synthesis and Characterization of Smart Materials and Their Potential Applications (ISSCSMPA-2020)" organized by University School of Basic and Applied Sciences, Guru Gobind Singh Indraprastha University, New Delhi-1100078. (14th June – 17th June, 2020)

Webinar on "Endofullerenes: Nano-scale test tubes for single molecules and atoms" organized by National Academy of Sciences, India (NASI) – Delhi Chapter & MHRD – Institution Innovation Council (IIC) Deen Dayal Upadhyaya College Chapter, University of Delhi, Delhi on 8th June, 2020

National Webinar on "Experimental & Computational Tools for Materials Research (ECTMR 2020)", organized by Discipline of Natural Sciences, PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur, and Department of Physics, Central University of Rajasthan. (1st June – 8th June, 2020)

Webinar on "Material Science, Technology & Society" organized by School of Physical Sciences, JNU. (8th May – 9th May, 2020)

Webinar on "Covid 19: Challenges and Road Ahead" organized by Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi, PMMMNMTT, Govt. of India, (7th May – 9th May, 2020).

Webinar on "Leadership Role in Uncertain Times" organized by Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi under PMMMNMTT, MHRD, Govt. of India on 30th April, 2020

Webinar on "Teachers and Technology: The Road Ahead" organized by Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi under PMMMNMTT, MHRD, Govt. of India on 25th April, 2020

National Conference on "Advanced Materials: Theory and Applications" at Hansraj College, University of Delhi, Delhi (26th September - 28th September, 2019).

Seminar on "Life and Works of Prof. M. N. Saha and Prof. S. N. Bose" organized by Department of Physics and Materials Science & Engineering, Jaypee Institute of Information Technology, Noida sponsored by The National Academy of Sciences, India (Delhi Chapter) on 15th September, 2018.

Seminar on "Radiation Hazards and Monitoring:- Techniques and Materials" sponsored by IQAC Hansraj College, University of Delhi, Delhi, on 10th April, 2017

Seminar cum Workshop on "Quantum Entanglement and the EPR paradox, Computer Interfaced Science Experiments using EXPEYES", Hansraj College, University of Delhi, Delhi, on 30th March, 2017

Seminar on "Technical Terminology & Science Teaching" organized by Commission for Scientific and Technical Terminology Terminology at Deen Dayal Upadhyay College, University of Delhi, Delhi, (18th September - 19th September, 2015).

Signature of Faculty Member