



MAYA VERMA

ASSOCIATE PROFESSOR
DEPARTMENT OF PHYSICS
HANSRAJ COLLEGE
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CAREER PROFILE

- Associate Professor, Hansraj College (June 2020- till date)
- Assistant Professor, Hansraj College (July 2008- June 2020)
- Assistant Professor, Deen Dayal Upadhyay College (Feb-March 2008)
- Senior Research Fellow (SRF)- CSIR ,(2007-08)
- Junior Research Fellow (JRF)- CSIR , (2005- 2007)

EDUCATIONAL QUALIFICATION

- PhD , Department of Physics and Astrophysics, University of Delhi
Thesis entitled "Dielectric and Ferroelectric Studies on Strontium Bismuth Niobate ceramics and films (2012)
- M.Sc Physics , Department of Physics and Astrophysics, University of Delhi
- B.Sc (H) Physics , Miranda House, University of Delhi

AWARDS & DISTINCTIONS

- Junior Research Fellowship (JRF- CSIR)
- Senior Research Fellowship (SRF- CSIR)
- Excellent Poster Award , first prize for the paper entitled “ Thickness effects on the structural and Optical properties of Strontium Bismuth Niobate films” at Ramada Plaza Hotel, Jeju, Korea, June 28- July 1, 2010
- 8th prize in poster presentation in the one-day seminar on “Life and works of Prof. M.N. Saha and Prof. S.N. Bose, held at Jaypee Institute of Information Technology, Noida, Uttar Pradesh on 15th September’18

PAPERS TAUGHT

- Statistical Physics
- Mechanics
- Modern Physics
- Quantum Mechanics & Atomic Physics
- Solid State & Nuclear Physics
- Mathematical Physics III
- Thermal Physics

SPECIALIZATION

Condensed Matter Physics (Material Science)

PUBLICATIONS

- “Phase evolution of strontium bismuth niobate ceramics by conventional solid-state reaction method”, **Maya Verma**, Amit Tanwar, K. Sreenivas, Journal of Thermal Analysis and Calorimetry, 135, Issue 4, 2077- 2087 (2019) [impact factor: 2.731]
- “Influence of lone pair on structural and electrical properties of Sb substituted Bismuth layered $\text{SrBi}_2\text{Nb}_2\text{O}_9$ ceramics”, **Maya Verma**, Amit Tanwar, K. Sreenivas, Materials Chemistry and Physics, 209, 159-164(2018) [impact factor: 3.408]
- “Effect of A-site substitution of strontium on dielectric and piezoelectric properties of bismuth layered $\text{CaBi}_4\text{Ti}_4\text{O}_{15}$ ceramic”, Amit Tanwar, **Maya Verma**, K. Sreenivas and Vinay Gupta, Materials Chemistry and Physics, 130, 95(2011) [impact factor: 3.408]
- “Dielectric and ferroelectric properties of $\text{SrBi}_2\text{Nb}_2\text{O}_9$ and $\text{SrBi}_{1.9}\text{La}_{0.1}\text{Nb}_2\text{O}_9$ ceramics”, **Maya Verma**, Amit Tanwar, K. Sreenivas and Vinay Gupta, Ferroelectrics, 404, 233 (2010) [impact factor: 0.669]
- “Influence of La doping on structural and dielectric properties of $\text{SrBi}_2\text{Nb}_2\text{O}_9$ ceramics”, **Maya Verma**, K. Sreenivas and Vinay Gupta, J. Appl. Phy, 105, 024511 (2009) [impact factor: 2.286]

Abstract in book proceeding:

- “Effect of excess bismuth on the dielectric and piezoelectric properties of strontium bismuth niobate ceramics” Proceedings of the national conference on multifunctional advanced materials: abstracts of invited speakers, 2013

INTERNATIONAL CONFERENCES

- Oral presentation “Effect of Antimony substitution on structural and dielectric properties of Strontium Bismuth Niobate ceramics” **Maya Verma**, V. Gupta and K. Sreenivas; 5th International Conference on Electroceramics Sydney, Australia 12 – 16 December 2011
- Poster presentation “Electrical conductivity studies on Strontium substituted bismuth layered $\text{CaBi}_4\text{Ti}_4\text{O}_{15}$ ceramic” Amit Tanwar, **Maya Verma**, K. Sreenivas and Vinay Gupta, The 7th Asian Meeting on Ferroelectricity and the 7th Asian Meeting on Electro Ceramics, June 28 -July 1, 2010 Ramada Plaza Jeju Hotel, Jeju, Korea
- Poster presentation “Thickness effects on the structural and optical properties of Strontium Bismuth Niobate films”, **Maya Verma**, K. Sreenivas and Vinay Gupta, The 7th Asian Meeting on Ferroelectricity and the 7th Asian Meeting on Electro Ceramics, June 28 -July 1, 2010 Ramada Plaza Jeju Hotel, Jeju, Korea
- Oral presentation “Electrical, ferroelectric and piezoelectric properties of La doped Strontium Bismuth Niobate ceramics” **Maya Verma**, K. Sreenivas and Vinay Gupta, The 7th Asian Meeting on Ferroelectricity and the 7th Asian Meeting on Electro Ceramics, June 28 -July 1, 2010 Ramada Plaza Jeju Hotel, Jeju, Korea
- Oral Presentation “Structural and dielectric properties of La-doped Strontium Bismuth Niobate ceramics”, **Maya Verma**, Vinay Gupta and K. Sreenivas; International conference on Advanced Materials and Applications-2007; 15-17 Nov., 2007 at Shivaji University, Kolhapur

NATIONAL CONFERENCES

- Poster presentation “Effect of silver doping in TiO₂ nanoparticles for water treatment application”, **Maya Verma**, Pratibha Tiwari and Hema Chutani, in National conference on Advanced Materials: Theory and Applications, , organised by Dept. of Physics & Electronics, Hansraj college during Sept. 26-28; 2019
- Poster presentation "Bose-Einstein Condensate: Fifth state of matter", **Maya Verma** and Divya Haridas, in One day seminar on "Life and Works of Prof. M.N. Saha and Prof. S.N. Bose" held at Jaypee Institute of Information Technology, Noida, Uttar Pradesh on 15th September'18
- Oral presentation “TiO₂ nanoparticles for water treatment application”, **Maya Verma**, in National workshop on “Nanotechnology: Emerging Frontiers & Applications, held on 30-31 January, 2017 at Shyamlal college, University of Delhi
- Poster presentation “Dielectric properties of La doped SrBi₂Nb₂O₉ ceramics”, **Maya Verma**, Vinay Gupta and K. Sreenivas; National Seminar on Electro ceramics (NSE-2007); 5-6 Nov., 2007 at G.V.M. Girls College, Sonapat.
- Poster presentation “Structural and Dielectric Studies on stoichiometric Strontium Bismuth Niobate ceramics”, **Maya Verma**, Vinay Gupta and K. Sreenivas at 14th National Seminar on Ferroelectrics and Dielectrics (NSFD-XIV), 18-21 December, 2006 at Department of Physics & Meteorology, Indian Institute of Technology, Kharagpur.

PROJECTS

- Innovation project entitled "Development of Visible Light Activated Photocatalyst for water treatment", funded by University of Delhi, 2015-16 (Amount sanctioned : Rs Five Lac only)
- DBT-Sponsored in- house minor Projects in the academic session 2016-17:
 - a. To design an off-balance Wheatstone Bridge and investigating the dependence of the bridge linearity and bridge sensitivity on circuit parameters.
 - b. To determine Specific Rotation of optically active substances.
 - c. Study of Structural Properties of using X-ray Diffraction.

CHAPTERS & BOOK REVIEW

- E- chapter “Classical Theory of Radiation” virtual learning Environment, Inst. of Lifelong learning, University of Delhi, Delhi (ISSN 2349-154X) (2017)
- Reviewer for the book on Quantum Mechanics published by the Universities Press (India) Private Limited (2017)

RESOURCE PERSON

DU –Pre-entrance summer school- 2018, University of Delhi (01-06-2018 to 16-06-2018)

CONFERENCES/ SEMINARS/ WORKSHOPS ORGANIZED

As a Coordinator

- Coordinator of webinar “ Observing the Wonder World using Fluorescence Spectroscopy and Microscopy”, organised by Dept. of Physics and Electronics under aegis of IQAC, held on 11th May 2020.
- Coordinator of National conference on Advanced Materials: Theory and Applications organised by Dept. of Physics & Electronics, Hansraj college during Sept. 26-28; 2019

As a member

- Organizing committee member in INSPIRE Programme (DST) from 12th to 16th December, 2017 held at Hansraj college, University of Delhi
- Organizing committee member in DBT sponsored workshop on “Characterization of materials by X-ray Diffraction” held on 23-24 February, 2016 at Dept. Of Physics and Electronics, Hans Raj college, University of Delhi
- Organizing committee member in DBT sponsored workshop on “Flourescence Studies of Organic Structures”, held on 26-27 September’2014 at Dept of Physics & Electronics, Hans Raj college, University of Delhi
- Organizing committee member in DBT sponsored workshop on “Functional Analysis and Troubleshooting of Electronic Devices for Biotechnology and Biomedical Applications”; 12-14 March, 2014 at Dept. Of Physics & Electronics, HansRaj college

ADMINISTRATIVE ASSIGNMENTS

2021-22

- Liaison Officer, (OBC), Hansraj College
- Convener, ECA committee
- Nodal Officer, Azadi ka Amrut Mahotsava
- Member, Students' Welfare Committee
- Member, Grievance Committee
- Member, Women's Development Committee
- Member, Admission Committee
- Convener, Department Purchase Committee
- Member, Department Administrative Committee
- Member, Department Workload & Time Table Committee
- Member, Department Infrastructure Development Committee
- Member, Department Monitoring Committee

2020-21

- Admission Convener, Sciences
- Teacher-In-Charge, Department of Physics & Electronics
- Superintendent- Practical Examinations, Department of Physics & Electronics (Odd & Even Semester)
- Convener, Administrative Committee, Department of Physics & Electronics
- Convener, Department Time Table Committee
- Member, Department Monitoring Committee
- Member, Workload Committee
- Member, Central Purchase Committee
- Member, Grievance Committee

2019-20

- Member, Department Admissions
- Member- Administrative Committee, Department of Physics & Electronics
- Member, Department Infrastructure Committee
- Member, Environment Awareness Committee

2018-19

- Convener ECA committee
- Co- convener Annual Day
- Convener, LUMEN- Physics & Electronics society
- Organized Delhi University centralized trials for creative writing (Hindi & English)
- College Staff Council Nominee (Hindi Creative Writing) for Delhi University centralized trials for creative writing, 2018-19
- Member, Environmental awareness committee
- Member, Department Purchase committee
- Member, Department Infrastructure Committee
- Organized 'College Orientation Programme, Independence Day celebration programme and Annual Day

2017-18

- Co-convener, ECA committee
- Organized Delhi University centralized ECA trials-theatre category, 2017-18
- Certificate evaluator for Delhi University centralized ECA trials - theatre category, 2017-18
- Organized 'College Orientation Programme, College Foundation Day, cultural programme for NAAC team
- Member, Annual Festival Organizing Committee
- Member, Annual Prize Distribution Committee
- Member, Canteen Committee
- Member, Department Time Table Committee
- Member, Department Infrastructure Committee

2016-17

- Dy. Coordinator, Central Evaluation centre-HRC
- Co-convener, ECA committee
- Presenter, Department NAAC presentation
- Organised Delhi University centralized ECA trials-theatre category 2016-17
- Organized the cultural events in college foundation day, street play on "Quit India", promotion of movie 'Rustom', Independence Day celebration programme, Teacher's Day Celebration, Four days event for multitalented students in collaboration with Story mirror foundation, Republic Day Celebration, cultural events on Annual Day
- Member, Canteen Committee
- Member, Department Infrastructure Committee

2015-16

- Convener, Department Purchase Committee
- In charge, Department Admissions
- Member, Academic Affair Committee
- Member, Department Infrastructure Committee
- Member, Environmental Awareness Committee

2014-15

- In charge, Department Admissions
- Convener, Student Welfare committee
- Member, Department Purchase Committee
- Member, Department Infrastructure Committee

2013-14

- Superintendent, theory Examinations, May-June 2014
- Member, Student Welfare committee
- Member, Academic Affair Committee
- Member, Department Purchase Committee
- Member, Department Infrastructure Committee

2012-13

- Member, Department Time Table Committee

2011-12

- Convener, LUMEN- Physics & Electronics Society
- Member, Student Welfare committee
- Member, Department Purchase Committee

2020-21

- One week e-Workshop on "Materials and their Characterization", organised by Department of Physics, Maharaja Agrasen University, Solan, HP from June 14-19, 2021
- One week Faculty development programme on "Systematic Literature Review and Meta - Analysis" organised by Teaching Learning Centre, Ramanujan College, University of Delhi, under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMNMTT) from 06-12 May, 2021
- Three days National Workshop on "Challenges of Teaching Physics Laboratory Courses in Online Mode" organised by Department of Physics, in association with Department of Physics & Astrophysics, University of Delhi and the National Academy of Sciences India (NASI), Delhi Chapter on 23-25 January, 2021
- Two weeks Faculty Development Programme on "Managing online classes and co-creating MOOCs 3.0" from July 25- August 10, 2020 organised by Teaching Learning Centre, Ramanujan college, University of Delhi.
- Three days National Online Experimental Workshop Simulation in Physics (NEWSP:2020) Organised by Indian Association of Physics Teachers- Asian Physics Olympiad Cell (IAPT- APHO Cell) from July 10-12, 2020.

2019-20

- One Week online Faculty Development Programme on "Open Source Tools for Research" from June 08 - June 14, 2020, organised by Teaching Learning Centre, Ramanujan college, University of Delhi
- One Week online Faculty Development Programme on "RESEARCH METHODOLOGY: TOOLS & TECHNIQUES" under Pandit Madan Mohan Malviya National Mission on Teachers and Training Scheme of MHRD, Govt. of India held from 5 th-11th June, 2020 at ARSD College, University of Delhi.
- Two weeks online workshop on "Comprehensive e-Learning to e-Training guide for Administrative Work" from May 25 - June 05, 2020, organised by Teaching Learning Centre, Ramanujan college, University of Delhi

- Online Workshop on “Smart Skills for Online Teaching”, online workshop conducted by smart shikshaa on 17th May, 2020.
- Faculty Development Programme on “e- content Development Methodology: Four Quadrant model, OERs and copyright issues”, organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi, held on 15th May, 2020.
- Faculty Development Programme on “Challenges & Opportunities before Indian Higher education due to Covid-19” organized by Guru Angad Dev Teaching Learning Centre SGTB Khalsa College, University of Delhi, held on 2nd May, 2020

2018-19

- Workshop for ”Development of Guidelines for mentoring of Schools by Higher Education Institutes (HEIs) under Rashtriya Avishkar Abhiyan” organised by Department of Education in Science and Mathematics, NCERT, NIE, New Delhi from March 18 to March 20, 2019.
- Swayam Arpit Online Course for Career Advancement Scheme (CAS) promotion on “Physics of Semiconductors and Devices” March 2019
- Two weeks Faculty development programme on “Challenges before the academia in the era of Gadgets, e-communication & A.I. from 15th December to 28th December 2018 organised by Mahatma Hansraj Faculty Development Centre, Hansraj college, University of Delhi

2017-18

- Faculty Empowerment workshop on “ Stress Management and Emotional Intelligence in Teaching-Learning Environment” held at Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi, on 21st February, 2018.
- DBT sponsored Faculty Development Workshop “Introduction to Scilab” held at Hansraj college, University of Delhi, on 22-23 September, 2017

2016-17

- Refresher course in Physics during 13th October’16 to 3rd November’16 at Centre for Professional Development in Higher Education, University of Delhi
- Faculty development workshop on “Embedded Systems and Synthesis of Nano-materials” held on January 6-7, 2017 at Dept. Of Physics & Electronics, Hansraj college, University of Delhi
- Faculty development programme on ”Advances in optoelectronics” and ”Matlab” held on 4 October, 2016 at Dept. Of Physics & Electronics, Hansraj college, University of Delhi

2015-16

- ”Capacity-Building Workshop” on e-content held on 21st June, 2016 at Institute of Lifelong Learning, University of Delhi, Delhi
- ”Third Workshop on Quantum Mechanics: Theory and Application” held on 13-14 March, 2016 at Deen Dayal Upadhyaya college, University of Delhi
- DBT sponsored workshop on ”Embedded systems” held on 15-16 January, 2016 at Dept. Of Physics and Electronics, Hans Raj college, University of Delhi
- Refresher course in Physics during 5th October’15 to 30th October’15 at Jawaharlal Nehru University, Delhi
- Faculty development program in “Research Project Management- Proposal to publication and beyond” on 19th July, 2016 at CIC-Centre for science education and communication, University of Delhi, Delhi

2014-15

- Workshop on 3D Printing, 13-14 March 2015 at Cluster Innovation Centre, University of Delhi

2013-14

- Active learning integrating hands on experiments and multimedia resources: A collaborative workshop for undergraduate Physics teachers, 07-08 October 2013 at D S Kothari centre for Research and Innovation in Science Education, Miranda House, University of Delhi

2012-13

- Orientation Programme (OR-70) from 25th June'12-21st July'12 at Centre for Professional Development in Higher Education, University of Delhi

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- Webinar on "New Initiatives in Examination and Evaluation by University of Delhi"organised by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi, held on 10th July,2021
 - National Webinar entitled "Implementation of Academic Bank of Credits" organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education on 10th July 2021.
 - Webinar on "OBE: Examination & Evaluation"organised by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi, held on 22nd June,2021
 - Webinar on " Basic Documentation for Teachers" organised in collaboration with IQAC, Hansraj College, University of Delhi, under PARAMARSH, held on 22nd June, 2020
 - Online workshop entitled" SAHAJAYOGA Meditation" organised by IQAC and Atman, Shri Ram College of Commerce, University of Delhi on June 14, 2020
 - Webinar on "Quest for Quality: Ranking and Accreditation" organized by internal quality assurance cell (IQAC), Hansraj College on May 23,2020
 - Webinar on"Role of ICC and Prevention, Prohibition and Redressal of Sexual Harassment of Workmen at Workplace" organized by internal complaints committee, Hansraj College on May 22,2020.
 - Webinar on"Emerging Trends in E-Learning: Complete Classroom and Evaluation Process using MOODLE LMS" organized by the Internal Quality Assurance Cell (IQAC) and Department of Botany, Swami Shraddhanand College, University of Delhi on May 18, 2020.
 - Webinar on"E- content : Design And Delivery" organized by ARSD College, Dhaula Kuan held on 15th May, 2020.
 - Webinar on "Leave Rules" organized by ARSD College, Dhaula Kuan held on 14th May, 2020.
 - Webinar on "Myths and truths of fitness and corrective exercises for various body deformities" organised by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi, held on 12th – 13th May, 2020
 - Webinar on "Learning to live with virus" organized by National Council for Science & Technology Communication, Department of Science and Technology, Government of India and Gujarat Council on Science and Technology, Department of Science and Technology, Government of Gujarat, held on 12th May, 2020.
 - Webinar on"Material Science, Technology & Society" organised by School of Physical Sciences, held on 8th- 9th May, 2020.

- Webinar on “Covid 19: Challenges and Road Ahead”, organised by Mahatma Hansraj Faculty Development Centre, Hansraj College held during 7th- 9th May, 2020
- Webinar on “Quality Assurance in Higher Education : Practices And Issues” organized jointly with IQAC, Hansraj College Under PARAMARSH, a UGC scheme, held during May 4th - 8 th , 2020
- Webinar on “Importance of Infrastructure and Learning Resources in HEI” organised by Keshav Mahavidyalaya & Sri Aurobindo College (Evening) University of Delhi, held on 2nd May, 2020
- Webinar on “Online Teaching and Learning Technology” organized by ARSD College, University of Delhi held on 27th April, 2020.
- One day seminar on ”Life and Works of Prof. M.N. Saha and Prof. S.N. Bose” held at Jaypee Institute of Information Technology, Noida, Uttar Pradesh on 15th September’18
- ”Indo-US colloquium on recent developments in interdisciplinary research” held on July 2, 2018 organised by Department of Chemistry, Hansraj college, University of Delhi
- Seminar cum workshop on ”Quantum Entanglement and the EPR paradox” and ”Computer Interfaced Science Experiments using EXPEYES” held on March 30, 2017 at Dept. Of Physics and Electronics, Hans Raj college, University of Delhi
- ”National seminar on e-Learning and MOOCs in Higher Education” held on March 29, 2017 at SGTB Khalsa college
- National conference on ”Combating industrial pollution for sustainable environment-A fusion of industrial and scientific efforts” held on September 22-23 , 2016 at Gargi college, University of Delhi
- DBT-sponsored seminar on ”Physics of Stars” held on 1st April, 2016 at Dept. Of Physics & Electronics, Hansraj college, University of Delhi
- National seminar on ”Role of Analytical sciences in sustainable development” held on 4-5 March, 2016 at Hansraj college, University of Delhi
- National conference on ”Synthesis, Characterization and Application of Advanced Nanomaterials” held on 17-19 January, 2014 at Hindustan College of Science & Technology, Mathura, U.P.
- Indo- European conference on quality assurance in Higher Education, 6-7 May, 2010 at Conference Centre, University of Delhi
- National Seminar on Multifunctional Nanomaterials Nanostructures and Applications (MNNA 2006) , 22-23 December 2006 at Department of Physics and Astrophysics, University of Delhi

MEMBERSHIP/ FELLOWSHIP OF LEARNED BODIES

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- Life member of the Indian Association of Physics Teachers (IAPT)
 - Life member of the Indian society of Analytical Scientists (ISAS) [LMT-2016/12]