

RESUME

Title (Ms/Mr/Dr/Prof)	Dr.	FirstName	VARSHA	LastName	.	Photograph
Designation	ASSISTANT PROFESSOR					
Department	PHYSICS					
Address (Official)	1 st floor, Science block, Department of Physics, Kalindi College, University of Delhi-110008, India.					
Phone No.						
Email	msvarsha@kalindi.du.ac.in					
Education						
Subject	Institution		Year		Details	
Ph.D.	UNIVERSITY OF DELHI		2024		Response of quantum heterostructures to external fields	
GATE	IIT KANPUR		DEC,2015			
NET	CSIR		Dec,2014			
M.Sc	UNIVERSITY OF DELHI		2013-2015			
B.Sc(H) PHYSICS	UNIVERSITY OF DELHI		2010-2013			
CareerProfile						
Organisation/Institution	Designation		Duration		Role	
Department of physics, Kalindi college	ASSISTANT PROFESSOR(AD-HOC)		~7.5YEAR (since 20/07/2017 to 24/02/2024)		Teaching undergraduate students	
Department of physics, Kalindi college	ASSISTANT PROFESSOR(Permanent)		From 24/02/2024 to till date		Teaching and research with undergraduate students	
Research Interests/Specialization						
Quantum Heterostructures, Nanomaterials, Optical properties, External perturbation Behavior of quantum heterostructures, Condensed Matter Physics						
Administrative Assignments / Contribution to corporate life						

- Convenor, Website committee of Physics department 2024-25
- Deputy-Superintendent of Semester Examination Committee, 2024-25
- Co-Convenor for Admission Committee for Humanities 2024-25
- Co-Convenor for Student feedback & student satisfaction survey for science students 2024-25
- Member, Student Progression Committee, Physics Department , 2024-25
- Convenor for Banner, Memento and felicitation Committee for the National seminar on topic : “Sustainable Startup: Integrating Tradition Knowledge with Innovation” IBSD Committee in collaboration with IQAC Kalindi College, University of Delhi 2024-25
- Member, AQAR Committee, Physics Department , 2024-25
- Technical member, Prize Committee, Annual Day 2024-25, 2025-26
- Co-Convenor PHYSITHON Society 2022 to 2024
- Co-Convenor, Poster/Banner committee for Alumni meet 2023
- Member timetable uploading committee of the department 2024-25,2025-26
- Member, Lehren, State Property Committee 2025-26
- Member, ECA committee, 2024-25, 2025-26
- Member, Committee for Consultancy & Internship, 2024-25
- Member, Stage decoration and rangoli committee for Oath Ceremony and Fresher’s welcome 2022-23
- Co-Convenor, Rangoli and Lamp lighting Committee for Orientation Program 2023-24
- Member, AQAR Core Committee, 2022
- Member, Creative writing competition during LEHREN, 2023
- Member, Rangoli Club, 2021,2022, 2023
- Member, Disaster Management Cell, 2022
- Member, Seating Arrangement and Shamiyana Committee for Oath Ceremony and Fresher’s Welcome 2023
- Member, Yoga and Aerobic Club , 2017-2020
- Member, PHYSICOM SOCIETY from 2017-2021
- Member, PHYSITHON Society since 2019
- Member, Fresher’s committee, Refreshment distribution, stage decoration since 2017
- Member, Annual Report Committee 2020, 2021,2022,2023
- Member, Swachhta Abhiyan, Science block, first floor since 2017
- Member , Stage Decoration Committee , LAHREN 2018,2019,2020
- Member , Placement Cell Committee 2017,2021,2022
- Member, Website Committee 2021
- Member, Academic Audit Committee, AQAR since 2017
- Member, Entrepreneurship Cell, Vyavsaay 2020
- Member, CRITERION II -TEACHING-LEARNING AND EVALUATION COMMITTEE since 2017

Teaching Experiences (Subject/Courses taught)
Total Teaching Experience~9year THEORY Nanomaterials and it's Application ➤ B.Sc. (H) Physics IIInd year(CBCS) Waves and optics ➤ Generic Physics-II(CBCS) Solid State Physics ➤ Generic Physics-II(UGCF-NEP) Digital, Analog and Instrumentation ➤ Generic Physics-I(CBCS) Analog Systems and Application ➤ B.Sc. (H) Physics IIInd year(CBCS) Mathematical Physics-III ➤ B.Sc. (H) Physics IIInd year(CBCS,UGCF-NEP) Advanced Mathematical Physics-I ➤ B.Sc. (H) Physics IIInd year(UGCF-NEP) Mathematical Physics-II ➤ B.Sc. (H) Physics Ist year(UGCF-NEP) Skill Enhancement paper ➤ B.Sc. (H) IIInd year,(NUMERICAL ANALYSIS) ➤ B.Sc. (PS) IIIrd year,(NUMERICAL ANALYSIS) ➤ B.Sc. (H) Physics, IIInd Year(ELECTRICAL CIRCUITS AND NETWORK SKILLS) ➤ B.Sc. (PS) IIInd year,(BASIC INSTRUMENTATION SKILLS) ➤ B.Sc. (PS) IIIrd year,(ELECTRICAL CIRCUITS AND NETWORK SKILLS) ➤ B.Sc. IIIrd year, (DOCUMENT PREPARATION & PRESENTATION SOFTWARE)
Professional Skills
Programming in MATLAB, COMSOL MULTIPHYSICS, C/C++, Scilab, Python, MS office, Google Forms, Google Meet, Google classroom, Zoom etc.
Research Guidance
1. Dissertation on the topic “Comparative study of donor and acceptor impurities effect on excitonic states in spherical GaAs quantum dots” to Ms. Suruchi Singh, student of B.Sc. (H) Physics, IVth year at Kalindi College (University of Delhi) 2025-26. 2. Research project guidance on title “Theoretical and Experimental study of semiconductor/metal quantum dots for Energy Harvesting Applications” to students of B.Sc. (H) Physics (Anjali, Ziya, Gaurangi, Yashasvi, Drishti, Mahi) and B.Sc. Physical Science (Harshita, Aarti, Muskan, Poonam, Sneha), 2nd year at Kalindi College (University of Delhi) 2025-26. 3. Project Guidance to students of B.Sc. (H) (Sweety, Anshu, Sumedha, Mansi Mann) and B.Sc Physical Science (Devika, Lakita, Manjaree, Shubhangi) students at Kalindi College(University of Delhi) in 2019.
Publication (Peer Reviewed/Indexed Journals)

Year of Publication	Title	Journal (Name of the journal. Vol Issue ISSN)	Co-Author
2020	Study of Optical properties of Wannier-Mott Exciton in Spherical Quantum Dot in Kratzer Potential	AIP Conference Proceedings, 2220, 020154(2020) ISBN:978-0-7354-1976-6, ISSN:0094243X Impact factor: 0.40 Doi: https://doi.org/10.1063/5.0002124	Varsha , Prof. Poonam Silotia, Dr. Vinod Prasad
2021	Wetting Layer and Size Effects on the Nonlinear Optical Properties of Semi Oblate and Prolate SiGe/Si Quantum Dots	Current Applied Physics, 25, 1-11(2021), ISSN:15671739 Impact factor: 2.856 Doi: https://doi.org/10.1016/j.caa.2021.02.004	M. Kria, Varsha , M. Farkous, V. Prasad, F. Dujardin, L. M. Perez, D. Laroze, E. Feddi
2021	Quantum Confined Stark Effect on the Linear and Nonlinear Optical Properties of SiGe/Si Semi Oblate and Prolate Quantum Dots Grown in Si Wetting Layer	Nanomaterials, 11(6), 1513(2021) ISSN: 20794991 Impact factor: 5.719 Doi: https://doi.org/10.3390/nano11061513	Varsha ; M. Kria, J.E. Hamdaoui, L.M. Pérez, V. Prasad, M. El-Yadri, D. Laroze, E. Feddi
2022	Polaronic corrections on magnetisation and thermodynamic properties of electron-electron in 2D systems with Rashba spin-orbit coupling	Journal of Magnetism and Magnetic Materials, 551, 169042 (2022) ISSN: 3048853 Impact factor 2.993 Doi: https://doi.org/10.1016/j.jmmm.2022.169042	K. Lakaal, M. Kria, J. E. Hamdaoui, Varsha ; V. Prasad, V. V. Nautiyal, M. El-Yadri, L.M. Pérez, D. Laroze, E. Feddi
2022	Pressure- and temperature-dependent EIT studies in a parabolic quantum dot coupled with excitonic effects in a static magnetic field	Pramana- Journal of Physics, 96, 81(2022), ISSN : 3044289 Impact Factor: 2.219 DOI: https://doi.org/10.1007/s1203-022-02326-x	Monica Gambhir, Varsha and Vinod Prasad
2022	Hydrogenic impurity effect on optical properties of Wannier-Mott exciton confined in a spherical quantum dot with Kratzer potential under magnetic field	Revista Mexicana de Física, 68(5), 050504 (2022), ISSN : 0035001X Impact Factor: 1.702 DOI: https://doi.org/10.31349/RevMexFis.68.050504	Varsha , Rajesh Giri, Monika Arora, Vinod Prasad

2022	Rashba effect on linear and nonlinear optical properties of a cylindrical core/shell heterojunction quantum dot	Frontiers in Physics- Optics and Photonics, 10, 942758 (2022). ISSN : 2296424X Impact Factor: 3.718 DOI: https://doi.org/10.3389/fphy.2022.942758	M. Kria, Vijit V. Nautiyal, K. Lakaal, J. El Hamdaoui, L. M. Perez ', Varsha , D. Laroze, V. Prasad, G. Long, E. Feddi
2022	Lattice deformation and potential effects on linear and nonlinear optical properties of doped SiGe quantum dot encapsulated in Si matrix	The European Physical JournalPlus, 137, 1340(2022). ISSN : 21905444 Impact Factor: 3.758 DOI: 10.1140/epjp/s13360-022-03530-9	Varsha , K. Lakaal, M. Kria, J. El Hamdaoui, V. Prasad, E. Feddi, D. Laroze, L. M. Pérez, M. E. Mora Ramos
2023	Anomalous Stark effect and optical properties of exciton in a quantum dot with linear potential under ionized donor hydrogenic impurity	Current Applied Physics, 48, 17-28(2023), ISSN:15671739 Impact factor: 2.856 Doi: https://doi.org/10.1016/j.cas.2023.01.004	Varsha , Monika Arora, Monica Gambhir, Vinod Prasad
2023	Effect of electric and magnetic field on thermal property of two dimensional harmonic oscillator	Results in Physics, 45, 106225(2023) ISSN: 22113797 Impact factor: 4.565 DOI: https://doi.org/10.1016/j.rin.2023.106225	Monika Arora, Rajesh Giri, Varsha , Kirtee Kumar, Chanchal Yadav, Bhavna Vidhani, Monica Gambhir, Vinod Prasad
2023	Optical properties of donor impurity in Yukawa like potential: Application to SiGe/Si and Si/SiGe	Physica Scripta, 98, 055914 (2023) ISSN: 14024896 Impact factor: 3.081 DOI: 10.1088/1402-4896/acc7d5	Varsha , M. Kria, Vijit V. Nautiyal, K. Lakaal, D. Laroze, L.M. Pérez, V. Prasad, M. El-Yadri, and E. Feddi
2023	Enhancement of persistent currents and magnetic fields in a two dimensional quantum ring	Scientific Reports, 13, 15486 (2023) ISSN: 20452322 Impact factor: 4.6 DOI: 10.1038/s41598-023-42417-2	Vinod Prasad, Monika Arora, Varsha

2025	Investigation of electromagnetic-induced transparency in GaAs quantum dot in presence of Morse potential	Physica Status Solidi B, 262(11), 2500204 (2025) ISSN: 15213951 Impact factor: 1.8	Varsha , Monica Gambhir, Vinod Prasad
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		DOI: 10.1002/pssb.2500204	
2026	Role of Fe Incorporation in Modulating the Structural, Optical, and Functional Behavior of ZnO-Thin Films Using Green Synthesis	Chemistry Select, 11(12), e00014, (2026) ISSN: 2365-6549 Impact Factor: 2 DOI: 10.1002/slct.202600014	Ishu Bhadana, V. Bhasker Raj, Abhishek Kumar, Varsha, Savita Sharma
2026	Impurity and confinement effects on excitonic states in GaAs quantum dots: optical and transition properties	The European Physical Journal B, 99,71 (2026). ISSN: 1434-6036 Impact Factor: 1.7DOI: 10.1140/epjb/s10051-026-01182-7	Suruchi Singh, Kapil Kumar, V. Bhasker Raj, Vinod Prasad, Savita Sharma, and Varsha
2026	Semiconductors -Book chapter Title of Book: Properties and Applications of Advanced Materials	WILEY-VCH GmbH, First edition (2026). ISBN: 978-3-527-35573-0 DOI: 10.1002/9783527854165.ch1	Vinod Prasad, Poonam Silotia, and Varsha
Seminar/Workshop/Conferences Presentation/Organisation			

Workshop

1. Participated in the National seminar on “Integrating E-content in Teaching Learning Processes: Strategies and Best Practices” held on 20 February 2026 organised by the E- content development committee, Kalindi College.
2. Participated in the capacity building workshop organised by the internal quality assurance cell (IQAC), Kalindi College, University of Delhi on the theme “Using AI responsibly in teaching and research: Plagiarism and Turnitin insights” is held on 4 February 2026 at Kalindi College.
3. Participated in the capacity building workshop organised by the internal quality assurance cell (IQAC), Kalindi College, University of Delhi on the theme “Academic Integrity and Plagiarism Management: Hands- on Training on Turnitin” is held on 28 January 2026 at Kalindi College.
4. Coordinator for summer internship “NanoXplore- 2026: Bridging theory and practice in Nanomaterials” held in hybrid mode from 10 June to 10 July 2026, organized by Department of Physics, Kalindi College.
5. Attended 2-Days workshop on “Advanced and Functional Materials for Energy Application (WAFME-2026)” from 24th to 25th April, 2026 at National Physical Laboratory (NPL, New Delhi).
6. Coordinator of National Artificial Intelligence Workshop organized by the Physithon Society, Kalindi College, on February 6, 2026.
7. Coordinator of Health and Wellness Workshop “Experience of Self-Discovery & Transformation” organized by Kalindi College Alumni Association and Alumni Committee on 18th September, 2025.
8. Coordinator of National Artificial Intelligence Workshop organized by the Physithon Society, Kalindi College, on February 6, 2026.
9. Convenor for summer internship “NanoXplore- 2025: Bridging theory and practice in Nanomaterials” held in hybrid mode from 8 June to 8 July 2025, organized by Department of Physics, Kalindi College.
10. Attended Inter-College workshop on “Indoor air pollution and Smoking” organized by Anti-tobacco committee, Kalindi college on 25/02/2025.
11. Participated in National workshop on **“MATLAB and It’s Applications” organized by Rajasthan Technical University, Kota and Sri Balaji College of Engineering and Technology** held from 04/01/2021- 08/01/2021.
12. Participated in National workshop on “Challenges of Teaching Physics Laboratory Courses in Online Mode” organized by Kalindi College, University of Delhi with National Academy of Sciences(NASI), from 23rd Jan 2021 to 25th Jan 2021.
13. Member of organizing committee of National workshop **“QUANTUM PHYSICS: AN INSIGHT”** held on 25-26 Oct, 2017, organized by **NASI-DELHI CHAPTER and KALINDI COLLEGE.**
14. Organizer and Trainer of **“SKILL ENHANCEMENT WORKSHOP FOR LABORATORY STAFF”** held on 13-14 March, 2018, organized by Internal Quality Assurance Cell & Science Departments at **KALINDI COLLEGE.**
15. Participated in **“SUPERSTRUCTURE & R-MATRIX CODES”**, organized by **THE OHIO STATE UNIVERSITY, USA**, held on feb 10-march 5, 2014.
16. Attended 3 days workshop on **“Computational Physics in Applied Research”** organized by Department of Applied Physics, Gautam Buddha University from 25-27th July 2019.
17. Participated in two-week online workshop on “Comprehensive e-Learning to e-training guide for administrative work” organized by Teaching learning centre, Ramanujan College, University of Delhi, sponsored by MHRD, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from 25th May, 2020 to 5th June, 2020.
18. Member, Organizing Committee of Online National Workshop on “Challenges of Teaching Physics Laboratory Courses in Online Mode” organized by Department of Physics under the aegis of IQAC Kalindi College in Association with Department of Physics and Astrophysics, University of Delhi and The National Academy of Sciences (NASI), Delhi Chapter from 23rd -25th Jan, 2021.
19. Member, Organizing Committee of Two-day online workshop on “Skill Enhancement by ICT Learning in the Period of Online Knowledge Exchange” from 9th -10th Dec, 2020 organized by Department of Physics, IQAC, Kalindi College.

20. Member, Organizing Committee of Two-day National workshop on “**Fascinating Science and Indian Contributions**” from 28th - 29th Oct, 2022 organized by the Department of Physics, Kalindi College under the aegis of the National Academy of Sciences (NASI), Delhi Chapter in collaboration with Indraprastha Vigyan Bharati (VIBHA) and SHAKTI.
21. Event coordinator for a workshop on “Data Visualization with TABLEAU” on 27th March 2023 organized by Physithon-The Physics Society in collaboration with Kryptus-The Placement Cell of Kalindi college.

Faculty Development Programme/Training Programme/Refresher Course

22. Attended Two-week Training Program/Faculty Development Program on High Performance Computing and its Applications in Materials Science (HPC-AMS) organized by Department of Computer Science & Engineering in association with Department of Applied Physics, Delhi Technological University, Delhi during from 6th to 17th October, 2025 at Delhi Technological University.
23. Attended Faculty Induction Program (FIP-6) organized by CPDHE UGC-MMTTC, University of Delhi organized by Centre for Professional Development in Higher Education (CPDHE), UGC - Malaviya Mission Teacher Training Centre (MMTTC), University of Delhi from 23/07/2024 to 20/08/2024.
24. Attended online training programme on “NEP 2020 Orientation & Sensitization Programme” under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) organized by Centre for Professional Development in Higher Education (CPDHE), UGC - Malaviya Mission Teacher Training Centre (MMTTC), University of Delhi from 08/10/24 to 17/10/24.
25. Attended FDP on “Healthcare and Med Tech: Innovations, Challenges, and Future Directions” organized by Delhi Technological University with AICTE Training and Learning (ATAL) Academy from 09/12/2024 to 14/12/2024.
26. Attended two-week refresher course on ICT in Academics and Research organized by Mahatma Hansraj-Malaviya Mission Teacher Training Centre (MMTTC), Hansraj College, University of Delhi from 16/12/2024 to 30/12/2024.
27. Attended two-weeks online training programme on “NEP 2020 Orientation & Sensitization Programme” under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) online organized by Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi from 16/12/2023 to 30/12/2023
28. Participated in “**INTRODUCTION TO SCILAB**” organized by Department of Physics, HANSRAJ COLLEGE, UNIVERSITY OF DELHI held on 22-23 sept. 2017, sponsored by DBT
29. Participated in “**APPLIED PHYSICS AND EMBEDDED SYSTEMS DESIGN**” held on 14-15th dec, 2017 at RAJDHANI COLLEGE, UNIVERSITY OF DELHI.
30. Participated in one week FDP on “**Recent Trends in Material Science and Engineering**” organized by **IEEE EDS Delhi Chapter and Department of Applied Physics, DTU** on 17th -21st September, 2018.
31. Attended one-week faculty development programme on “Recent advances in science & technology” organized by RPS group of institutions, Mahendergarh, Haryana (NCR) from 21st - 27th May, 2020.
32. Participated in one week FDP on “राजभाषा हिन्दी का व्याह ारक प्रयोग”, organized by department of Hindi in collaboration with IQAC and Research committee of Kalindi College, University of Delhi from 22nd – 28th June 2023.
33. Participated in Two Week (Online) Training Programme on “**NEP 2020 Orientation & Sensitization Programme**” organized by Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi on 15th -30th December, 2023.

National Conference/ Seminar/ Presentation

1. Participated in seminar organized under auspice of the innovation project “TO DEVICE A COST EFFECTIVE SET UP FOR CELL IDENTIFICATION, CHARACTERISATION AND SEPARATION”, organized by Gargi college, University of Delhi, held on 12th April 2013.
2. Poster competition in National seminar organized by Venkiteshwar College, University of Delhi, 2012 and at Gargi College, University of Delhi, 2013.
3. Participated in CSIR SPONSORED NATIONAL CONFERENCE ON CURRENT AND FUTURE PERSPECTIVES IN NANOTECHNOLOGY : “NANOWORLD-2018” held on April 12-13, 2018, organized by Department of Physics, Shivaji College, University of Delhi.
4. Participated in the National Conclave on “BIODIVERSITY FOR EVERYONE’S LIFE” organized by Miranda House College and IBSD Manipur on 31st august, 2018.
5. Participated in a One-day Seminar on “Life and Works of Prof. M N Saha and Prof. S. N. Bose” organized by PMSE department, IIIT, Noida on 15th September, 2018.
6. Attended National seminar on “Nuclear, Particle & Accelerator Physics” Jointly organized by Department of Physics, Kalindi College, University of Delhi and The National Academy of Sciences(NASI), India-Delhi Chapter on 6th Nov. 2019.
7. Participated in National seminar on “Exploring Physics with Experts!!” organized by Kalindi College, University of Delhi with National Academy of Sciences(NASI) on 10/02/2021.
8. Participated in an “Online Lecture Series” organized by Indian Association of Physics Teachers(IAPT)Regional Council and Delhi State Science Teacher's Forum, on 01/08/2020.
9. Participated in National Conference on “Characterization techniques for smart Materials” organized by Department of Physics, College of Basic Sciences and Humanities, CCS Haryana

Agricultural University from 15/01/2021-16/01/2021.

10. Participated in National seminar on "Introduction to COMSOL Multiphysics" organized by Deshbandhu College, University of Delhi on 25/03/2021.

Organising seminars/ conferences/workshops, other college/university activities

1. Convenor for the Online Training Programme on 'NEP Orientation and Sensitization Programme' organized by Kalindi College in collaboration with Mahatma Hansraj Malaviya Mission Teacher Training Centre, Hansraj College, University of Delhi from 03/03/2025 to 11/03/2025.
2. Mentor for the training program on "Sustainability Studies" under Honeywell Women Empowerment Program organized by Delhi University Computer Centre, University of Delhi in collaboration with ICT Academy from 17/02/2025 to 06/03/2025.
3. राष्ट्रीय विज्ञान अकादमी, भारत (NASI) द्वारा प्रायोजित परियोजना "विज्ञान और समाज कार्यक्रम के अंतर्गत (DSC2)" ग्रामीण क्षेत्रों में महिलाएं बाल स्वास्थ्य और शिक्षा का कार्यक्रम कायदशा के लिए कायदश समन्वयक organized by Department of Physics, Kalindi College, under the aegis of The National Academy of Sciences India, (NASI) - Delhi Chapter on 10/02/2025.
4. Program Coordinator in National Webinar-on "Role of Women Scientists towards Science and Society: A Webinar Series Part- II" under Science and Society Programme, organized by Department of Physics, Kalindi College, under the aegis of The National Academy of Sciences India, (NASI) - Delhi Chapter on 07/03/2025.
5. Program Coordinator in National Webinar-Part I on "Role of Women Scientists towards Science and Society: A Webinar Series" under Science and Society Programme organized by Department of Physics, Kalindi College, under the aegis of The National Academy of Sciences India, (NASI) - Delhi Chapter on 25th January, 2025.
6. Program Coordinator for National Seminar on "Contribution of contemporary science in advancement of society" organized by Department of Physics, Kalindi College, under the aegis of The National Academy of Sciences India, (NASI) - Delhi Chapter on 21/10/2024.
7. Member, Organizing Committee of National Seminar, "Exploring Physics with Experts!!" organized by Department of Physics, Kalindi College in association with National Academy of Sciences (NASI), Delhi Chapter on 10th Feb, 2021.
8. Member, Organizing Committee of National Webinar series, "Omnipresent Physics: An Experiential Approach" organized by the Department of Physics, Kalindi College in association with National Academy of Sciences (NASI), Delhi Chapter on 19th Oct, 20th Oct, 22nd Oct, and 1st Nov, 2022.
9. Co-Convener for the national student seminar on "Recent advances in Physics:- Exploring the possibilities" from 19th-20th April, 2023 organized by Physithon-The Physics Society, Kalindi College .
10. Co-Convener for the national seminar on "Energy" on 27th April, 2023 organized by Physithon-The Physics Society, Kalindi College.
11. Co-Convener for the Inter-college event on G20 theme "Resonance" on 20th Oct, 2023 organized by Physithon-The Physics Society, Kalindi College.

Inter-National Conference/ Seminar/ Presentation

1. Presented an oral talk on "Generation and Enhancement of Currents and Magnetic Fields in a Two Dimensional Quantum Ring Using Short Electromagnetic Pulses" at **4th International Conference on Materials Science & Nanotechnology** organized by Yuktan Technologies in Valencia, Spain (in hybrid mode) from 23rd – 27th Oct, 2023.
2. Presented a paper entitled as "**Persistent Current and Magnetic Field in a 2-D Quantum Ring**" in International Conference on "**Recent Advances in Functional Materials (RAFM-2022)**". Organised by Department of Physics, IQAC and Star College Scheme (GoI), ARSD College University of Delhi, held on 14-16 March, 2022.
3. Presented a poster on the topic "**Excitonic Transitions in a spherical Quantum dot modified by Kratzer Potential in magnetic Field**" at "**International Conference on Physics, Society and Technology (ICPST-2019)**" organized by Deshbandhu College and Department of Physics and Astrophysics from 17-19th January , 2019.

4. Participated in “**3rd International Conference on Condensed Matter & Applied Physics, ICC-2019**”, organized by Department of Physics, Govt. Engineering College, Bikaner and presented posters titled (i) **Study of optical properties of Wannier-Mott exciton in spherical quantum dot in Kratzer potential in magnetic field** from 14th -15th Oct. 2019.

Condensed Course

Participated in the course on “ATOMIC AND MOLECULAR RADIATION PHYSICS: ASTRONOMY TO BIOMEDICINE”, organized by THE OHIO STATE UNIVERSITY, USA, held on 10th Feb- 5th March, 2014.

Webinar

1. Participated in National Webinar-Part I on “Role of Women Scientists towards Science and Society: A Webinar Series” under Science and Society Programme organized by Department of Physics, Kalindi College, under the aegis of The National Academy of Sciences India, (NASI) - Delhi Chapter on 25/01/2025.
2. Participated in National Webinar-Part II on “Role of Women Scientists towards Science and Society: A Webinar Series” under Science and Society Programme organized by Department of Physics, Kalindi College, under the aegis of The National Academy of Sciences India, (NASI) - Delhi Chapter on 07/03/2025.
3. Attended national webinar on “How to Publish Scholarly Books with Taylor and Francis” Organised by Swami Shraddhanad College held on 29/11/2021, at Online.
4. Attended Webinar on “How to avoid predatory publishing? What researchers can do” organized by Research Committee under the aegis of IQAC, Kalindi College, held on July 24, 2021
5. Attended Webinar on “E-Content Development using Basic Tools”, organized by E-Content Development Committee, Kalindi College, University of Delhi on 27th September, 2021.
6. Attended international webinar on “Introduction to MATLAB”. Organised by Department of Mathematics, JSSATE Noida held on 17/09/2021, at Online.
7. Attended National Webinar on “Fight Against Tobacco” organized by the Anti-Tobacco Committee in collaboration with IQAC, Kalindi College, University of Delhi, on 16th October, 2021.
8. Attended webinar on “Intellectual Property Rights in Academics” organized by Research Committee in Collaboration with IQAC, Kalindi College on September 30, 2021
9. Attended a Webinar titled “Being Happy by Choice not Chance in COVID Times” organized by Kalindi College, University of Delhi on 1st May, 2020.
10. Attended a webinar titled “Conserve Water: Need of Future Generation” organized by ARSD College, University of Delhi on 3rd May, 2020.
11. Attended a Webinar titled “Search, Research and Publication Ethics” organized by Kalindi College, University of Delhi on 4th May, 2020.
12. Attended a Webinar titled “Understanding the Coronavirus: Some Good News” organized by Kalindi College, University of Delhi on 5th May, 2020.
13. Attended a National Webinar titled “Higher Education in India after COVID-19” organized by ARSD College, University of Delhi on 7th May, 2020.
14. Attended a National Webinar on “What is light: Evolution of Quantum Theory” organized by Kalindi College, University of Delhi on 12th May, 2020.
15. Attended a National Webinar on “Science, Society and Exponential Change: Reimagining the Future” organized by Kalindi College, University of Delhi on 13th May, 2020.
16. Organized a National Webinar on “An introduction to Measurement of light” organized by Kalindi College, University of Delhi on 13th May, 2020.
17. Attended a National Webinar on “Emerging out a Winner in Lockdown” organized by Kalindi College, University of Delhi on 14th May, 2020.
18. Attended a Webinar titled “Virtual Symposium on Emerging Areas of Photonics to Celebrate International Day of Light” organized by The National Academy of Sciences India(NASI) -Delhi Chapter on 16th May, 2020.
19. Attended a national webinar on “Research Methodology: An Overview” organized by ARSD College, University of Delhi on 12th May, 2020.

20. Attended a National Webinar on “Mindfulness & Stress Management: Living in the Times of COVID-19” organized by Department of Political Science, Kalindi College, University of Delhi on 15th May, 2020. 21. Attended webinar on “Narratives in Lockdown: A psychological perspective” organized by Department of Geography, Kalindi College, University of Delhi on 18th May, 2020. 22. Participated in webinar on “Basics of planning your research article writing” organized by Ambedkar University, Delhi, on 29th June, 2020.
Awards & Distinctions
- Awarded CSIR-LS (Lectureship) Dec 2014 Examinations organized by Council of Scientific and Industrial Research, India. - Awarded CSIR-LS (Lectureship) June 2015 Examinations organized by Council of Scientific and Industrial Research, India. - Qualified GATE– 2015 Examination, organized by IIT KANPUR. - Qualified GATE– 2016 Examination, organized by IISC BANGLORE.
Public Service/ University Service/ Consulting Activity
<i>Internal examiner of computer programming and Numerical Analysis lab Dec 2017</i> <i>External Examiner of Numerical technique lab Dec 2017</i> <i>External examiner of GE MECHANICS lab, April 2018</i> <i>External Examiner of Quantum Physics Lab Dec 2018</i> <i>External Examiner of Thermal and Statistical Mechanics lab Dec 2018</i> <i>External Examiner of Statistical Mechanics lab April 2019</i> <i>External Examiner of Statistical Mechanics lab April 2022</i> <i>External Examiner of Solid State Physics lab April 2022</i> <i>External examiner for Waves and Optics lab Dec 2022</i> <i>External examiner for Solid State Physics lab Dec 2022</i> <i>External examiner for Advanced Mathematical Physics-I lab Dec 2022</i> <i>External Examiner of Quantum Physics Lab Dec 2023</i> <i>External Examiner of Introduction to Electronics Lab Dec 2023</i> <i>Practical examination paper DSC- Mechanics Lab 2024</i> <i>Head Examiner-II for Semester - III for the Undergraduate NEP : UGCF-2022 & CBCS-LOCF Semester-I/III/V (Repeat) Examination Dec./Jan-2024 for Regular students for the Academic Session 2024-25. November 2024</i> <i>Head Examiner-II for Semester - III for the Undergraduate GE paper NEP : UGCF-2022 & CBCS-LOCF Semester-I/III/V (Repeat) Examination Dec-2025 for Regular students for the Academic Session 2025-26. November 2024</i> <i>Internal examiner of Electricity and Magnetism Lab May 2026.</i> <u>Evaluation of Answer Scripts</u> - For exam Dec-2017, 2018,2019,2020,2021,2022 for the Waves and Optics paper - For exam May-2018 for the Analog System and Application Paper - For exam Dec-2018,2019 for the Digital, Analog and Instrumentation Paper - For exam May-2020,2022 for Mathematical Physics-III Paper - For exam Dec-2023,24,25 for Mathematical Physics-III Paper - For exam May-2026 for Mathematical Physics-II Paper - For exam May-2026 for Advanced Mathematical Physics-I
Professional Societies Memberships
Life time Member of Indian Association of Physics Teachers(IAPT). Life time Member of Vijnana Bharati(VIBHA).
Projects(MajorGrants/ Collaborations)

- I am one of the Principal investigator for the undergraduate project funded by Kalindi College, on Topic “**Theoretical and Experimental study of semiconductor/metal quantum dots for Energy Harvesting Applications**” to students of B.Sc. (H) Physics and B.Sc. Physical Science in the academic year 2025-26.

Principal Investigators:

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|---|--|
| 1. Dr. Varsha (Assistant Professor) | 2. Dr. Savita Sharma (Assistant Professor) |
| 3. Dr. V. Bhasker Raj (Assistant Professor) | 4. Mr. Kapil Kumar (Assistant Professor) |

Department of Physics, Kalindi College.

Students Involved: 6 students from B.Sc. (H) Physics (Anjali, Ziya, Gaurangi, Yashasvi, Drishti, Mahi) and 5 students from B.Sc. Physical Science (Harshita, Aarti, Muskan, Poonam, Sneha), 2nd year at Kalindi College were involved in the project.

Grants: Rs.17800 out of which Rs. 17600 were utilized.

- I am one of the Principal investigator for the undergraduate project funded by Kalindi College, on Topic “**Investigation of Mechanics Problems through Computer Simulation Using SCILAB**” in the academic year 2019-2020.

Title of the projects (2019-20): (1) Investigation of Mechanics Problems through Computer Simulation using Scilab

Principal Investigators:

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|---|---|
| 1. Dr. Monika Bassi (Associate Professor) | 2. Dr. Sudha Gulati (Associate Professor) |
| 3. Dr. Rashmi Menon (Assistant Professor) | 4. Ms. Varsha (Assistant Professor) |
| 5. Dr. Majhar Ali (Assistant Professor) | |

Department of Physics, Kalindi College.

Students Involved: 8 students from first year (4 from B.Sc.(H) Physics{Sumedha, Mansi, Anshu, and Sweety} and 4 from B.Sc. Physical Science{Manjaree, Shubhangi, Devika, and Latika}) were involved in the project.

- **Grants:** Rs. 5000 was allotted but no grant was used and the amount was refunded.
- I did an undergraduate innovation project funded by Delhi University and the topic was “**To device a cost effective setup for cell identification, characterisation and separation using lasers**” in year 2012-2013.**Project Investigator:** 1. Dr. Neelam Sachdeva 2. Dr. Alka Garg 3. Dr. Nisha Gupta **Mentor:-** Prof. A.K. Singh

OtherDetails

1. Judged the Intra-college Mehndi competition at Kalindi college on 19/02/2025 with theme “Women Empowerment” organized by ECA under the aegis Viksit Bharat.
2. Judged the Inter-college event for western dance as internal judge in college annual fest Lehren 2025, on 03/04/2025 organized by Kalindi College.
3. Participated in one day seminar on “Importance of working in Hindi in independent india” on 27/02/2025.
4. Convenor of the Wall Magazine Decoration Committee held organized by Department of Physics on 23/10/2024.
5. Judge for the League of Leaders, inter-college competition organized by Entrepreneurship Cell, Vyavsaay on 23rd March, 2021.
6. External Judge for Debate and Climate Cooking event at Annual Geo Fest “RESURGENCE 2023” on the topic “Climate Change : sinking domains of nature (a light on joshimath event)” on 10th Feb, 2023 by Geography department.
7. External Judge for ConWin- Contest for women & Innovation /Start-up Idea event at Women leader conclave 2023 and Inter-college Fest on 20th March, 2023 by Women’s development cell, Gender sensitization committee and Transgender cell.
8. Participated in the NATIONAL SCIENCE DAY PROGRAM , organized by INTER-UNIVERSITY ACCELERATOR CENTRE on 28th Feb 2018.
9. Participated in the “VISITORS PROGRAMME” organized by Department of Physics and Astrophysics on 27th Feb. 2019.
10. Participated in the NATIONAL SCIENCE DAY PROGRAM , organized by INTER-UNIVERSITY ACCELERATOR CENTRE along with 8 students from the college on 28th Feb 2023.
11. Participated in the “VISITORS PROGRAMME” organized by Department of Physics and Astrophysics on 13th March 2023.