

FACULTY PROFILE PROFORMA

Title (Ms/Mr/Dr/Prof)	Prof.	First Name Monika	Last Name Bassi		Photograph
Designation	Professor				
Department	Physics				
Address (Official)	38-39, Lucky Home Society Sector 13, Rohini Delhi – 110085				
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Email	monikabassi@kalindi.du.ac.in				

Education

Subject	Institution	Year	Details
M.Sc. (Physics)	Miranda House, DU	1994	With Specialisation in Electronics
Ph.D. (Physics)	Department of Physics and Astrophysics, DU	1999	In the field of Atomic and Molecular Physics

Career Profile

Organisation/Institution	Designation	Duration	Role
Gargi College	Lecturer	16.7.1997-14.7.2006	Teaching
Kalindi College	Professor	Since 14.7.2006	Teaching

Research Interests/Specialization

Electronics, Instrumentation, Atomic and Molecular Physics, R-Matrix Method, Mechanics, Python, Scilab

Administrative Assignments / Contribution to corporate life of college

Important Positions Held:

- Convener, Committee for Social Responsibility, Extension Activities, and Community Outreach Programmes, 2026-2028.
- Member, Anti-Ragging Committee, 2026-2028
- Co-Convener, Physics (H) Admission Committee, 2026
- Convener, Newsletter Committee, Physics Department, Kalindi College, 2026
- Member, Admission Committee for B. Sc. (H) Physics Admissions 2025-2026.
- Co-Convener, National E-poster making Competition on the theme “World Space Walk” held on 11th October 2025
- Convener, AQAR (Annual Quality Assurance Report) for 2024-2025 of the Academic Audit of Physics Department, Kalindi College
- Co-Convener, Timetable Committee 2025-2026

- Co-Convener, Physithon Society 2025-2026
- Convener of Visit to National Physical Laboratory (NPL) on 17.10.2025
- Co-Convener of Street Play on Anti-Tobacco - "Aakhari Saans" held on 10.11.2025 at August Kranti Park, organized by the Street Play Committee and Anti-Tobacco Committee.
- Convener, National E-Poster Making Competition on the theme "Your Lungs Deserve Better - Quit Today, Live Tomorrow," held on 16.11.2025, organized by the Anti-Tobacco Committee.
- Co-convener of the Intercollege Seminar on Artificial Intelligence "Synapse" held on 6.11.25
- Co-Convener of the National Screening Event on "Stranger Things" held on 16.1.26.
- Co-convener of the National Artificial Intelligence Workshop and Poster Making Competition held on 6 Feb 2026 by Physithon Society.
- Co-Convener of Career Vartalaap on the occasion of National Science Day held on 28.2.2026
- Resource person of National-Level AI Training Workshop & Poster Making Competition: 6th Feb 2026
- **Overall Co-Convener** of Central Admission Committee for supervision of Commerce Courses for 2024-2025.
- **Co-Convener**, Anti-Tobacco Committee 2024-2025, 2025-2026.
- **Deputy Superintendent** for Central Examination Committee for University Theory Exams 2024-2025, Kalindi College.
- Member of Committee for Social Responsibility, Extension Activities and Community Outreach Programmes 2024-2025, 2025-2026
- Convener, National E-poster competition on the theme "Tobacco Free Tomorrow: Design the Future" organized by the Anti-Tobacco Committee on 26th October, 2024.
- Convener, Inter-college Workshop on "Indoor Air Pollution and Smoking" held on 25.02.2025, organized by the Anti-Tobacco Committee.
- Teacher-in-charge, Department of Physics, Kalindi College for 2022-2024.
- Member Faculty of Sciences, Council Branch -I, University of Delhi, for a period of 3 years w.e.f. 27.7.22-27.7.24.
- Coordinator Value Added Course on Arduino Programming from 18th March 2024 to 2nd May 2024.
- Convener, Anti-Tobacco Committee 2023-2024, 2022-2023, 2021-2022, 2020-2021.
- Co-convener, Anti-Ragging Committee 2022-2023, 2021-2022.
- **Convener** Physithon Society - The Physics Society, Kalindi College 2022-2024.
- **Co-Convener** of Committee for Social Responsibility, Extension Activities and Community Outreach Programmes 2022-2024.
- **Co-convener "Orientation 2023-2024"** by **Connecting Dream Foundation** and Ritva Kalindi held on 12.09.2023.
- **Convener Visit to India International Science Festival 2023 #ViksithBharat@2047** from 17th – 20th Jan 2024.
- Convener of Competition on **"Best Ideas" for ViksithBharat@2047** held on 29.1.24.
- Convener **Career Vartalap 3.0**: A Career counselling session with Alumni #ViksithBharat@2047 held on 4.2.2024.
- Convener Interactive session with **NGO Mymenia Foundation** held on 5.2.2024 under Community Outreach Programme.
- Convener **Donation Drive** Physithon Society from 5th-8th Feb 2024.
- Convener **Community Outreach Programme** at Slum area "Shiv Basti" held on 12.02.2024.
- Convener **"SCIVOLUTION"**- National Science Day Celebrations held on 28.2.2024.

- Convener for the **National** e-poster-making competition on “**Creating Voices for Tobacco-Free Lives**” held on 18.3.2024.
- **Co-convener of Meraki’24** by Connecting Dream Foundation and Ritva Kalindi, held on 31.01.2024.
- **Convener, Enactus Orientation 2023** held on 10.10.2023.
- Convener, **Kona Kona Shiksha**: A Financial Education Initiative organized by the Social Responsibility Cell, partnered with the National Institute of Securities Markets (An Educational Initiative of SEBI) and Kotak Securities, held from 6.11.23 to 7.11.23.
- Convener of the inter-college event “**Resonance**” on the **G20 Summit** held on 20.10.2023.
- Co-Convener of the Cloth Donation Drive by Enactus Kalindi on 5th and 6th February 2024.
- **Co-Convener of the two-day annual fest “Udyamita”** by Enactus Kalindi held on 29.2.24 and 1.3.24.
- **Convener**, Admission Committee for Physics Hons. Admission from 1.8.23 to 20.10.23.
- Principal Investigator in In-house Interdisciplinary Research Project “**Analysis of Air Quality in Delhi: Examining the Effects of Urbanization on Particulate Matter Concentration**”.
- **Editor** of Conference Proceedings of **National Conference** on “Sustainable Startups: Integrating Traditional Knowledge with Innovation” held on 17th February 2025, organised by the Institute of Bioresources and Sustainable Development (IBSD) Committee, Kalindi College.
- Member Academic Committee 2022-2024
- Member, Internal Assessment Committee 2022-2024
- Member, Library Committee 2022-2024
- Member, Lab Development and Equipment Committee 2022-2024.
- Member, Dr. B. R. Ambedkar Study Centre 2022-2024.
- Convener “**Sagacious Scribblers - The English Creative Writing Club**”, Kalindi College for 2022-2023, 2021-2022.
- Member, Dr. B. R. Ambedkar Centre, 2022-2023, 2021-2022.
- Convener, Admission Committee for B.Sc. (Life Sciences) 2021-2022 batch and performed Admission Duties from 01.10.2021 to 29.11.2021.
- External Examiner at Ramjas College for 4 days (4.5.22, 5.5.22, 7.5.22, 8.5.22) to conduct the Practical Exam of Analog Systems and Application Lab of B.Sc.(H) Physics, 2nd Year.
- External Examiner, B.Sc. (PS) Sem II Electricity and Magnetism Lab, 30th July 2022, at Shiva Ji College
- Internal Examiner, B.Sc. (PS) Sem II Electricity and Magnetism Lab, 1st- 2nd August 2022.
- Examiner for Paper setting Committee for B.Sc.(H) Physics, April 2022.
- Internal Examiner for Practical Examination for B.Sc.(H) Physics 2nd year for Mathematical Physics III, Scilab (Computer Programming Lab), April 2022.
- Evaluator for Analog System and Applications during June 2022 at Daulat Ram College.
- Examiner for Paper Setting Committee for B.Sc.(H) Physics, August 2022 for Phase II Examination.
- Evaluator for Analog System and Applications August 2022 Phase II Exam at Hindu College in August 2022.
- Mentor of students for 2018-2019, 2019-2020, 2020-2021, 2021-2022, 2022-2023.
- Member, Repository Committee 2022-2024.
- Member of the Question Framing Committee at University Level, of the Model Question Paper and Model Problem Set of Core Paper “CC-X: Analog Systems and Applications”, IV Semester B.Sc.(H) Physics, during 2019-2020 at the Department of Physics and Astrophysics, University of Delhi.

- Convener, Annual Report 2019-2020
- Member, CCTV Camera Committee of the college during 2018-2019, 2019-2020, 2020-2021.
- Member, Ward-Quota Committee for Admission for the College during 2014-2015 and 2015-2016.
- Member, Programme Organization Committee 2018-2019 and 2019-2020.
- Member, Students' Union Advisory Committee, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021.
- Convener, Ward-Quota Committee for Admission for the College during 2016-2017, 2017-2018, 2018-2019, 2019-2020, and 2020-2021
- Member, Internal Complaints Committee (ICC), 2014-2017, Kalindi College under THE SEXUAL HARASSMENT OF WOMEN AT THE WORKPLACE PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013.
- Member, Admission Committee, Physics, Kalindi College, 2014-2015.
- Member, Canteen Committee, 2014-2015, 2015-2016, 2016-2017, 2017-2018.
- Co-convener, Canteen Committee, 2018-2019, 2019-2020, 2020-2021.
- Member Secretary, College Complaint Committee (CCC), Kalindi College, University of Delhi – A Statutory Body constituted under the Delhi University Act, 1922 during 2012-2013 and 2013-14.
- Co-Convener, Proctorial Board, Kalindi College, University of Delhi during 2017-2018, 2018-2019, 2019-2020, 2020-2021.
- Member, Proctorial Board, Kalindi College, University of Delhi during 2010-2011, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017.
- Convener, Admission Committee of the entire Kalindi College, University of Delhi during the academic session 2012-2013.
- Convener, ECA Admission Committee, Kalindi College, University of Delhi for the Academic session 2013-2014.
- Teacher-In-Charge, Department of Physics, Kalindi College, University of Delhi in 2012-2013 and 2013-2014.
- Convener, Annual Report of Kalindi College, University of Delhi, 2011-2012, 2012-2013, 2013-2014 and 2014-2015.
- Co-Convener “Cleanliness Committee – 2014”, Kalindi College.
- Public Information Officer (PIO) of Kalindi College, University of Delhi in 2010.
- Convener, Sub-Committee, Kalindi College, University of Delhi of the Lab Development Committee 2012-2013.
- Member of Academic Committee of Kalindi College, University of Delhi for the year 2006-2007, 2012-2013, 2013-2014, 2022-2024.
- Convener, “Physcom Society” (Academic Society of Physics and Computer Science Departments) of Kalindi College, University of Delhi during the years 2012-2013 and 2013-2014.
- Coordinator, Eco-Club, Kalindi College, University of Delhi during 2013-2014.
- Co-coordinator of “Society for Environmental Sustainability”, an effort by Eco-Club in “Gyan Leher: A Knowledge Fair” presenting Innovative Academic Practices; held from 5.2.2014-6.2.2014 in the college.
- Member, Coordination Committee of inter-college Science Fest “Ist Vigyan Vividha- 2014” with the theme “Role of Science and Technology in Women Empowerment” organized from 29.01.14-30.01.14.

- Convener, Innovative Projects/Models during the intercollege Science Fest “Ist Vigyan Vividha- 2014” with the theme “Role of Science and Technology in Women Empowerment” organized from 29.01.14-30.01.14.
- Convener, Physics in “Gyan Leher: A Knowledge Fair” presenting Innovative Academic Practices; held from 5.2.2014-6.2.2014.
- Member, Admission Committee, Kalindi College, University of Delhi in 2013.
- Convener, Fillers Committee “LEHREN-2015,” the Inter-College cultural festival of Kalindi College, University of Delhi, in the academic session 2014-2015.
- Convener, Fillers Committee “LEHREN-2014,” the Inter-College cultural festival of Kalindi College, University of Delhi, in the academic session 2013-2014.
- Co-Convener, Teachers’ Talent Show in “LEHREN-2014,” the Inter-College cultural festival of Kalindi College, University of Delhi, in the year 2013-2014.
- Convener, Teachers’ Talent Show in “LEHREN-2013,” the Inter-College cultural festival of Kalindi College, University of Delhi, in the academic session 2012-2013.
- Convener, Fillers Committee “LEHREN-2013,” the Inter-College cultural festival of Kalindi College, University of Delhi, in the year 2012-2013.
- Convener (Staff Advisor), Student Union in 2010, Kalindi College, University of Delhi. Organized an Interactive session with Smt. Kiran Bedi (IPS) and Mr. J. S. Deshwal, then Additional Deputy Commissioner of Police, Central District, with students on 16.09.2010 on the occasion of the Oath Ceremony of Students’ Union.
- Co-Convener (Staff Advisor), Student Union, Kalindi College, University of Delhi in 2008-2009 and 2009-2010.
- Co-Convener “LEHREN,” the Inter-College cultural festival of Kalindi College in the year 2006.
- Member of the Culture Council, University of Delhi for the year 2007-2008 and 2008-2009.
- Convener of Costume Committee, Kalindi College, University of Delhi for Annual Day 2007.
- Member, Admission Committee, Kalindi College, University of Delhi in 2007 and 2010.
- Convener of Antakshari Event in Inter-college Festival LEHREN 2009 organized by Kalindi College, University of Delhi.
- Judged the event Sa Re Ga Ma Pa in LEHREN 2009.
- Convener of the Mike Committee, Kalindi College, University of Delhi during 2008-2009, 2009-2010 and 2011-2012.
- Member of ECA Committee, Kalindi College, University of Delhi for the Admissions 2011-2012.
- Convener of Intra-College “Teacher Talent Show” event in LEHREN 2011.
- Member of Canteen Committee, Kalindi College, University of Delhi during the years 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016.
- Member of the Proctorial Board, Kalindi College, University of Delhi during the years 2010-2011, 2011-2012 and 2012-2013.
- Convener of Rangoli cultural club of Kalindi College for the years 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021.
- Co-Convener of Rangoli cultural club of the Kalindi College for the years 2011-2012 and 2012-2013.
- Teacher representative, Governing Body, Kalindi College in 2014-2015.

Teaching Experiences (Subject/Courses taught during last four years)**2025-2026 (Odd Semester): Under NEP**

Class	Paper Name and details
B.Sc. (H) Physics, Part I, Semester I	Mechanics (Theory)
B.Sc. (H) Physics, Part IV, Semester VII	Research Methodology (Theory)
B.Sc. (PS) Part I, Semester I	Mechanics Lab
B.Sc. (H) Physics Part III, Semester V	Digital Electronics Lab
B.Sc. (H) Physics, Part II, Semester III	Mathematical Physics - III, Python Lab
SEC Paper, Sem I	Programming using Python

2025-2026 (Even Semester): Under NEP

Class	Paper Name and details
B.Sc. (H) Physics, Part II, Semester IV	Analog Electronics (Theory)
B.Sc.(H) Physics, Part III, Semester VI	DSE: Microprocessors (Theory)
B.Sc.(H) Physics, Part I, Semester II	Electrical Circuit Analysis (Theory)
B.Sc. (PS) Part I, Semester II	Electricity and Magnetism Lab
B.Sc. (H) Physics Part II, Semester IV	Analog Electronics Lab
B.Sc. (H) Physics, Part I, Semester II	Mathematical Physics - II, Python Lab
B.Sc.(H) Physics, Part III, Semester VI	DSE: Microprocessors (Lab)

2024-2025 (Odd Semester): Under NEP

Class	Paper Name and details
B.Sc. (H) Physics, Part I, Semester I and B.Sc. (PS)	Mechanics (Theory)
B.Sc. (PS) Part I, Semester I	Mechanics Lab
B.Sc. (H) Physics Part III, Semester V	Digital Electronics Lab
B.Sc. (H) Physics, Part II, Semester III	Mathematical Physics - III, Python Lab
SEC Paper, Sem I	Programming using Python

2024-2025 (Even Semester): Under NEP

Class	Paper Name and details
B.Sc. (H) Physics, Part II, Semester IV	Analog Electronics (Theory)
B.Sc.(H) Physics, Part III, Semester VI	DSE: Microprocessors (Theory)
B.Sc. (PS) Part I, Semester II	Electricity and Magnetism Lab
B.Sc. (H) Physics Part II, Semester IV	Analog Electronics Lab
B.Sc. (H) Physics, Part I, Semester II	Mathematical Physics - II, Python Lab
SEC Paper, Sem II	IT Skills and Data Analysis-I

2022-2023, 2023-2024 (Odd Semester): NEP effective from 2022-2023 for First year, 2023-2024 under CBCS

Class	Paper Name and details
B.Sc. (H) Physics, Part I, Semester I	Mechanics (Theory) (Under NEP in 23-24 and 22-23)
B.Sc. (H) Physics, Part I, Semester I	Waves and Oscillations (Theory): Under NEP (22-23)
B.Sc. (PS) Part I, Semester I	Mechanics Theory: Under NEP (23-24)
B.Sc. (PS) Part I, Semester I	Mechanics Lab: Under NEP (23-24, 22-23)
B.Sc. (H) Physics Part II, Semester III	Digital Systems and Applications Lab (22-23, CBCS)
B.Sc. (H) Physics, Part II, Semester III	MP-II, Scilab (22-23 under CBCS)
B.Sc. (H) Physics, Part II, Semester III	MP-III, Scilab (23-24, NEP)
B.Sc. (PS) Physics, Part III, Semester V	Elements of Modern Physics Lab (CBCS) (23-24)

2022-2023, 2023-2024 (Even Semester): NEP effective from 2022-2023 for First year, 2023-2024 under CBCS

Class	Paper Name and details
B.Sc. (H) Physics Part II, Semester IV	Analog Electronics (Theory): NEP (2023-2024)
B.Sc. (H) Physics Part I, Semester II	Electrical Circuit Analysis: NEP (2023-2024)
B.Sc. (H) Physics Part II, Semester IV	Analog Electronics (Lab): NEP (2023-2024)
B.Sc. (H) Physics Part I, Semester II	Mathematical Physics-II, Scilab: NEP (2023-2024, 2022-2023)
B.Sc. (PS) Part I, Semester II	Electricity and Magnetism Lab: NEP (2023-2024, 2022-2023)
B.Sc. (H) Physics Part II, Semester IV	CC- X: Analog Systems and Applications (Theory) (32221403) (2022-2023, CBCS)
B.Sc. (H) Physics Part II, Semester IV	CC- X LAB: Analog Systems and Applications (LAB) (32221403) (2022-2023, CBCS)
B.Sc. (H) Physics Part II, Semester IV	Mathematical Physics-III, Scilab (22-23, CBCS)

Research Guidance: (Projects for Undergraduate Students)

Project 1: To design a Swamped Transistor Amplifier (2015-2016)

: To study the effect of swamping on

- (a) Gain of Amplifier
- (b) Stabilization of Gain
- (c) Input Impedance of the Amplifier
- (d) Reduction in distortion of large signals

Project 2: Investigation of Adulteration in Milk using Surface Plasmon Resonance (2018-2019)

Project 3: Investigation of Mechanics Problems through Computer Simulation using Scilab (2019-2020)

Project 4: Study of Electrical behaviour of Metal-Semiconductor Contacts for UV Photodetectors (2019-2020) (As Academic Advisor)

Project 5: Principal Investigator in In-house Interdisciplinary Research Project “Analysis of Air Quality in Delhi: Examining the Effects of Urbanization on Particulate Matter Concentration” (2023-2024).

Project 6: Principal Investigator of ongoing Undergraduate Physics Research Project entitled "Achieving High Fidelity in Low-Signal Rectification: Half-Wave and Full-Wave Precision Rectifiers with Op-Amps" (2024-2025)

Project 7: Principal Investigator of ongoing Undergraduate Interdisciplinary Research Project entitled “Water Quality Assessment of the Yamuna River: Identifying Pollution Hotspots and Mitigation Strategies” (2024-2025).

Publication (Peer Reviewed/Indexed Journals)

Year of Publication	Title	Journal (Name of the journal. Vol Issue ISSN)	Co-Author
1999	“Polarizability of a Coulomb-modified potential”	Indian J. Phys. 73B (3), 527-530(1999).	Prof. K L Baluja
2000	“Transition probabilities for two photon H(1s-2s) and He(1 ¹ s-2 ¹ s) transitions: A partial-closure approach”	Pramana Journal of Physics 54 No. 3, 377-384(2000).	Prof. K L Baluja
2012	“Polarizability of screened Coulomb potential”	Indian J Phys (November 2012) 86(11):961–966 DOI 10.1007/s12648-012-0150-y	Prof. K L Baluja
2017	“Low energy electron-impact study of AlO using the R-matrix method”	The European Physical Journal D (2017) 71: 268 DOI: 0.1140/epjd/e2019-100057-0 Eur. Phys. J.D.	Savinder Kaur Prof. K L Baluja
2019	“Elastic and Vibrationally resolved excitation cross sections for electron impact with MgF radical using R-matrix”	The European Physical Journal D (2019) 73: 187 DOI: 10.1140/epjd/e2017-80183-9	Anand Bharadvaja Prof. K L Baluja
2020	“Designing and Analysis of Swamped Transistor Amplifier and study of effect of Swamping on gain Stabilization”	Yearly Academic Journal, Vol. XIX, ISSN: 2348-9014, 2019-2020.	Dr. Sudha Gulati Dr. Savita Sharma
2020	“A study of electron scattering from 1-1 C ₂ H ₂ F ₂ from 0.1 eV to 5 keV”	The European Physical Journal D, Eur. Phys. J. D (2020) 74: 232 https://doi.org/10.1140/epjd/e2020-10035-6	Anand Bharadvaja Prof. K. L. Baluja
2021	“Investigation of Adulteration in Milk using Surface Plasmon Resonance”	ECS J. Solid State Sci. Technol. 10 091004(September 2021) https://iopscience.iop.org/article/10.1149/2162-8777/ac1f71	Savita Sharma, Ayushi Paliwal Monika Tomar Vinay Gupta Sudha Gulati
2021	“Electron interactions with tetramethylsilane from the ionization threshold upto 5000eV”	“Plasma Sources Sci. and Technol.” 30 (September 2021) 095012 (10pp) https://iopscience.iop.org/article/10.1088/1361-6595/ac12c2	Anand Bharadvaja Ajay Kumar Arora Prof. K. L. Baluja
2022	“Elastic and Inelastic Cross Sections for Low-Energy Electron Collisions with CIF Molecule Using the R-Matrix Method”	Atoms, Vol. 10, issue 1, p. 8, January 2022 https://doi.org/10.3390/atoms10010008	Anand Bharadvaja Prof. K. L. Baluja

2022	“Moments of Probability density of Hydrogen atom in a cage”	<i>Indian J. Phys.</i> (01 October 2022) https://doi.org/10.1007/s12648-022-02463-4	Prof. K L Baluja
2024	Room-temperature ferromagnetism in Co and Ni co-doped ZnO particles: validation through density functional theory.	<i>Applied Physics A</i> , 130(11), 1-18, November 2024. https://link.springer.com/article/10.1007/s00339-024-08018-0	Yadav, S., Agrawal, A., Mehra, V., Ahmad, T., Sharma, M., & Kuanr, B. K.
2025	Annealing- Induced Changes in the Optical Properties of Hydrogenated Amorphous Silicon Thin Films Fabricated by High-Power PECVD	<i>International Journal of Science and Research (IJSR)</i> , October 2025, https://dx.doi.org/10.21275/SR25928232405	Aravind Kumar, Pawan Kumar, Chanchal Kaushik, Sai Tripti Samal, Rashmi Menon
2025	Electron scattering from plasma relevant dichlorosilylene (SiCl ₂) molecule from low to high energy.	<i>Physica Scripta</i> , 100(12), 125401. DOI 10.1088/1402-4896/ae22a7 https://iopscience.iop.org/article/10.1088/1402-4896/ae22a7/meta	Kaur, S., Goswami, K., Baluja, K. L., & Bharadvaja, A.

Seminar/Workshop/Conferences Presentation/Organisation

Conference Presentations/ Workshops and Lectures Attended

1. Resource person for the National Conference on “Sustainable Startups: Integrating Traditional Knowledge with Innovation” held on 17th February 2025 organised by IBSD Committee, Kalindi College.
2. Presented a Paper in the **International Conference** on “Geospatial Innovations for Biodiversity Conservation, Climate Resilience and Sustainable Development Across Multi-domain Ecosystems” on the topic: “Analysis of Air Quality in Delhi: Examining the Effects of Urbanisation on Particulate Matter Concentration,” held on April 9, 2025, organised by the Department of Geography, Kalindi College, in collaboration with the Centre for Himalayan Studies, University of Delhi
3. Presented a paper on “Neuro Biophysics: Neuronal Transmission” in a 3-week Refresher Course in Computer Applications from 10th to 30th September, 2008 at CPDHE, University of Delhi.
4. Participated in a Webinar on “New Education Policy 2020 Transformational Features and Challenges” organized by IQAC & Physics Department, Kalindi College, held on 23-25 Jan 2021.
5. Participated in a National Webinar on “Geopolitics of Vaccine: Access, R & D and Manufacturing” organized by Kalindi College, University of Delhi, in collaboration with Universal Access for Vaccine and Medicine & Swadeshi Shodh Sansthan, held on 22nd June, 2021.
6. Participated in National Webinar on “Energy Efficient Innovations & Applications” by Maitreyi College, University of Delhi, held on 30th June, 2021.
7. Participated in an online Lecture organized by the Indian Association of Physics Teachers, Regional Council (Delhi and Haryana) on “Hidden Symmetry in Planetary Motion” by Prof. Venkataraman Balakrishnan, Adjunct Professor of Physics, IIT Madras, on 10th July 2021.
8. Participated in an Online Lecture by the Indian Association of Physics Teachers, Regional Council (Delhi and Haryana) on “Scaling and Power Laws in the Natural Sciences and beyond” by Prof. Venkataraman Balakrishnan, Adjunct Professor of Physics, IIT Madras, on 17th July 2021.
9. Participated in an Online Lecture by the Indian Association of Physics Teachers, Regional Council (Delhi and Haryana) on “The Mass of Small Things” by Prof. Amitava Raychaudhuri, Professor Emeritus,

Department of Physics, University of Calcutta, Kolkata (Former Palit Professor of Physics, University of Calcutta, and Former Director, Harish-Chandra Research Institute, Prayagraj (Allahabad) on 24th July 2021.

10. Participated in the webinar, organized by the Research Committee, Kalindi, under the aegis of IQAC, on the topic “HOW TO AVOID PREDATORY PUBLISHING? WHAT RESEARCHERS CAN DO,” delivered by Dr. Sumit Narula on July 24, 2021.
11. Participated in Two Days’ National Webinar on “SEWA, SWADHEENTA AUR SANKALP: NAYE BHARAT KA NIRMAAN” to celebrate 75 Years of India’s Independence - Azadi Ka Amrut Mahotsav” on August 6 - August 7, 2021, organized by Ministry of Education, Govt. of India, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching, Cultural Committee and Teaching Learning Centre, Ramanujan College; and Kalindi College, University of Delhi.
12. Participated in a **National Seminar** (Virtual Mode) on Innovation and Opportunities in Marine Bioresource and Biotechnology organized by Marine Biotechnology Laboratory, Department of Botany, University of Delhi and Cluster Innovation Centre (CIC), University of Delhi on 21st August 2021 on “**Seaweeds, Mangroves, Marine Hazards, Societal Impacts, Marine Policy, Infrastructure and Facilities**”.
13. Attended an online Lecture on “Entanglement Entropy and Holography” by Prof. Justin David from the Centre for High Energy Physics, Indian Institute of Science, Bangalore on September 8, 2021, organized by Shyam Lal College under SLC Eminent Lecture Series 2021-2022
14. Completed Hands-on Training Session on “E-content Development using Basic Tools” organized by E-content Development Committee, Kalindi College, University of Delhi on 27th September, 2021
15. Participated in an **International Webinar** on "GENDER, CULTURE & EVERYDAY EXPERIENCE" organized by Physithon Society, Department of Physics, Kalindi College, University of Delhi on October 27, 2021.
16. Attended a Webinar on “Tools and Techniques for Avoiding Plagiarism in E-content Development” on 9th November 2021, organized by the E-content Development Committee, Kalindi College
17. Attended a Webinar on “Integrating Scopus in your research workflow-DU” on November 23, 2021, organized by Researcher Academy on Campus, University of Delhi/Elsevier.
18. Participated in **National Seminar** “Rewriting Your Genetics: From Genetics to Epigenetics” on 15th January, 2022, organized by Physithon Society, Department of Physics, Kalindi College, University of Delhi.
19. Invited as a resource person and presented an invited talk on the topic “Working on Excel” in a two-day workshop on “Skill Enhancement by ICT Learning in the Period of Online Knowledge Exchange” organised by the Department of Physics and IQAC, Kalindi College on Dec. 9-10, 2020
20. Invited as a resource person and judged the “COLLOQUIUM.mp4” video-making competition, organized by PHYSITHON-The Physics Society, Kalindi College on September 25-28, 2020
21. Participated in the Webinar on “Understanding the Coronavirus: Some Good News” organized by the Department of Mathematics, Kalindi College, University of Delhi on 5th May, 2020
22. Participated in a 2-day webinar on “Material Science, Technology and Society (MSTS-2020)” organized by School of Physical Sciences, Jawaharlal Nehru University, on 8th-9th May, 2020.
23. Participated in National Webinar on “Emerging out a Winner in Lockdown” organized by Kalindi College, University of Delhi on 14th May, 2020.
24. Participated in National Webinar on “What is light: Evolution of Quantum Theory” organized by Department of Physics, Kalindi College, University of Delhi on 12th May, 2020.

25. Participated in National Webinar on “Science, Society and Exponential Change: Reimagining the Future” organized by Department of Physics, Kalindi College, University of Delhi on 13th May, 2020.
26. Participated in a webinar on “New Education Policy 2020: Transformational Features and Challenges” organized by IQAC, Kalindi College, University of Delhi on Dec. 11, 2020.
27. Participated and presented a Poster in “National Conference on Advanced Materials: Theory and Applications (NCAMTA)” held from September 26-28, 2019, at Hansraj College on the topic: “Detection of Adulteration in Milk using SPR-based Optical Sensor,” published in Abstract Book pp 49, NCAMTA-2019.
28. Attended a **National Conference** on “Biotechnology in Present Era: Impact on Human Life and Environment” organized by Maitreyi College in collaboration with the Department of Biotechnology, Govt. of India (Under the DBT-CTEP) Programme on 23rd August 2019.
29. **Participated in National Seminar** on “Nuclear, Particle and Accelerator Physics” jointly organized by Department of Physics, Kalindi College and The National Academy of Sciences (NASI) Delhi Chapter on 6th November, 2019.
30. **Participated in National Seminar on “Laser Dynamics and Fiber Optics”** organized by Department of Electronics and Department of Physics, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi on 7th January, 2020.
31. **Participated in the Webinar on “Search, Research and Publication Ethics”** organized by the Library, Kalindi College, University of Delhi on 4th May, 2020.
32. **Participated in the Webinar on “Understanding the Coronavirus: Some Good News”** organized by the Department of Mathematics, Kalindi College, University of Delhi on 5th May, 2020.
33. **Participated in a 2-day webinar on “Material Science, Technology and Society (MSTS-2020)”** organized by School of Physical Sciences, Jawaharlal Nehru University, on 8th-9th May, 2020.
34. **Participated in National Webinar on “What is light: Evolution of Quantum Theory”** organized by Kalindi College, University of Delhi on 12th May, 2020.
35. **Participated in National Webinar on “Science, Society and Exponential Change: Reimagining the Future”** organized by Kalindi College, University of Delhi on 13th May, 2020.
36. **Participated in National Webinar on “Emerging out a Winner in Lockdown”** organized by Kalindi College, University of Delhi on 14th May, 2020.
37. “Investigation of adulterants in milk using Surface Plasmon Resonance”, Sudha Gulati, Monika Bassi, Savita Sharma, Neha Ahlawat, Raksha Tewari, Ayushi Paliwal, Monika Tomar, Vinay Gupta presented at **International Conference** on Physics, Society and Technology-2019 held at Conference Centre, University of Delhi from 17th-19th January, 2019
38. “Modern Techniques to detect food adulteration”, Neha Ahlawat, Raksha Tewari, Ritika Jain, Monika Bassi, Sudha Gulati, Savita Sharma, presented at Astrodroid, Physcom Society fest of Kalindi College held at Kalindi College, University of Delhi. (2018-2019)
39. “Food adulteration and recent techniques to detect”, Neha Ahlawat, Raksha Tewari, Manu Chaudhary, Ritika Jain, Ayushi Dhyani, Ishika Bhullar, Monika Bassi, Savita Sharma, Sudha Gulati, presented at IIIT Student Conference on Optics and Photonics held at Jaypee Institute of Information Technology, Noida from 2nd-3rd November, 2018.
40. Presented a paper entitled “**Electron-Impact study of AIO using the R-matrix method**” at 44th EGAS **International Conference of the European Group on Atomic Systems (EGAS), Gothenburg, Sweden, 9-13 July 2012**, organized by the University of Gothenburg, Europe.

41. Attended a 3-day UGC-sponsored Workshop on “Evaluation Methodology” from 8th -10th November 2012 conducted by CPDHE, University of Delhi.
42. Attended **Indo-European Conference** on Quality Assurance in Higher Education from 6th -7th May 2010 at Conference Centre, University of Delhi.
43. Attended Workshop on Experiments in Physics & Electronics from 23rd to 26th July 2008 at Keshav Mahavidyalaya, University of Delhi, organized by ILL & Keshav Mahavidyalaya.
44. Attended three days’ Workshop on Content Creation for e-learning, held at the University of Delhi, South Campus from 25th -27th August 2006.
45. Awarded a Certificate of participation in “Workshop on Physics & Electronics Experiment: Computer Applications” from Department of Physics, Rajdhani College, University of Delhi
46. Attended a lecture on “Challenges for Science Interface with the Society” By Prof. K. Kasturirangan, member, Planning Commission, Govt. of India, on 8th June 2012 at Indian National Science Academy, Bahadurshah Zafar Marg.

Professional Courses Done

47. Completed National Level FDP on “**Programming using Python**” organized by Hindu College in collaboration with Spoken Tutorial, IIT Bombay from July 22, 2024 to August 10, 2024 and successfully passed the FDP exam conducted by ST, IIT Bombay on August 10, 2024.
48. Completed a one-week FDP with **grade A+** on “**Python with Data Analytics**” from 7-13 August 2023
49. Completed a one-week Faculty Development Programme on “**Open-Source Tools for Research**” from 24-30 August 2021 and obtained **Grade A+** from Teaching Learning Centre, Ramanujan College, University of Delhi, under the Aegis of the **Ministry of Education, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching**.
50. Completed a one-week Faculty Development Programme on “**ICT Enabled Teaching and Learning**” from 20-26 September 2021 and obtained **Grade A+** from Teaching Learning Centre, Ramanujan College, University of Delhi, under the Aegis of the **Ministry of Education, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching**.
51. Awarded a certificate of completion for completing an International online course on programming skills - “Scilab: The First Course [Beginners to Intermediate] on March 4, 2021, from Udemy Inc. – ‘An American massive open online course.
52. Participated in a 3-week UGC-ASC, UGC Sponsored **Refresher Course** in the subject “Computer Applications”, conducted by Centre for Professional Development in Higher Education, Institute of Lifelong Learning, from 10th -30th September 2008.
53. Participated in a 3-week UGC-ASC, UGC Sponsored **Refresher Course** in the subject “Physics” conducted by CPDHE (Centre for Professional Development in Higher Education), University of Delhi from February 7 – 26, 2005.
54. Participated in a 4-week UGC-ASC, UGC Sponsored **Orientation Course**, conducted by CPDHE (Centre for Professional Development in Higher Education), University of Delhi from March 3 – April 1, 2003.

Seminars/Workshops/Competitions Organized

1. Convener, Poster Making Competition on 31.10.2022 by Physithon – The Physics Society, under the aegis of Centenary Celebrations of University of Delhi.
2. Convener of the English Creative Writing Competition held on the theme “Celebrating 100 years of DU in Prose and Verse” under the aegis of Centenary celebrations of University of Delhi, held on 19.10.2022.

3. Convener of Intra-college slogan writing competition held on 10th August 2022, on the theme ***“Har Ghar Tiranga”*** under the aegis of Azadi ka Amrut Mahotsava.
4. Invited as a **Resource Person** in a two-day National Seminar on “Dr. B. R. Ambedkar: A symbol of knowledge” held on 28th - 29th September, 2022, organized by Dr. B. R. Ambedkar Center, Kalindi College.
5. Organized an Inter College Slogan Writing Competition on “The Elixir of Freedom: Celebrating 75 years of Independent India” on 10.8.21, as the Convener of “Sagacious Scribblers” (English Creative Writing Club).
6. Organized a talk on **“Travel Writing”** by Ms. Urvi Mangesh Gupte, Travel Blogger and Content Writer on 25 August 2021 as the Convener of Sagacious Scribblers, English Creative Writing Club in collaboration with Mitrakshar, the English Literature Society of Kalindi College.
7. As the Convener of the Event, organized an Interactive Session and Creative Writing Competition on **“Gender Sensitization”** on 30th September 2021 under “Sagacious Scribblers” - The English Creative Writing Club, Kalindi College.
8. As the Convener of the Event, organized a **National Webinar** on **“Understanding Ambedkar: Relevance of Dr. B.R. Ambedkar in Contemporary Era”** on 8th October 2021, under Dr. B. R. Ambedkar Study Centre, Kalindi College.
9. As the Convener of the Event, **organized a 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.
10. As the Convener of the Event, organized a **National Workshop** on **“Story Lines in Music and Poetry”** on **28.1.2022**, under “Sagacious Scribblers” - The English Creative Writing Club, Kalindi College.
11. As the Coordinator of the event, organized a **Talk** on **“Anti-Ragging: A step towards Awareness and Interdiction of Menace”** on **9th March 2022**, under the Anti-Ragging Committee, Kalindi College.
12. As the Convener of the Event, organized an Intra-College Short Story Writing Competition on the theme/topic **“Mirror-Mirror on the Wall”** or **“Rewrite the story of Cinderella in the modern context”** on 13.4.2022 under “Sagacious Scribblers” - The English Creative Writing Club, Kalindi College.
13. As the Convener of the Event, organized an **Alumna Talk** on **“Creative Writing in the age of Instagram”** on 27.4.2022 under “Sagacious Scribblers” - The English Creative Writing Club, Kalindi College.
14. Organized a National Webinar as Coordinator on “An introduction to Measurement of Light” at the Department of Physics, Kalindi College, Google Meet platform, University of Delhi on 13th May, 2020.
15. Organized an e-Rangoli Competition as Convener on 8th July 2021 in the college.
16. As the “Member Secretary” of the College Complaint Committee, organized a Seminar on **“Gender Sensitization”** on 23.10.13 in Kalindi College. Eminent speakers of the Seminar - Joint Commissioner of Police Mr. Sandeep Goyal, DCP Mr. Alok Kumar, DCP Mr. Ashok Malik, ACP Patel Nagar Mr. Rajeev Midha, and SHO Patel Nagar Mr. Ranbir Singh were invited to create awareness amongst students about legal issues relating to women in the current era, changing scenario of women's rights, etc. This was an effort of the College Complaint Committee in collaboration with Delhi police.
17. As the “Member Secretary” of the College Complaint Committee, organized a Workshop on **“Women and Law”** on 7.3.2013 in Kalindi College (just one day before the International Women's Day). The eminent speakers of the workshop included Justice Rekha Sharma (Retired High Court Judge), Prof.

Madhu Vij (Director, Women Studies and Development Centre, University of Delhi) and ACP Pratima Sharma. Justice Rekha Sharma discussed how the status of women has improved over the past two decades. Prof. Madhu Vij explained Ordinance XV-D to our students. ACP Pratima Sharma shared valuable information on women's issues with the students. Students enjoyed the informative discussions in the workshop.

18. As the convener of Physcom Society, organized a poster-making competition for students on 23.09.13 with the themes: Safety for Women, Alternative Energy Sources, and Changing Technology.
19. As the Convener of Physcom Society, organized a talk by Prof. Vinay Gupta from the Department of Physics and Astrophysics on “Thin Films” on 21.10.13.
20. Organized the Annual academic and cultural full-day event “Bits and Bytes” on 30th January 2013. The eminent speakers of the event included Prof. Kirti Ranjan from the Department of Physics and Astrophysics, University of Delhi, and Prof. V. K. Panchal, Scientist G and Associate Director, DRDO, New Delhi. Prof. Kirti Ranjan delivered a lecture on **"Large Hadron Collider"** and Prof. V. K. Panchal delivered his talk on “Artificial **Intelligence**” and “**Big Bang**,” followed by their interactive sessions with the students. The event further included the following academic and cultural competitions for students: Paper Presentations Competition, Solo Song Competition, Solo Dance Competition, Group Dance Competition

Awards & Distinctions

21. Awarded the **“Best Teacher in University of Delhi, Award for College Lecturer:2012-2013”** from the Chief Minister Smt. Shiela Dixit, awarded by the Directorate of Higher Education, sanctioned by **Hon’ble Lt. Governor, Delhi**, and received **Prize money of Rs One Lac.**
22. Awarded certificate for being the Principal Investigator in the Innovation Research Project entitled “Investigation of Adulteration in milk using Surface Plasmon Resonance in 2018-2019, on 30.9.2019.
23. Awarded certificate of enrollment as Life Member of the “Indian Association of Physics Teachers” Kanpur.
24. Awarded a certificate of Appreciation for securing 100% in the National Level Quiz Competition on “Covid-19” organized by IQAC of Vanita Vishram Women’s College of Commerce, Surat on 4.5.2020 to spread awareness about Corona.
25. Awarded a Certificate of Merit by CSIR-UGC NET for clearing Junior Research Fellowship (JRF) and Eligibility for Lectureship.
26. Qualified Graduate Aptitude Test (GATE) in Engineering in the year 1996.
27. Awarded Certificate of Merit by CBSE under National Scholarship Scheme for obtaining 33rd position at National Level in class X.
28. Awarded Degree by Annamalai University in the year 1996 for completing Bachelor of Education in Physics with First Division in Written Examination.
29. Awarded Certificate of Merit by Physical Society, Department of Physics & Astrophysics, and University of Delhi in the year 1993-1994 for working as a member of Cultural Sub-Committee of Physical Society.
30. Awarded Certificate of Merit by the Physical Society, Department of Physics & Astrophysics, and University of Delhi in the year 1993-1994 for working as a member of the Lecturer, Seminar and Paper Reading Sub-Committee of Physical Society.
31. Awarded Certificate in Computer Studies by the CADCOS, New Delhi for completing the course with “A” Grade in Basic Programming.

32. Awarded Certificate of Merit for standing first in the college in B.Sc. (H) Physics, Part I in the year 1990-1991.
33. Awarded Certificate of Merit for standing first in the college in B.Sc. (H) Physics, Part III in the year 1991-1992.
34. Awarded Certificate for completing Junior Diploma (two-year course) in **Classical Vocal Music in First Division with Distinction** in Practical in the year 1987.
35. Awarded Certificate for completing Senior Diploma (two-year course) in **Classical Vocal Music in First Division with Distinction** in Practical in the year 1989.
36. Awarded Certificate of Participation in Hindi Speech Competition held in connection with the 126th Birth Anniversary celebrations of Swami Vivekanand in the year 1989.
37. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Third Position in English Recitation (Senior) at Zonal Level in 1988-1989.
38. Awarded Certificate of Merit by the Directorate of Education, Delhi for securing First Position in Sanskrit Recitation (Senior) at Zonal Level in 1988-1989.
39. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Second Position in Extempore Hindi at Zonal Level in 1988-1989.
40. Awarded Certificate of Participation by Directorate of Education, Delhi in the Science Fair in 1988.
41. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Second Position in Folk Song (Senior) at Zonal Level in 1987-1988.
42. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Second Position in Group Song at Zonal Level in 1987-1988.
43. Awarded Certificate of Merit by the Directorate of Education, Delhi for securing First Position in Qawwali (Senior) at Zonal Level in 1987-1988.
44. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Third Position in Debate Competition in the Science Fair at Zonal Level in 1987.
45. Awarded Certificate of Merit by the Directorate of Education, Delhi for securing Second Position in the Project “Water Works System” in the Science Fair at Zonal Level in 1987.
46. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Third Position in Sanskrit Recitation at Zonal Level in 1986-1987.
47. Awarded first prize in Inter-College Solo Classical Singing Competition in LEHREN 2012 in Teacher’s Talent Competition.