# FACULTY PROFILE PROFORMA

Title		First Name	Last Name	Photograph
(Ms/Mr/Dr/Prof)	Dr.	Monika	Bassi	
Designation	Associ	ate Professor		
Department	Physics			
Address	38-39, Lucky Home Society			100
(Official)	Sector 13, Rohini			
	Delhi -	Delhi – 110085		
Phone No.	98717	11042		
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Email	monika	<u>abassi@kalindi.du.</u>	<u>ac.1n</u>	
Education				
Subject		Institution	Year	Details
M.Sc. (Physics)		Miranda House, D	DU 1994	With Specialisation in Electronics
Ph.D. (Physics)		Department of	1999	In the field of Atomic and
		Physics and		Molecular Physics
		Astrophysics, DU		
<b>Career Profile</b>				
Organisation/Institution		Designation	Duration	Role
Gargi College		Lecturer	16.7.1997-14.7.2	2006 Teaching
		Associate Profess	or Since 14.7.2006	Teaching
<b>Research Interests</b>	/Speciali	ization		

Electronics, Atomic and Molecular Physics, R-Matrix Method, Surface Plasmon Resonance, Mechanics, Computer Simulation

# **Administrative Assignments / Contribution to corporate life of college**

### **Important Positions Held:**

- 1. Teacher-in-charge, Department, Kalindi College for a period of two years 2022-2024.
- 2. Member Faculty of Sciences, Council Branch -I, University of Delhi, for a period of 3 years w.e.f. 27.7.22.
- 3. Convener Anti-Tobacco Committee 2022-2023, 2021-2022.
- 4. Co-convener Anti-Ragging Committee 2022-2023, 2021-2022.
- 5. Convener **"Sagacious Scribblers The English Creative Writing Club"**, Kalindi College for 2022-2023, 2021-2022.
- 6. Member Dr. B. R. Ambedkar Centre 2022-2023, 2021-2022.
- 7. Convener Admission Committee for B.Sc. (Life Sciences) 2021-2022 batch and performed Admission Duties from 01.10.2021-29.11.2021.
- 8. External Examiner at Ramjas College for 4 days (4.5.22, 5.5.22, 7.5.22, 8.5.22) to conduct Practical Exam of Analog Systems and Application Lab of B.Sc.(H) Physics, 2<sup>nd</sup> Year.
- 9. External Examiner B.Sc. (PS) Sem II Electricity and Magnetism Lab 30<sup>th</sup> July 2022 in Shiva Ji College

- 10. Internal Examiner B.Sc. (PS) Sem II Electricity and Magnetism Lab 1<sup>st</sup> -2<sup>nd</sup> August 2022.
- 11. Examiner for Paper setting Committee for B.Sc.(H) Physics, April 2022.
- Internal Examiner for Practical Examination for B.Sc.(H) Physics 2<sup>nd</sup> year for Mathematical Physics III, Scilab (Computer Programming Lab), April 2022.
- 13. Evaluator Analog System and Applications during June 2022 at Daulat Ram College.
- 14. Examiner for Paper setting Committee for B.Sc.(H) Physics August 2022 for Phase II Examination.
- 15. Evaluator Analog System and Applications August 2022 Phase II Exam at Hindu College in August 2022.
- 16. Mentor of students for 2018-2019, 2019-2020, 2020-2021, 2021-2022, 2022-2023.
- 17. Member Internal Assessment Committee 2022-2024.
- 18. Member Library Committee 2022-2024.
- 19. Member Lab Development/Equipment Committee 2022-2024.
- 20. Member Repository Committee 2022-2024.
- 21. Member of 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 Department of Physics and Astrophysics, University of Delhi.
- 22. Convener Annual Report 2019-2020
- 23. Member CCTV Camera Committee of the college during 2018-2019, 2019-2020, 2020-2021.
- 24. Member Ward-Quota Committee for Admission for the College during 2014-2015 and 2015-2016.
- 25. Member Programme Organization Committee 2018-2019 and 2019-2020.
- 26. 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.
- 27. Convener Ward-Quota Committee for Admission for the College during 2016-2017, 2017-2018, 2018-2019 and 2019-2020, 2020-2021
- 28. Member Internal Complaint Committee (ICC) 2014-2017, Kalindi College under THE SEXUAL HARASSMENT OF WOMEN AT WORKPLACE PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013.
- 29. Member Admission Committee Physics, Kalindi College, 2014-2015.
- 30. Member Canteen committee 2014-2015, 2015-2016, 2016-2017, 2017-2018.
- 31. 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.
- 35. 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.
- **38**. Convener Annual Report of Kalindi College, University of Delhi 2011-2012, 2012-2013, 2013-2014 and 2014-2015.

- 39. Co-Convener "Cleanliness Committee 2014", Kalindi College.
- 40. Public Information Officer (PIO) of the Kalindi College, University of Delhi in 2010.
- Convener Sub-Committee, Kalindi College, University of Delhi of the Lab Development Committee 2012-2013.
- 42. Member of Academic Committee of Kalindi College, University of Delhi for the year 2006-2007, 2012-2013 and 2013-2014, 2022-2024.
- 43. Convener "Physcom Society" (Academic Society of Physics and Computer Science Departments) of Kalindi College, University of Delhi during the year 2012-2013 and 2013-2014.
- 44. Coordinator Eco-Club, Kalindi College, University of Delhi during 2013-2014.
- 45. Co-coordinator of "Society for Environmental Sustainability", an effort by Eco-Club in "Gyan Leher: A Knoeledge Fair" presenting Innovative Academic Practices; held from 5.2.2014-6.2.2014 in the college.
- 46. Member Coordination Committee of inter-college Science Fest "Ist Vigyan Vividha- 2014" with the theme "Role of Science and Technology in Woman Empowerment" organized from 29.01.14-30.01.14.
- 47. Convener Innovative Projects/Models during the intercollege Science Fest "Ist Vigyan Vividha- 2014" with the theme "Role of Science and Technology in Woman Empowerment" organized on 29.01.14-30.01.14.
- 48. Convener Physics in "Gyan Leher: A Knoeledge Fair" presenting Innovative Academic Practices; held from 5.2.2014-6.2.2014.
- 49. Member Admission Committee, Kalindi College, University of Delhi in 2013.
- 50. Convener Fillers Committee "LEHREN-2015" the Inter-College cultural festival of Kalindi College, University of Delhi in the academic session 2014-2015.
- 51. Convener Fillers Committee "LEHREN-2014" the Inter-College cultural festival of Kalindi College, University of Delhi in the academic session 2013-2014.
- 52. Co-Convener Teachers' Talent Show in "LEHREN-2014" the Inter-College cultural festival of Kalindi College, University of Delhi in the year 2013-2014.
- 53. Convener Teachers' Talent Show in "LEHREN-2013" the Inter-College cultural festival of Kalindi College, University of Delhi in the academic session 2012-2013.
- 54. Convener Fillers Committee "LEHREN-2013" the Inter-College cultural festival of Kalindi College, University of Delhi in the year 2012-2013.
- 55. 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 Oath Ceremony of Students' Union.
- 56. Co-Convener (Staff Advisor) Student Union, Kalindi College, University of Delhi in 2008-2009 and 2009-2010.
- 57. Co-Convener "LEHREN" the Inter-College cultural festival of Kalindi College in the year 2006.
- 58. Member of the Culture Council, University of Delhi for the year 2007-2008 and 2008-2009.
- 59. Convener of Costume Committee, Kalindi College, University of Delhi for Annual Day 2007.
- 60. Member Admission Committee, Kalindi College, University of Delhi in 2007 and 2010.
- 61. Convener of Antakshari Event in Inter-college Festival LEHREN 2009 organized by Kalindi College, University of Delhi.
- 62. Judged the event Sa Re Ga Ma Pa in LEHREN 2009.
- **63**. Convener of the Mike Committee, Kalindi College, University of Delhi during 2008-2009, 2009-2010 and 2011-2012.

- 64. Member of ECA Committee, Kalindi College, University of Delhi for the Admissions 2011-2012.
- 65. Convener of Intra-College "Teacher Talent Show" event in LEHREN 2011.
- 66. Member of Canteen Committee, Kalindi College, University of Delhi during the years 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016.
- 67. Member of the Proctorial Board, Kalindi College, University of Delhi during the years 2010-2011, 2011-2012 and 2012-2013.
- 68. Convener of Rangoli cultural club of the Kalindi College for the years 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019 and 2019-2020, 2020-2021.
- 69. Co-Convener of Rangoli cultural club of the Kalindi College for the years 2011-2012 and 2012-2013.

70. Teacher representative Governing Body, Kalindi College in 2014-2015.

**Teaching Experiences (Subject/Courses taught during last four years)** 

# 2017-2018, 2018-2019, 2019-2020 (Odd Semester):

Class		Paper Name and details
1.	B.Sc. (PS) Part I, Semester I	PHYSICS CC -1A: Mechanics (Theory)
		(42221101)
2.	B.Sc. (PS) Part I, Semester I	PHYSICS LAB: CC-1A, Mechanics Lab
		(42221101)
3.	B.Sc. (H) Physics Part II,	CC- VII LAB: Digital Systems and Applications Lab
	Semester III	(32221303)
4.	B.Sc. (H) GE Part I,	GE LAB: Digital, Analog and Instrumentations
	Semester I	(32225103)

### 2017-2018, 2018-2019, 2019-2020 (Even Semester):

Class		Paper Name and details
1.	B.Sc. (PS) Part I,	PHYSICS: CC-2A Electricity, Magnetism and EMT Lab
	Semester II	(42221201)
2.	B.Sc. (H) Physics Part II,	CC- X: Analog Systems and Applications (Theory)
	Semester IV	(32221403)
3.	B.Sc. (H) Physics Part II,	CC- X LAB: Analog Systems and Applications (LAB)
	Semester IV	(32221403)
4.	B.Sc. (H) GE Part I,	GE LAB: Mechanics (LAB) (32225201)
	Semester II	

### 2020-2021,2021-2022, 2022-2023 (Odd Semester):

Class	Paper Name and details
1. B.Sc. (H) Physics Part I,	CC -II: Mechanics (Theory)
Semester I	(32221102)
2. B.Sc. (PS) Part I, Semester I	PHYSICS LAB: CC-1A, Mechanics Lab (42221101)
3. B.Sc. (H) Physics Part II,	CC- VII LAB: Digital Systems and Applications Lab
Semester III	(32221303)
4. B.Sc. (H) Physics Part II,	CC-V: Mathematical Physics II (32221301) Scilab
Semester III	Programming Lab (2021-2022, 2022-2023)

5. B.Sc. (H) GE, Part I, Semester I	GE LAB: Digital, Analog and Instrumentations	
	(32225103) (2020-2021)	

#### 2020-2021, 2021-2022 (Even Semester):

Class	Paper Name and details
1. B.Sc. (H) Physics Part II, Semester IV	CC -X: Analog Systems and Applications (Theory) (32221403)
2. B.Sc. (PS) Part I, Semester II	PHYSICS: CC-2A Electricity, Magnetism and EMT Lab (42221201)
3. B.Sc. (H) Physics Part II, Semester IV	CC- X: Analog Systems and Applications Lab (32221403)
4. B.Sc. (H) Physics Part II, Semester IV (In 2021-2022)	CC-VIII: Mathematical Physics III (32221401) Scilab (2021-2022)

# **Research Guidance: (Projects for Undergraduate Students: Four in number)**

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)

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 <sup>1</sup> s-2 <sup>1</sup> 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 $C_2H_2F_2$ 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. <b>10</b> 091004(September 2021) <u>https://iopscience.iop.org/article/10.1149/2</u> <u>162-8777/ac1f71</u>	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." <b>30</b> (September 2021) 095012 (10pp) <u>https://iopscience.iop.org/article/10.1088/1</u> <u>361-6595/ac12c2</u>	Anand Bharadvaja Ajay Kumar Arora Prof. K. L. Baluja
2022	"Elastic and Inelastic Cross Sections for Low- Energy Electron Collisions with ClF Molecule Using the R- Matrix Method"	<i>Atoms</i> , 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"	Indian J. Phys. (01 October 2022) https://doi.org/10.1007/s12648-022-02463-4	Prof. K L Baluja

# Seminar/Workshop/Conferences Presentation/Organisation

# **Conference Presentations/ Workshops and Lectures Attended**

71. Presented a paper on "Neuro Biophysics: Neuronal Transmission" in 3-weeks Refresher Course in Computer Applications from 10<sup>th</sup> to 30<sup>th September</sup>, 2008 at CPDHE, University of Delhi.

- 72. Participated in a Webinar on "New Education Policy 2020 Transformational Features and Challenges" organised by IQAC & Physics Department, Kalindi College, held on 23-25 Jan 2021.
- 73. Participated in 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.
- 74. Participated in National Webinar on "Energy Efficient Innovations & Applications" by Maitreyi College, University of Delhi held on 30th June, 2021.
- 75. Participated in an online Lecture organized by 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 10<sup>th</sup> July 2021.
- 76. 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 17<sup>th</sup> July 2021.
- 77. 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 24<sup>th</sup> July 2021.
- 78. Participated in the webinar, organized by 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.
- 79. 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.
- 80. Participated in a <u>National Seminar</u> (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 21<sup>st</sup> August 2021 on "Seaweeds, Mangroves, Marine Hazards, Societal Impacts, Marine Policy, Infrastructure and Facilities".
- 81. Attended an online Lecture on "Entanglement Entropy and Holography" by Prof. Justin David from 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
- 82. Completed Hands on Training Session on "E-content Development using Basic Tools" organized by E-content development Committee, Kalindi College, University of Delhi on 27<sup>th</sup> September, 2021
- **83**. 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.
- 84. Attended a Webinar on "Tools and Techniques for Avoiding Plagiarism in E-content Development" on 9<sup>th</sup> November 2021, organized by E-content Development Committee, Kalindi College
- 85. 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.

- 86. Participated in <u>National Seminar</u> "Rewriting Your Genetics: From Genetics to Epigenetics" on 15<sup>th</sup> January, 2022, organized by Physithon Society, Department of Physics, Kalindi College, University of Delhi.
- 87. Invited as Resource person and presented an invited talk on the topic "Working on Excel" in a two days' workshop on "Skill Enhancement by ICT Learning in the Period of Online Knowledge Exchange" organised by Department of Physics and IQAC, Kalindi College on Dec. 9-10, 2020
- 88. Invited as Resource person and judged "COLLOQUIUM.mp4"-video making competition, organized by PHYSITHON-The Physics Society, Kalindi College on September 25-28, 2020
- 89. Participated in the Webinar on "Understanding the Corona Virus: Some Good News" organized by Department of Mathematics, Kalindi College, University of Delhi on 5<sup>th</sup> May, 2020
- 90. Participated in a 2-days Webinar on "Material Science, Technology and Society (MSTS-2020)" organized by School of Physical Sciences, Jawaharlal Nehru University", on 8<sup>th</sup>-9<sup>th</sup> May, 2020.
  - Participated in the Webinar on "Search, Research and Publication Ethics" organized by Library Kalindi College, University of Delhi on 4<sup>th</sup> May, 2020.
  - 92. Participated in National Webinar on "Emerging out a Winner in Lockdown" organized by Kalindi College, University of Delhi on 14<sup>th</sup> May, 2020.
  - 93. Participated in National Webinar on "What is light: Evolution of Quantum Theory" organized by Department of Physics, Kalindi College, University of Delhi on 12<sup>th</sup> May, 2020.
  - 94. Participated in National Webinar on "Science, Society and Exponential Change: Reimagining the Future" organized by Department of Physics, Kalindi College, University of Delhi on 13<sup>th</sup> May, 2020.
  - 95. 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.
  - 96. 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.
  - 97. 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 23<sup>rd</sup> August 2019.
  - 98. 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 6<sup>th</sup> November, 2019.
  - 99. 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 7<sup>th</sup> January, 2020.
  - 100. Participated in the Webinar on "Search, Research and Publication Ethics" organized by Library Kalindi College, University of Delhi on 4<sup>th</sup> May, 2020.
  - 101. Participated in the Webinar on "Understanding the Corona Virus: Some Good News" organized by Department of Mathematics, Kalindi College, University of Delhi on 5<sup>th</sup> May, 2020.
  - 102. **Participated in a 2-days Webinar on** "Material Science, Technology and Society (MSTS-2020)" organized by School of Physical Sciences, Jawaharlal Nehru University", on 8<sup>th</sup> -9<sup>th</sup> May, 2020.
  - 103. Participated in National Webinar on "What is light: Evolution of Quantum Theory" organized by Kalindi College, University of Delhi on 12<sup>th</sup> May, 2020.

- 104. **Participated in National Webinar on** "Science, Society and Exponential Change: Reimagining the Future" organized by Kalindi College, University of Delhi on 13<sup>th</sup> May, 2020.
- 105. **Participated in National Webinar on** "Emerging out a Winner in Lockdown" organized by Kalindi College, University of Delhi on 14<sup>th</sup> May, 2020.
- 106. "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
- 107. "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)
- 108. "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 JIIT Student Conference on Optics and Photonics held at Jaypee Institute Of Information Technology, Noida from 2nd-3rd November, 2018.
- 109. Presented a paper entitled "Electron-Impact study of AlO 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 University of Gothenburg, Europe.
- 110. Attended a 3 days UGC-sponsored Workshop on "Evaluation Methodology" from 8<sup>th</sup> -10<sup>th</sup> November 2012 conducted by CPDHE, University of Delhi.
- Attended Indo European Conference on Quality Assurance in Higher Education from 6<sup>th</sup> -7<sup>th</sup>
  May 2010 at Conference Centre, University of Delhi.
- **112**. Attended Workshop on Experiments in Physics & Electronics from 23<sup>rd</sup> to 26<sup>th</sup> July 2008 at Keshav Mahavidhalya, University of Delhi organized by ILLL & Keshav Mahavidhalya.
- Attended three days' Workshop on Content Creation for e-learning, held at University of Delhi, South Campus from 25<sup>th</sup> -27<sup>th</sup> August 2006.
- 114. Awarded Certificate of participation in "Workshop on Physics & Electronics Experiment: Computer Applications" from Department of Physics, Rajdhani College, University of Delhi
- 115. Attended a lecture on "Challenges for Science Interface with the Society" By Prof. K. Kasturirangan, member Planning Commission, govt. of India, on 8<sup>th</sup> June 2012 at Indian National Science Academy, Bahadurshah Zafar Marg.

### **Professional Courses Done**

- 116. Successfully completed one week Faculty Development Programme on "Open-Source Tools for Research" from 24-30 August 2021 and obtained <u>Grade A+</u> from Teaching Learning Centre, Ramanujan College, University of Delhi, under the Aegis of Ministry of Education, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching.
- 117. Successfully completed one week Faculty Development Programme on "ICT Enabled Teaching and Learning" from 20-26 September 2021 and obtained <u>Grade A+</u> from Teaching Learning Centre, Ramanujan College, University of Delhi, under the Aegis of Ministry of Education, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching.

- 118. Awarded Certificate of completion for successfully 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.
- 119. Participated in a 3-weeks <u>UGC-ASC</u>, UGC Sponsored **Refresher Course** in the subject "Computer Applications", conducted by Centre for Professional Development in Higher Education, Institute of Lifelong Learning, from 10<sup>th</sup> -30<sup>th</sup> September 2008.
- 120. Participated in a 3-week <u>UGC-ASC</u>, 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.
- 121. Participated in a 4-week <u>UGC-ASC</u>, 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

- **122.** Convener Poster making Competition on 31.10.2022 by Physithon The Physics Society, under the aegis of Centenary Celebrations of University of Delhi.
- 123. Convener 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.
- 124. Convener of Intra-college slogan writing competition held on 10<sup>th</sup> August 2022, on the theme "*Har Ghar Tiranga*" under the aegis of Azadi ka Amrut Mahotsava.
- 125. Invited as Resource Person in two-day National Seminar on "Dr. B. R. Ambedkar: A symbol of knowledge" held on 28<sup>th</sup> 29<sup>th</sup> September, 2022, organized by Dr. B. R. Ambedkar Center, Kalindi College.
- 126. 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).
- 127. 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.
- 128. As the Convener of the Event, organized an Interactive Session and Creative Writing Competition on <u>"Gender Sensitisation"</u> on 30<sup>th</sup> September 2021 under "Sagacious Scribblers" - The English Creative Writing Club, Kalindi College.
- 129. As the Convener of the Event, organized a <u>National Webinar</u> on "Understanding Ambedkar: Relevance of Dr. B.R. Ambedkar in Contemporary Era" on 8<sup>th</sup> October 2021, under Dr. B. R. Ambedkar Study Centre Kalindi College.
- 130. As the Convener of the Event, <u>organized a National Webinar</u> on <u>"Fight against Tobacco"</u> organized by Anti-Tobacco Committee in collaboration with IQAC, Kalindi College, University of Delhi on 16<sup>th</sup> October 2021.
- 131. As the Convener of the Event, organized a <u>National Workshop</u> on <u>"Story Lines in Music and</u> <u>Poetry"</u> on 28.1.2022, under "Sagacious Scribblers" - The English Creative Writing Club, Kalindi College.
- 132. As the Coordinator of the event, organized a <u>Talk</u> on <u>"Anti-Ragging: A step towards Awareness</u> and Interdiction of Menace" on 9<sup>th</sup> March 2022, under Anti-Ragging Committee, Kalindi College.
- **133**. 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.

- 134. As the Convener of the Event, organized an Alumna Talk on <u>"Creative Writing in the age of Instagram"</u> on 27.4.2022 under "Sagacious Scribblers" The English Creative Writing Club, Kalindi College.
- 135. Organized a National Webinar as Co-ordinator on "An introduction to Measurement of Light" at Department of Physics, Kalindi College Google Meet platform, University of Delhi on 13<sup>th</sup> May, 2020.
- 136. Organized an e-Rangoli Competition as Convener on 8<sup>th</sup> July 2021in the college.
- 137. As the "Member Secretary" College Complaint Committee, organized a Seminar on "<u>Gender</u> <u>Sensitization</u>" 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 Nager 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 College Complaint Committee in collaboration with Delhi police.
- 138. As the "Member Secretary" College Complaint Committee, organized a Workshop on "<u>Women and Law</u>" 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 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 issues with the students. Students enjoyed the informative discussions in the workshop.
- **139**. 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.
- 140. As the Convener of Physcom Society organized a talk by Prof. Vinay Gupta from Department of Physics and Astrophysics on "Thin Films" on 21.10.13.
- 141. Organized the Annual academic and cultural full day event "Bits and Bytes" on 30<sup>th</sup> January 2013. The eminent speakers of the event included Prof. Kirti Ranjan from 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 <u>"Large Hadron Collider"</u> and Prof. V. K. Panchal delivered his talk on "Artificial <u>Intelligence</u>" and "<u>Big Bang</u>" followed with 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**

- 142. Awarded the <u>"Best Teacher in University of Delhi, Award for College Lecturer :2012-2013</u>" from the Chief Minister Smt. Shiela Dixit, awarded by Directorate of Higher Education sanctioned by Hon'ble Lt. Governor, Delhi and received <u>Prize money of Rs One Lac</u>.
- 143. 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.
- 144. Awarded certificate of enrollment as Life Member of the "Indian Association of Physics Teachers" Kanpur.

- 145. Awarded certificate of Appreciation for securing 100% in 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.
- 146. Awarded Certificate of Merit by CSIR-UGC NET for clearing Junior Research Fellowship (JRF) and Eligibility for Lectureship.
- 147. Qualified Graduate Aptitude Test (GATE) in Engineering in the year 1996.
- 148. Awarded Certificate of Merit by CBSE under National Scholarship Scheme for obtaining 33<sup>rd</sup> position at National Level in class X.
- 149. Awarded Degree by Annamalai University in the year 1996 for successfully completing Bachelor of Education in Physics with First Division in Written Examination.
- 150. 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.
- 151. 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 Lecturer, Seminar and Paper reading Sub-Committee of Physical Society.
- **152.** Awarded Certificate in Computer Studies by the CADCOS, New Delhi for successfully completing the course with "A" Grade in Basic Programming.
- **153**. Awarded Certificate of Merit for standing first in the college in B.Sc. (H) Physics, Part I in the year 1990-1991.
- 154. Awarded Certificate of Merit for standing first in the college in B.Sc. (H) Physics, Part III in the year 1991-1992.
- Awarded Certificate for successfully completing Junior Diploma (two-year course) in Classical Vocal Music in First Division with Distinction in Practicals in the year 1987.
- 156. Awarded Certificate for successfully completing Senior Diploma (two-year course) in Classical Vocal Music in First Division with Distinction in Practicals in the year 1989.
- 157. Awarded Certificate of Participation in Hindi Speech Competition held in connection with the 126<sup>th</sup> Birth Anniversary celebrations of Swami Vivekanand in the year 1989.
- 158. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Third Position in English Recitation (Senior) at Zonal Level in 1988-1989.
- 159. Awarded Certificate of Merit by Directorate of Education, Delhi for securing First Position in Sanskrit Recitation (Senior) at Zonal Level in 1988-1989.
- 160. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Second Position in Extempore Hindi at Zonal Level in 1988-1989.
- Awarded Certificate of Participation by Directorate of Education, Delhi in the Science Fair in 1988.
- 162. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Second Position in Folk Song (Senior) at Zonal Level in 1987-1988.
- 163. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Second Position in Group Song at Zonal Level in 1987-1988.
- 164. Awarded Certificate of Merit by Directorate of Education, Delhi for securing First Position in Qwali (Senior) at Zonal Level in 1987-1988.

- 165. 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.
- 166. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Second Position in the Project "Water Works Sysyem" in the Science Fair at Zonal Level in 1987.
- 167. Awarded Certificate of Merit by Directorate of Education, Delhi for securing Third Position in Sanskrit Recitation at Zonal Level in 1986-1987.
- 168. Awarded first prize in Inter-College Solo Classical singing competition in LEHREN 2012 in Teacher's Talent Competition.