


FACULTY PROFILE PERFORMA

Title (Ms/Mr/Dr/Prof)	Dr	First Name	Rachana	Last Name	Kumar	Photograph
Designation	Associate Professor					
Department	Physics					
Address (Official)	Department of Physics, Kalindi College, New Delhi-110008					
Phone No.	9811104857					
Email	rachanabkumar@gmail.com					
Education						
Subject	Institution		Year	Details		
B.Sc. (Hons.) Physics,	Hindu College, University of Delhi		1984	Sixth rank in the University		
M.Sc. Physics,	University of Delhi		1986	First Rank in the University (Gold Medalist)		
Ph.D.	Maastricht University, Maastricht, The Netherlands		1997			
Post Doctorate	Center of Excellence in Nanotechnology, Asian Institute of Technology (AIT), Bangkok, Thailand		2009-11			
Career Profile						
Organisation/Institution	Designation		Duration	Role		
Kalindi College, University of Delhi.	Present Designation, Associate Professor.		Since 1991 till presently:	Teaching Undergraduate students		
Centre of Excellence in Nanotechnology, Asian Institute of Technology,	Post Doc Fellow, Visiting faculty		2009-2011	Research		

Department of Biochemistry, Maastricht University,	Ph .D. Researcher	1993-1997	Research leading to a PhD degree
Solid State Physics Laboratory, DRDO, Ministry of Defence, Government of India	Scientist B	1987-1991	Research related to Mercury Cadmium Telluride based photoconductive detectors.
Rajdhani College, University of Delhi.	Lecturer(Adhoc)	1986-1987	Teaching Undergraduate students

Awards & Distinctions

- **Award for College Lecturer** (2014-15) by Directorate of Higher Education, Government of Delhi
- Visiting Fellow (2009-2011), Centre of Excellence in Nanotechnology, Asian Institute of Technology (AIT), Thailand
- **K.S. Krishnan Gold Medal** for obtaining First Rank in M.Sc., 1986.
- **Dr Meghnad Saha Award** (for Physics) for original popular science writing in Hindi, 1992, by the Government of India (Department of Science and Technology).
- **Certificate of Merit** by the Ministry of Defence, 1991 for work in the field of processing of infrared detectors.
- **Award for literature** for Neo-literates by Government of India (Ministry of Education and Culture)
- Jagmohan Krishan Shikshak Samman, 2006 by Balkan –Ji-Bari International
- Ambassador for Peace Prize from Universal Peace Federation (Interreligious and International Federation for World Peace)
- Award of Junior Research Fellowship by National Physical Laboratory, 1987
- Qualified the National level entrance examination for M.Sc. at IIT, 1984
- National Scholarship (1984-86) for meritorious performance in B.Sc. (Hons.) Physics

- Undergraduate (1984) and Postgraduate Science Merit Awards (1986) from the Faculty of Science, University of Delhi
- National Merit Certificates in Secondary School Examinations.

Appointed Member in University of Delhi Committees

Technical Contribution/Curriculum Development

- Appointed **Member** of the “Committee of Courses for Under-Graduate Studies” in Physics by Department of Physics and Astrophysics for the period 05.09.2019 to 04.09.2021.
- Appointed as **Member** of the team (2019) for preparing the Model Problem Set and Model Question paper for “Electromagnetic Theory” paper, B.Sc (Honours) Physics by Department of Physics and Astrophysics, University of Delhi.
- **Member** of Curriculum Development Committee, University of Delhi for Physics, 2004; developing discipline courses in Physics of II and III years of B.Sc. course and I year Foundation course
- **Member** of Committee of Courses (Hons, P.G. and Research Studies) of University of Delhi (1999-2001).

Administrative Contribution

Currently

- **Member** Purchase Committee
- **Convenor** Laboratory Fund Distribution Committee
- **Convenor** “Criterion II: Teaching, Learning and Evaluation” ,NAAC
- **Science Representative** IQAC Core Committee
- **Member** “Academic Audit Committee” , NAAC
- **Member** Girl’s Hostel Committee
- **Member** Infrastructure Space Committee

- **Member** Internal Assessment Moderation Committee
- **Convener** “Innovation Club”
- **Member** “ ARIIA Committee
- **Member** Admission Core Committee, 2019-20, B.Sc (Hons) Physics

Also served as:

- **Member**, Golden Jubilee Fund Distribution Committee, 2017
- **Convener**, Laboratories, NAAC Execution Committee
- **Convener**, Preparation of SSR Report, Department Portfolio and Power point Presentation of Physics Department for NAAC Evaluation
- **Teacher In Charge** of Physics Department (2014-16), also served previously as Teacher In Charge in two terms in 1992 and 2002
- **Member**, Selection Committee for Permanent /Adhoc appointments in Physics Department several times
- **Convener and Deputy-Superintendent** of Theory Semester Examinations for Entire College in the session 2014-2015
- **Convener** of Admission Committee of Entire College in 2012-13
- **Member, Selection Committee** for appointment of project fellow in IUAC.
- **Member**, Screening Committee, 2014
- **Convener**, Physics Models for participation in Antardhavni , 2013-15
- **Member Reception Committee** for Lehren, Gyan Lehren, Annual Day
- **Member**, Gandhi Study Circle, 2004-2009
- **Member**, Sports Committee, 2004-2009
- **Member**, Library committee, 2007-2008
- **Deputy-Superintendent** of Physics Practical examination in the session 1992, 2002-04, 2005 rotation wise.
- **Convener**, LCD, Mike Committee during Vice Chancellor visit to Kalindi College
- **Co-Convener** Annual Day celebrated in FICCI Auditorium on the occasion of Silver Jubilee of the college

- **Head Examiner/ Paper setter** for Physics theory papers and External examiner for practical examinations appointed by University of Delhi several times
- One of the **Founder members** of Physics Department of the college

Organization of co-curricular activities

- **Convener**, Farewell Committee
- **Co-Convener**- Mehndi Club, Lehen
- **Convener**, “Science Fiction Writing” in Dimenzie , 2017
- **Organised** Bits and Bytes Festival under Physcom Society of the college (2015-16). The events comprised Scientific Rangoli, Paper presentation, Poster making and Quiz
- Served as **Convener** of various cultural activities under the Annual Cultural Festival **LEHREN** in the College including
 - Inter college Fashion show (1999)
 - Creative Writing in Hindi-Katha Kahani
 - Quiz
 - Graffiti
 - Choreography
 - Caption writing
 - Mehndi
 - Just A Minute
 - Rangoli
 - Stage decoration
 - Fresher Welcome Function with Miss Fresher contest
 - Served as Judge several times in Student’s Activities like Power Point Presentations, Painting Competition, Slogan Writing

Research Interests/Specialization

- **Specialization:** Solid State Physics
- **Research Area of Interest:** Nanotechnology, Self- assembly of gold silica Nanoparticles by dip coating technique

Research Guidance

While doing Post Doctoral research in AIT, Bangkok gave research guidance to Ph.D student Mr Z.A. Khan in the field of Self Assembly of gold silica nanoparticles. This collaboration resulted in three published research papers of international repute. Have guided students of B.Sc. (H) Physics III year for various projects.

Teaching Experience (Subject/Courses taught)

Total teaching experience – 29 years, one of the Founder Members of Physics

Department. **Theory**

- Mathematical Physics
 - B.Sc (H) Physics I Year, Annual mode
 - B.Sc (H) Physics I Year, Semester mode
 - B.Sc (H) Physics I Year, FYUP mode
 - B.Sc (H) Physics I Year, CBCS mode
- Electromagnetic Theory
 - B.Sc (H) Physics III Year, Annual mode
 - B.Sc (H) Physics III Year, Semester mode
 - B.Sc (H) Physics III Year, FYUP mode
- Electromagnetism
 - B.Sc (H) Computer Science I year, Semester mode
 - B.Sc (G) Group A, Annual mode
 - Subsidiary for B.Sc(H) Mathematics, Annual mode
- Solid State Physics
 - B.Sc (H) Physics III Year, Annual mode
- Thermal physics

- B.Sc (H) Physics II Year, Annual mode
- Optics
 - B.Sc.(H) Physics II Year, Annual mode

Practical Labs:

- Took various Practical labs related to Optics, Thermal Physics, Electricity, Mechanics for B.Sc (H) Physics (Annual/Semester/FYUP/CBCS mode) and B.Sc, Physical Sciences/ B Sc Programe, B.Sc(Group A)/subsidiary for B.Sc(H) Maths/ Discipline course for Chemistry(H) FYUP mode

Publications (Peer Reviewed/Indexed Journals)

S No.	Year of Publication	Title	Journal (Name of the journal. Vol Issue ISSN)	Co-Author
1	2017	To study the generation of thermo emf as an alternative source of energy using different thermocouples under various modified parameters	Yearly Academic Journal, Kalindi College, 15, pp 217-222. ISSN 2348-9014	Seema Gupta et al
2	2016	Effect of Chitosan capping on optical response of thin films of colloidal gold and silica nanoparticles	Yearly Academic Journal, Kalindi College, pp 31-38, ISSN 2348- 9014	ZA Khan
3	2013	Effective Medium Theory Applied to Colloidal Solution of Gold Nanoparticles and Alternating Gold- Silica multilayer Thin Film Composites.	Journal of the Chemical Society of Pakistan 35 (2), pp 250 – 256. ISSN 0253-5106	ZA Khan, J Dutta
4	2012	Multilayer thin films of colloidal gold	The Canadian Journal of	ZA Khan, J Dutta

		and silica nanoparticles: Effect of polyelectrolyte coating	Chemical Engineering, 90 (4), pp 919 – 924, 2012. ISSN 1939-019X	
5	2011	Optical thin film filters of colloidal gold and silica nanoparticles prepared by a layer by layer self- assembly method	Journal of Materials Science, pp 1-6, 2011. ISSN 0022-2461	ZA Khan, WS Mohammed, GL Hornyak, J Dutta
6	2009	Self- assembly of citrate stabilised gold with chitosan/PDDA capped silica colloidal nanoparticles	Proceedings of the 3 rd Thailand Nanotechnology Conference 2009- Health, Energy, Environment	ZA Khan, J Dutta
7	1999	Fibrin induced platelet procoagulant activity in clotting plasma- Role of GPIIb/ IIIa and GP Ib/ IX Receptors and von Willebrand factor.	Blood, 93(2); pp 564-570, ISSN 0006-4971	Beguin S, Keularts I, Coller B, Hemker HC
8	1997	Thrombin, fibrin and platelets; a resonance loop in which Von Willebrand factor is a necessary link	Thrombosis and Haemostasis 77, State of the Art Issue XVth Congress ISTH, ISSN 0340-6245	Beguin S,
9	1996	Inhibition of platelet mediated tissue factor induced thrombin generation by the Mouse/Human chimeric antibody,	Journal of Clinical Investigation, 98(3), pp.863-874. ISSN 0021-9738	Reverter JC, Beguin S, Kessels H, Hemker HC, Coller BS
10	1995	The effect of fibrin clots and clot bound thrombin on the development of platelet procoagulant activity	Thrombosis and Haemostasis, 74 (3), pp962-068,ISSN 0340-6245	Beguin S, Hemker HC
11	1994	The influence of fibrinogen and fibrin on thrombin generation- evidence for feedback activation of the clotting system by clot bound thrombin.	Thrombosis and Haemostasis, 72(5), pp 713-721, ISSN 0340-6245	Beguin S, Hemker HC

12	1991	A $n^{2+}-n^+-n$ Blocking Contact Structure for an Intrinsic Photoconductor.	Infrared Physics, Vol. 31, No 5, 1991, pp. 435-440. ISSN 0020-0891.	Vishnu Gopal and K.C.Chhabra,
13	1991	Dependence of Responsivity on the structure of a Blocking Contact in an Intrinsic HgCdTe Photoconductor	Infrared Physics, Vol 31, No,1,pp.101-107. ISSN 0020-0891.	Sudha Gupta, Vishnu Gopal and K.C.Chhabra
14	1990	Doped Surface Layer Characteristics for HgCdTe Photoconductive Detectors	<i>InfraredPhysics</i> (Pergamon Press), Vol 30, No 4, pp 329. ISSN 0020-0891.	Vishnu Gopal and K.C.Chhabra,
15	1989	Accumulation Layer Characteristics for Responsivity Enhancement of HgCdTe Photoconductors	Proceedings of National Seminar on Recent Trends in IR Devices and their Defence Applications, New Delhi,17-18 March	Vishnu Gopal and K.C.Chhabra,

Published Books

- i) **Rachana Kumar**, On the procoagulant effect of fibrin. A resonance loop between fibrin- von Willebrand factor – platelets and thrombin (published doctoral thesis), Unigraphic, Maastricht ISBN 90-9010707-X, 1997.
 - ii) Four published books in Hindi. One out of them on popular science-“Vigyan Nai Rahen” awarded by **Department of Science and Technology, Government of India**. Another book awarded by **Ministry of Education and Culture, Government of India**.
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Seminar/Workshop/Conferences Presentation/Organisation

Conferences Presentations:

1. Presented a paper on **“The effect of antibodies against GPIIb/IIIa on the resonance loop between platelet activation and thrombin generation during the clotting of plasma”**. in AZU, Utrecht, Netherlands, October 1994
2. Presented a paper on **“ Inhibition of Glycoproteins IIb/IIIa damps the resonance loop between platelet activation and thrombin generation in platelet rich plasma”** in Cambridge, England in Annual Meeting of the European Society for Clinical Investigation, April 1995
3. Presented a paper on **“Fibrin bound thrombin, but also fibrin alone, elicits procoagulant activity in platelet rich plasma”** in Jerusalem, Tel Aviv in XVth Congress ISTH, June 1995.
4. Presented a paper on **“ Effect of fibrin clots (with/without bound thrombin) on the development of platelet pro-coagulant activity”** in Houthalan, Belgium in NVTH Symposium, January 1996
5. Presented a paper on **“Thrombin, fibrin and platelets: a resonance loop in which van Willebrand factor is a necessary link”** In Florence, Italy in XVIth Congress ISTH, June 1997
6. Presented a paper on **“Multilayer thin films of colloidal gold and silica nanoparticles- Effect of polyelectrolyte coating”** in Pathumthani, Thailand in Nanothailand Conference, Nanotechnology for a sustainable world, November 2010
7. Presented a paper on **“Maxwell-Garnett (M-G) theory simulations of alternating gold-silica colloidal multilayer thin film composites** in Pathumthani, Thailand in Nanothailand Conference, November 2010
8. Presented a paper on **“Thin film multilayers of gold and silica nanoparticles by layer by layer technique”** in Bangkok, Thailand in International Conference of Nanotechnology, December 2011
9. Presented a paper on **“Sustainable Development Goals and the Development Gaps across Indian states”** in International Conference on “ Spatial Decision Support Systems for United Nations Sustainable Development Goals” held at Kalindi College, February, 2017
10. Poster presentation **“To study the generation of thermo-emf as an alternative source of energy using different thermocouples under various modified parameters”** along with Dr Seema Gupta in National Seminar on “A Paradigm Shift

towards Empowerment of Women” held at Kalindi College ,February, 2017. The poster was awarded the Best Poster Presentation (in sharing) in the subtheme: “Alternative sources of energy”.

11. Presented a paper on “**Machine learning and its applications to Physics**” in National Conference on “Emerging trends in Information Technology” (UGC sponsored), organized by Department of Computer Science, Kalindi College, August , 2019
12. Presented a poster on “**Determination of Optical and Dielectric parameters for single to multiple interfaces using Fresnel’s equations**” along with Dr Seema Gupta in National Conference on Advanced Materials: theory and Applications (NCAMTA) held in Hansraj College, University of Delhi, September, 2019
13. Presented a paper on “**To study Carbon Nanotube (CNT) based gas sensors, effect of gas adsorption and their selective gas sensing properties**” along with Dr Seema Gupta in 2nd National Conference on “ New Trends in Nanotechnology and Applications”, NTNA 2020 organized by Department of Physics, ARSD College, University of Delhi, February, 2020
14. Poster Presentation in same Conference on “**Single Walled Carbon Nanotube As Environmental Sensor For NO₂ And NH₃**” along with Dr Seema Gupta and Mr Ankur Anand.

Organization of conferences/workshops/special lectures

- **Member, Organizing committee, Convener Registration** of the UGC Sponsored **National Seminar on Emerging Trends in Science and Technology: Photonics and Nanotechnology**, 1-2 February, 2005, Kalindi College, University of Delhi.
- **Convener Ist Vigyan Vividha, Inter College Science festival**, 29-30 Jan 2014, Kalindi College, DU. and a seminar entitled “**Role of Science and Technology in women’s empowerment**” was also organized at this occasion. The speakers were Dr. Krishan Lal, Past President, Indian National Science Academy as Chief Guest, Dr. R.B. Srivastava, Director, Defence Institute of High Altitude Research, Leh, DRDO, Ministry of Defence as Guest of honor, Prof. Dinabandhu Sahoo, a distinguished scientist and Professor at the Department of Botany, University of Delhi. A brochure was released on the occasion with blessings from honorable Dr APJ Abdul Kalam. There was an overwhelming response and students showcased their talents in various events like Paper presentation, Debate, Skit, Scientific Rangoli, Project, Model and Poster making. Overall 20 colleges of the Delhi University participated in different events apart from the host college, Kalindi.

- **Convener**, One day Workshop on ‘**Einstein and his year of miracles**’ by Prof A.K.Ghatak, 24th Sept 2014, Kalindi College, DU partially sponsored by National Academy of Sciences along with Dr Pushpa Bindal and Dr Punita Verma.
- **Convener**, Organized one day **Workshop** on ‘**LIGHT**’, 1st September 2015 to celebrate the year 2015- the international year of light as declared by the United Nations. by Prof A.K.Ghatak , 24th Sept 2014, Kalindi College, DU partially sponsored by National Academy of Sciences along with Dr.Pushpa Bindal. Three highly distinguished scientists and academicians were invited as subject experts, who delivered the lectures in this workshop. The details of the experts were as follows: Prof. V. P. Sharma (Padma Shree and Padma Bhusan, Add. Dir. Gen. of ICMR and Chairman in Public Health Research CRDT, IIT Delhi), Prof. Ajoy Ghatak (Shanti Swarup Bhatnagar Awardee, Formerly Prof. of Department of Physics, IIT Delhi), Prof. A. Pathak (Prof of Department of Physics, JIIT- Noida).
The workshop schedule also included physics lab visit by experts for demonstration of experiments based on light including fiber optic pressure sensor, diffraction and interference experiments with lasers and other sources of light.
- **Co- Convener**, Subtheme “Alternative Sources of Energy”: **National Seminar** on “**A Paradigm Shift towards Empowerment of Women**” held on 3-4 February, 2017 at Kalindi College.
- **Resource Person** for two sessions in NAAC sponsored **National Workshop** on “Skill Enhancement at Institutions of higher learning: training today for tomorrow” organized by Kalindi College on 11th January, 2019
- **Convener** , **National Webinar** on “Science, Society, and Exponential Change: Reimagining the future , Speaker Dr Pratibha Jolly, Former Vice Principal, Miranda house on 13th May, 2020
- **Convener** , **National Webinar** on “Emerging out a Winner in Lockdown”, Speaker Dr Anula Maurya, Vice Chancellor, JR Sanskrit University on 14th May, 2020

Conference/Workshop Participation

1. **National Seminar** on “Emerging trends in Science and Technology: Photonics and Nanotechnology”, Kalindi college, University of Delhi, February 2005
2. **Conference** on Recent Advances in Nano-Science and Nano Technology, Institute of Technology and Management, Gurgaon, Haryana, October 2007
3. Indo Australia **Symposium** on Multifunctional Nanomaterials , Nanostructures and Applications, Department of Physics and Astrophysics, University of Delhi, December 2007

4. Quantum Mechanics: Theory and Applications, DDU, University of Delhi, November 2008
5. **National Symposium** Indian Physics and Mega Projects –Research on the Frontiers, D S Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, February 2009
6. Participated in the **1st Vigyan Vividha, Inter College Science festival**, 29-30 Jan 2014, Kalindi College,
7. **Workshop** on ‘Einstein and his year of miracles’, 24th Sept 2014, Kalindi College
8. **Workshop** on ‘Light’, 1st Sept 2015, Kalindi College
9. Participated in a series of **Workshops** (2015) organized by Department of Physics, University of Delhi for discussion on various theory and Lab papers of FYUP batch.
10. **Workshop** on “Optics and its applications in Information Technology” organized by Bennett University, Greater Noida on October 1, 2016
11. **International Conference** on “ Spatial Decision Support Systems for United Nations Sustainable Development Goals” held at Kalindi College on 2-3 February, 2017
12. **National Seminar** on “A Paradigm Shift towards Empowerment of Women” held at Kalindi College on 3-4 February, 2017
13. **Conclave** on Biodiversity for everyone’s life, held at Miranda House, University of Delhi on 31st August, 2018
14. One day **Seminar** on “Life and Works of Prof M.N.Saha and Prof.S.N.Bose” held at Jaypee Institute of information Technology, Noida on 15th September, 2018
15. **Nominated** by the college to participate in United Nations World Teachers Day Celebrations and Higher Education and Research Summit for a cleaner world held at India International Centre, New Delhi on 5th October, 2018
16. **Resource Person** for two sessions in NAAC sponsored National Workshop on “Skill Enhancement at Institutions of higher learning: training today for tomorrow” on 11th January, 2019
17. One day **Workshop** “An exposition of perishable products of North- East and its challenges, organized by IBSD-Kalindi College Centre on 6th March, 2019
18. **National Conference** “Biotechnology in present era: Impact on human life and environment” organized by Maitreyi College, University of Delhi and Department of biotechnology, Govt of India, 23 August, 2019
19. **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
20. **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
21. **Webinar** on “Online Teaching and Learning Technology” organized by ARSD College on 27th April, 2020

22. **Webinar** on “Being happy by choice not chance in Covid Times” organized by Department of Mathematics, Kalindi College on 1st May, 2020
23. **Webinar** on “ Search, Research and Publication Ethics” organized by Library , Kalindi College on 4th May, 2020
24. **Webinar** on “ Understanding the Corona Virus: some good news” organized by Department of Mathematics, Kalindi College on 5th May, 2020
25. **Webinar** on “ Cyber Crime and Prevention during lockdown” organized by Mata Sundri College on 6th May, 2020
26. **National Webinar** on “What is light: Evolution of Quantum Theory” organized by Kalindi College on 12th May, 2020
27. **National Webinar** on “ An introduction to Measurement of Light” organized by Kalindi College on 13th May, 2020

Participation in Professional Courses

- 4-week **Orientation** Course 1999 conducted by Centre for Professional Development in Higher Education (CPDHE) University of Delhi
- 3-week Professional Development Programme, **Refresher Course**, 2001 in Physics and Electronics conducted by CPDHE University of Delhi
- 3-week Professional Development Programme, **Refresher Course**, 2002 in Physics and Electronics conducted by CPDHE University of Delhi
- Participated in **Faculty Development Programme** on “Recent Trends in Research Methodology, E content, Mathematical and Statistical methods in open education world “, 17th -23rd December, 2019 organised by Kalindi College in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College.

Projects (Major Grants / Collaborations)

- **Principal Investigator** along with Dr Seema Gupta in **Innovation Project** “Study of variation of Thermo-emf using different thermocouples under various modified parameters and its subsequent generation for thermoelectric applications.” (2015-16)
 - Student team comprising of three students of Physics (H) III Year and three of II year was involved in the project.
 - **Status:** Completed
- **Principal Investigator** along with Dr Seema Gupta and Dr Savita Sharma in **Innovation Project** (College funded) “To elucidate Fresnel’s equations for reflection of electromagnetic waves at an interface between dielectric media and to correlate the

reflection and transmission coefficients of lossless and lossy materials for implication in energy conservation and its potential applications”.(2018-19)

- Student team comprised of four students of Physics (H) II Year.
- **Status:** Completed
- **Principal Investigator** along with Dr Seema Gupta and Mr Ankur Anand in **Innovation project** (College funded) “To study Carbon nanotube based gas sensors, effect of gas adsorption and their selective gas sensing properties” -2019-20. The project has collaboration with Nanotechnology Group, Solid State Physics Laboratory, DRDO, Ministry of Defence.
 - Student team comprises of two students, Kamini and Priyanka of BSc (H) Physics II Year and two students, Ananya and Abhika of BSc (Program) II Year
 - **Status:** Ongoing

Student welfare

- Physics teacher representative of Physcom society 2014-16 and in 2002-2004. Organised ‘**Bits and Bytes Festival**’ under Physcom Society of the college. The events comprised Scientific Rangoli, Paper presentation, Poster making and Quiz which provided opportunity to students to present their talents in diverse fields
- Took students to National Physical Laboratory and IUAC for exposure to research facilities
- Took students to an excursion tour to Vaishno Devi temple, Jammu , 2006
- Referred students to Solid State Physics Laboratory for research work and also for summer internships.
- Provided LOR (Letter of Recommendation) to students for Universities in India and abroad for summer projects and Ph.D.
- Mentor to students groups to discuss their Academic, Carrier related and myriad of other queries.

Community Service

- Have contributed articles in college magazine. Given several radio talks on popular science, written stories for children in popular children magazines like *Nandan* and newspaper like Times of India
- **Member of NGO –Balkan ji Bari International** which organizes activities for children and children’s writers like painting competitions, plays, poetry and story writing and other welfare activities.

Lifelong Membership

Member of Indian Association of Physics Teachers (IAPT)