

Dr. Amandeep Kaur

Assistant Professor

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CAREER OBJECTIVE

To seek a career for sharing my knowledge and experience with students and gain more experience into education and teaching field.

KEY SKILLS:

- Excellent explanation skills
- Can teach the students as per their level
- Good Communication
- In depth knowledge of subjects
- Can speak for long time
- Punctual and Patient

TEACHING EXPERIENCE

- Assistant Professor in Instrumentation Department, Bhaskaracharya College of Applied Science, University of Delhi from 17. August.2015 to date.
- Guest Lecturer in Electronics Department, Bhaskaracharya College of Applied Science, University of Delhi as guest lecturer from August 2014 to November 2014.

EDUCATIONAL QUALIFICATION

- **PhD** from Department of Electronic Science, University of Delhi South Campus under the supervision of **Prof. Mridula Gupta** and **Prof. P.K.Bhatnagar** from **January 2012-November 2015**.

- **Thesis Title:** “Fabrication and Characterization of Carbon nanotube and Polymerbased Vapor Sensor”
- A composite sensor using functionalized multi walled carbon nanotubes and Poly (methyl methacrylate) (PMMA) has been developed for detection of volatile organic compounds. These composites can be easily shaped, withstand high servicetemperatures and are mechanically resistant. The composite has been made by solution processing technique. The so developed sensor is very fast (i.e. low response and recovery time), highly sensitive (10 ppm of methanol vapors) and cost-effective.
- Publications: International Journal : 10
- Conferences International and National : 16
- M.Sc. Electronics from Department of Electronic Science, Delhi University in 2011-Scored 78%
- B.Sc. Electronics from SGTB Khalsa College, Delhi University in 2009- Scored 66%
- 12th from CBSE Board with 74% in 2006
- 10th from CBSE Board with 85% in 2004

REWARDS AND RECOGNITION

- Honored by Vice Chancellor University of Delhi for coordinating G-20 Event organized by Bhaskaracharya College of Applied Science in association with Shivaji college and SPM college under the guidance of Culture Council, December 2023.
- Won 2nd prize in 100 meter Race on sports day organized by Bhaskaracharya College of Applied Science on February 2023.
- Won 1st prize in Oral presentation in National Conference of Material Science at Mewar University, Chittorgarh in October 2014
- Qualified UGC-NET in June 2012
- Got Rank 2 in Delhi University M.Sc(H) Electronics Entrance Exam
- Achieved 2nd position in debate about Nuclear deal at SGTB Khalsa College, New Delhi in 2008
- Awarded 2nd prize for meritorious performance in the 39th Youth Parliament statelevel completion held in 2004-05

ACADEMIC ACTIVITIES ORGANIZED

- Contributed as faculty coordinator in organizing an Expert Lecture on Digital Marketing on February 12, 2024.
- Contributed as faculty coordinator in organizing a visit to the

National Physics Laboratory on October 4, 2023.

- Contributed as faculty coordinator in organizing “Engineering Trivia” on the occasion of Engineer’s Day on September 15, 2023.
- Resource person in ‘Entrance Examination Preparation Classes and Counseling Session’ from January 29-February 12, 2022.
- Organized an ‘Electronic Waste Awareness Program’ in association with the Department of Electronics on August 29, 2021.
- Coordinated an Inter college online technical quiz ‘Quarantine 2020’ on May 19, 2020.

WORKSHOP AND FDPs ATTENDED

- Attended one week online workshop Recent development in field of Electronics organized by Department of Electronics Science, University of Delhi from July 25-29, 2022
- Workshop on "Online Banking with Cyber Safety" delivered by Mr. Rajinder Kumar Dhingra (Regional Manager, State Bank of India) organised by the college on November 11, 2022
- Successfully completed One-Week Online National Faculty Development Program on Development of MOOCs, e-Content and Teacher’s e-Kit in Four Quadrant Format organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) from December 8-14, 2022
- Attended training program on New Measurement Technologies and Simulation Techniques in Electronics organized by IEEE Electron Device Society Chapter , Department of Electronic Science held during October 17-18
- Attended one day National Seminar on Financial literacy: Basics, Issues and Challenges organized by Bhaskaracharya college of Applied Sciences funded by Indian Council of social science research (ICSSR), Ministry of Education, Govt of India and SBI on 21st April 2022
- Attended workshop on ‘Event Coordination and Database Management’ organized by NAAC committee of the college from November 22-25, 2021.
- Completed one week (online) Interdisciplinary Faculty Development Programme on ‘Youth and Climate Change ‘organized by Bhaskaracharya College of Applied Sciences and Catholice college postgraduate & research Department of Botany, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) from October 27- November 3, 2021.
- Participated in a workshop on ‘Decoding Beams’ organized by the Digitization and Automation Committee of the college on September 1, 2021.
- Participated in a workshop on ‘Decoding Brahma’ organized by the Digitization and Automation Committee of the college on August 24, 2021.

- Completed one week (online) Interdisciplinary Faculty Development Programme on ‘Microsoft Tools for Creating Effective Teaching and Learning Environment’ organized by Vivekananda College in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi from June 7-13, 2021.
- Completed five-day FDP cum workshop on ‘Artificial Intelligence’ organized by Department of Electronics, Sri Aurobindo College, University of Delhi from April 2-6, 2021.
- Completed NPTEL AICTE Faculty Development Programme online certification on ‘Introduction to Embedded System Design’ during September-December, 2020.
- Participated in two-day online intercollege Faculty Development Programme on ‘Understanding Google Classroom’ organized by Automation and Digitization committee of the college from May 13-14, 2020.
- Participated in three-day online intercollege Faculty Development Programme on ‘Online Transaction of Courses with Moodle-LMS’ organized by Automation and Digitization committee of the college from May 8-10, 2020.
- Attended Faculty development program on Research Methodology, Administrative Reforms to raise the quality of Educational Institutions and e-Procurement, PCB Designing at Bhaskaracharya College of Applied Sciences

ACTIVITY ORGANIZED AS CONVENER OF MODERN AND FINE ARTS CLUB (2021-2023)

- Organized Intercollege Musical palate competition on the occasion of Srijan 2023 on April 13, 2023.
- Organized an “Intercollege Anime Drawing Competition” in Srijan 2022 on April 8, 2022. Participants drew/painted various animations and cartoons.
- Organized an Intra college activity named “Old and Used Material Collection for College Decoration for Srijan 2022 “from April 2-7, 2022
- Organized an intercollege “College Flag designing Competition” on 20th June 2022.
- Organized an Intra college “wall painting event on the theme “United Nations - Sustainable Development Goals’ by DNAmics, the society of the Department of Biomedical Science and Akriti, Modern and Fine Arts Club of the college on 23rd January 2023.
- Organized a two-hour workshop on ICT Skills for Lab Staff - Poster and Certificate Designing using Canva in collaboration with the College Department of Computer Science of March 3, 2022.
- Organized a logo designing competition on the theme of 75 years of India’s independence and 25 years of college establishment on February 17 2022.
- Organized an Intercollege Online Painting Competition on the theme of ‘Major developments of India in 75 years of Independence’ on August 13, 2021.

ACTIVITY ORGANIZED AS CONVENER OF ECO CLUB (2023-24)

- Organized Plantation drive on the occasion of Van Mahotsav week on July 11, 2024.
- Organized Slogan Writing Competition on the occasion of World Environment Day on June 5, 2024.
- Initiated campaign " plastic Lao thaila le jao " in collaboration with Lakshya organization to make free our Delhi from single use plastic on May 3, 2024. 10 kg of plastic was collected in May.
- Organized "Bird Nesting and Sparrow Breeding Activity" in college premises on the occasion of World Earth Day on April 22, 2024.
- Organized Inter College Hands-on Workshop on Paper Recycling on March 20, 2024.
- Organized an outreach activity 'Swachhta drive' on March 11, 2024.
- Organized an Intercollege 'Best out of the waste competition' on March 7, 2024.
- Organized an Intercollegiate 'Flower arrangement Competition' in collaboration with the garden committee on February 29, 2024.
- Organized an outreach activity 'A Water Cleaning and Conservative Initiative at Chhat Ghat' in collaboration with Sant Nirankari Foundation and Ministry of Culture at ITO Bridge, Delhi on February 25, 2024.
- Organized an Intercollege 'Introductory Session on Ao sware yamuna Kinare' in collaboration with Sant Nirankari Foundation and Ministry of Culture on February 7, 2024
- Organized an outreach activity on 'Sankalp sabha on Red Light ON Gaadi OFF' on November 3, 2023.

TECHNICAL SKILLS

- Programming Languages: C, C++, FORTRAN, Assembly Language, P-Spice, Multisim Stimulation, LABVIEW, Proteus and MATLAB

POSITION OF RESPONSIBILITY

- Guided Projects of undergraduate students at Bhaskaracharya College of Applied Science.
- **2021-22:** Project title: IoT- Based Face Mask Detection using Raspberry Pi 3.
- **2020-21:** Project title: Auto-Intensity Controlled Solar LED Street light

- Convener of Modern and Fine Arts Club at Bhaskaracharya College of Applied Science since July 2021.
- Member of various clubs and committees (Website and Internet committee, Annual Report committee, NIRF, Music Fine Arts, Training and Placement, Canteen etc) at Bhaskaracharya College of Applied Science
- Organizer in various activities such as Quiz, Expert lecture and Workshops at Department and College level.
- Member of Syllabus Revision committee and Paper setting committee.

CERTIFICATION

- Completed online course on “Introduction to Programming with MATLAB” from Coursera on January 12, 2020.
- Completed online course on “Control Systems made Simple” from Udemy on April 10, 2020.
- Completed online course on “Introduction to Process Control and Instrumentation” from Udemy on June 23, 2020.

PROJECTS DONE

- Material Science laboratory, Department of Electronic Science 2012. Fabricated polymer light emitting diode employing P3HT polymer. Liquid solution of P3HT was made keeping toluene as solvent. Thin films of this solution were made and were characterized by Absorption and PL spectroscopy. Finally, a LED was fabricated keeping ITO as anode and Al as cathode.

PERSONAL DETAILS

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|--------------------------|---|
| □ Husband's Name | Mr. Gagandeep Singh Arora |
| □ Date of Birth | 21 st March 1989 |
| □ Home Town | New Delhi |
| □ Nationality | Indian |
| □ Languages Known | English, Hindi & Punjabi |
| □ Interests | Reading, Online Researching, travelling and Interacting with People |

LIST OF PUBLICATIONS

Book Chapters

1. Manoj Kumar Tiwari, Amandeep Kaur, Nanotechnology Development: A Paradigm Shift in Science and Technology in Innovative Approaches in Basic and Applied Sciences for Societal Development, ISBN No: 978-93-80117-85-0
2. Nanoengineered Polymer Composites and Their Applications: A Systematic Assessment of Synthesis Methods *By Amandeep Kaur, Shikha Madan Book edited by Verma, R.K., Kesarwani, S., Xu, J., & Davim, J.P. (Eds.). (2023). Polymer Nanocomposites: Fabrication to Applications (1st ed.). CRC Press. <https://doi.org/10.1201/9781003343912>*
3. Recent advances in carbon nanotubes-based sensors **Amandeep kaur**, Jitender Kumar, and Avtar Singh in Book Low Power Designs in Nanodevices and Circuits for Emerging Applications, 1st Edition, 2023, Imprint CRC Press, Pages13 eBook ISBN9781003459231

Journal Papers

1. **Kaur.A**, Sharma.S, Sumit Asthana, Sushil Kumar Pal, Anshuman Singh , Vishal Kumar, Vivek Kumar, Face Recognition Based on Image Processing in an Advanced Robotic System, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 10 Issue: 07 |July 2023
2. Amandeep kaur, Swati sharma, Manoj k. Tiwari, Jitender kumar, Srijan, Shreeparna talukdar, Performance enhancement of Iot-based automatic face mask detector as preventive safety measured, International Journal For Research Engineering Applications and Management, Volume: 9 Issue: 09 December 2023
3. Effect of Physicochemical properties of analyte on the selectivity of PMMA:functionalized multiwalled carbon nanotube composite sensor, **Amandeep Kaur**, Inderpreet Singh, Amit Kumar, Peta Koteswara Rao, Pramod Kumar Bhatnagar, Material science in semiconductor processing, 41, 26-31(2016) ISSN:1369-8001, Impact factor-2.2
4. Enhancement in the performance of MWCNT:PMMA composite thin film ethanol sensor through appropriate nanotube functionalization, **Amandeep Kaur**, Inderpreet Singh, Jitender Kumar, Chhavi Bhatnagar, Shiv Kumar Dixit , P. K. Bhatnagar, P. C. Mathur, José A. Covas and Maria C. Paiva, Material science in semiconductor processing 31, 166-174, 2015, ISSN:1369-8001, Impact factor-2.2.

5. A Environment friendly highly sensitive Ethanol vapor sensor based on Polymethylethacrylate: Functionalized-Multiwall Carbon Nanotubes Composite. Amandeep Kaur, Inderpreet Singh, Jitender Kumar, Devinder Madhwal, P. K. Bhatnagar, P. C. Mathur, C. A. Bernardo and M. C. Paiva, *Advanced Science and Engineering Medicine* , 5 1–5, 2013, ISSN: 2164-6627, Impact factor-0.8.
6. Enhancement of efficiency of a conducting polymer P3HT:CdSe/ZnS quantum dots hybrid solar cell by adding SWCNT for transporting photo generated electrons, Shiv Kumar Dixit, Shikha Madan, **Amandeep Kaur**, Devinder Madhwal, Inderpreet Singh, P.K.Bhatnagar, and P.C.Mathur , and C.S. Bhatia in *Journal of Renewable and sustainable Energy Vol.5*, 2013 ISSN 1941-7012, Impact factor: 1.51.
7. Study of relaxation dynamics of photogenerated excitons in CuInS₂ quantum dots Inderpreet Singh, S. Madan, **A. Kaur**, J. Kumar, P.K. Bhatnagar, and P.C. Mathur, *MRS Communications Vol.4* 2014 ISSN: 2159-6859 Impact Factor :1.250.
8. Effect of Surfactant Assisted Dispersed Graphene on Sensitivity of MWCNT-Alcohol Sensor, Anita Kumari, Neetu Prasad, **Amandeep Kaur**, shiv kumar dixit, P.K.Bhatnagar, P.C.Mathur. Published in *American Institute of Physics (AIP) proceedings in 58th DAE-solid state physics symposium*, 2013.

Patent Published

Filed Indian Patent entitled: ‘Overhead Mobile Charging System For Electric Vehicles’ Patent Application No. 202411004456 A

Applicants: Dr. Manoj Kumar Tiwari, **Dr. Praduman Prasad Singh**, Amandeep Kaur, Date of filing- January 23 , 2024, Date of Publication- February 09, 2024

International Conference

1. Optimizing the 12T Hybrid 1-Bit Full Adder Circuit for Low Energy Applications, R Lorenzo, A Singh, **A Kaur** - 2023 1st International Conference on Circuits, Power, 2023
2. Impact of Underlap/Overlap on Source Engineered Tunnel FET, A Shakya, AK

Mishra, T Bhadauria, A Singh, **A Kaur** - 2023 1st International Conference on Circuits, Power, 2023

3. **Amandeep Kaur**, Women of the 21st century: A Blooming tree, International conference, Human Rights, National and International Issues and Challenges, 22-23 February 2020
4. Gurkiran Kaur, **Amandeep Kaur**, Anwar Shahzad Siddiqui, Munna Khan , Conglomeration of Artificial Intelligence and Nanotechnology organized by Centre for Nanoscience and nanotechnology, Jamia Millia Islamia, 6-7 March 2019
5. **Amandeep kaur**, Jitender Kumar, Inderpreet Singh, Anita Kumari, Neetu Prasad, P. K. Bhatnagar and P. C. Mathur, Nanostructure Graphene and Chemically Functionalized Multiwalled Carbon Nanotube based gas Sensors, Indo-Canadian Symposium on Nano-Science and Technology, NIE, Mysore 2013 (presented)
6. **Amandeep Kaur**, Jitender Kumar, Inderpreet Singh, C.A.Bernardo , M C Paiva, P. K. Bhatnagar and P. C. Mathur, Alcohol sensors based on functionalized MWCNT- polymer composites, IWPSD, 2013, P-82 (presented)
7. **Amandeep Kaur**, Inderpreet Singh, Jitender Kumar P.K.Rao, P. K. Bhatnagar and P. C. Mathur, Fabrication and Characterization of Alcohol Sensor based on composite of thermoplastic polymer and functionalized multiwalled carbon nanotube, ICAFM 2014 (presented)
8. **Amandeep Kaur**, Inderpreet Singh, P.K.Bhatnagar, P.C.Mathur, J.A.Covas and P.C. Paiva, Alcohol sensor based on functionalized MWCNT-polymer composite, IWPSD, 2013, p-82. (presented)
9. Prmatma C.Mathur, **Amandeep Kaur**, Inderpreet Singh , Comparison of functionalized multi-walled carbon nanotubes for sensing applications, SPIE Nanosystems in Engineering Medicine 2012, Korea (accepted)
10. Jitender Kumar, Shikha Madan, Inderpreet Singh, **Amandeep Kaur**, P.K.Bhatnagar, P.C.Mathur, Effect of Confinement on the Electronic Structure and Electron-Phonon Interaction in CDS_{Se} Quantum Dots, IWPSD, 2013, p-381.

National Conferences

1. Presented paper in the National E-conference on Industry 4.0 and Society 5.0 on Role of health Care Instruments in Overcoming Covid Pandemic organized by department of Management science 27-28 August 2022.
2. **Amandeep kaur**, Jyoti Bansal, Jitender Kumar, Devinder Madhwal, Inderpreet Singh, Single Walled Carbon Nanotube based sensor for Chlorobenzene Vapor Detection, NSRTMMP 2011, Gopeshwar (presented)
3. Devinder Madhwal, Shikha Madan, Rohini Bhardwaj, Jyoti Bansal, Shiv Kumar Dixit, Neetu Prasad, Anita Kumari, **Amandeep Kaur** , Conducting Polymers and Nanomaterials –Fabrication and Analysis of LEDs, Solar Cells and Sensors, NWNDA-2011, SSPL, Delhi, INDIA (presented).
4. **Amandeep Kaur**, Khyati Gautam, Inderpreet Singh, Shiv Kumar Dixit, R.K.Garg, P.K.Bhatnagar, Functionalization of carbon nanotube and development of its

compositesensor with PMMA for detection of harmful organic vapors, NCMS, 2014, p-1026. (presented)

5. **Amandeep Kaur** and Geeta Bhatt, Carbon Nanotubes – A Suitable Candidate for Waste Water Treatment, 1st National Conference on Clean and Green Energy: The chemical and Environmental Aspects held on 16-17, February 2018, pp108
6. **Amandeep Kaur**, Utilization of CO₂ in Synthesis of Carbon Nanotube, 2nd National Conference on Clean and Green Energy: The chemical and Environmental Aspects held on 26-27th September 2019, p 67

DECLARATION

I hereby declare that the above furnished information is true and correct to the best of my knowledge.