

Dr. Amit Kumar

<https://publons.com/researcher/3837656/amit-kumar/publications/>(**h-index: 7, CLARIVATE, Web of Science**)

<https://www.scopus.com/authid/detail.uri?authorId=57243657700>(**h-index: 8, Scopus**)

<https://scholar.google.co.in/citations?hl=en&user=VmZZFTYAAAAJ>(**h-index: 8, Google-Scholar**)

<https://orcid.org/0000-0002-6858-3770>

<https://www.youtube.com/@amitkumarDU>

DoB: 18 August 1980
M. No.: 09868007267/8076138700
E-mail: amit.kumar@bcas.du.ac.in

Official Address: Department of Electronic Science, Bhaskaracharya College of Applied Sciences (University of Delhi) Dwarka, Sector-2, New Delhi-110075.

Current Position:

Professor in the Department of Electronic Science, Bhaskaracharya College of Applied Sciences.

Recent Administrative Contributions:

Nodal Officer (NIRF-2024), Nodal Officer (Exams, AY 2022-23), NSS Programme Officer (for three AYs 2020-23), AMC convener (AY 2023-24), Convened Energy & Green Audits, ISO Certification, Campus Cleanliness (NAAC, 2023)

Education:

- **Ph.D. (Electronics)** from University of Delhi in June 2006.

Thesis Title: Optical and electrical characterization of electroluminescent conjugated polymer-MEHPPV and development of its light emitting devices

- **M.Sc. (Electronics)** from Department of Electronic Science, University of Delhi, securing 75% in 2002.
- **B.Sc. (Hons.) Electronics** from AcharayaNarenderDev College, University of Delhi, securing 76% in 2000.
- XII (CBSE) in 1997.
- X (CBSE) in 1995.

Teaching Experience:

College/University	Post Held	Time Period		Total
		From	To	
Bhaskaracharya College of Applied Sciences (University of Delhi)	Associate Professor	28/01/2019	Continued	5 years
Bhaskaracharya College of Applied Sciences (University of Delhi)	Assistant Professor	28/01/2011	27/01/2019	8 years
Sri Aurobindo College (University of Delhi)	Assistant Professor (temporary)	23/09/2006	27/01/2011	4 years 4 months
ShyamLal College (University of Delhi)	Lecturer (ad-hoc)	14/09/2005	22/09/2006	1 year
AcharyaNarendraDev College (University of Delhi)	Lecturer (ad-hoc)	13/08/2004	14/04/2005	8 months

Publication in International Journals (Scopus Indexed): (11)

1. "Improved recognition rate of different material category using convolutional neural networks" by AbhayShukla, GauriKalnoor, Amit Kumar, N. Yuvaraj, R. Manikandan, M. Ramkumar, **Materials Today: Proceedings, 81 (2) 947-950 (2023)**.
<https://doi.org/10.1016/j.matpr.2021.04.307>
2. "Performance enhancement of solar photovoltaic system for roof top garden" by Prasad, AraniRajendra, Shankar, Ramalingam, Patil, Chandrashekhar K., Karthick, Alagar, Amit Kumar, Robbi Rahim, **Environmental Science and Pollution Research, 28 (36), 50017 - 50027 (2021)**,<https://doi.org/10.1007/s11356-021-14191-z>
3. "Energy and Economic Analysis of Curved, Staright, and Spiral Flow Flat-Plate Solar Water Collector" by U Muthuraman, R. Shankar, Vijay Kumar Nassa, AlagarKarthrick, ChandrabhanuMalla, Amit Kumar, P Manoj Kumar, Robbi Rahim and MurugesanBharani, **International Journal of Photoenergy, vol. 2021, Article ID 5547274, 11 pages, (2021)**.
<https://doi.org/10.1155/2021/5547274>
4. "Effect of physicochemical properties of analyte on the selectivity of polymethylmethacrylate:Carbon nanotube composite sensor for detection of volatile organic compounds" by AmandeepKaur, Inderpreet Singh, Amit Kumar, PetaKoteswaraRao, Pramod Kumar Bhatnagar, **Materials Science in Semiconductor Processing, 41, 26-31 (2016)**.
<https://doi.org/10.1016/j.mssp.2015.08.010>
5. "Self-trapping mechanism in green phosphorescent dye-doped polymer light-emitting diodes" by DevinderMadhwal, SS Rait, A Verma, A Kumar P. K. Bhatnagar, P. C. Mathur, K Tada, M. Onoda, **PhysicaScripta 81, 065701 (2010)**.
<https://doi.org/10.1088/0031-8949/81/06/065701>
6. "Increased luminance of MEH-PPV and PFO based PLEDs by using salmon DNA as an electron blocking layer" DevinderMadhwal, S.S. Rait, A. Verma, Amit Kumar, P.K. Bhatnagar, P.C. Mathur, M. Onoda, **Journal of Luminescence 130, 331-333 (2010)**.
<https://doi.org/10.1016/j.jlumin.2009.09.012>
7. "Development and characterization of an efficient bio-white polymer light-emitting diode with red and green phosphorescent dyes as dopants", by DevinderMadhwal, S. S. Rait, A. Kumar, A. Verma, K. Tada, M. Onoda, P.K.Bhatnagar and P.C.Mathur, **Journal of Material Science, 45, 3300 (2010)**.
<https://doi.org/10.1007/s10853-010-4343-5>
8. "Enhanced luminance of MEH-PPV based PLEDs using single walled carbon nanotube composite as an electron transporting layer", Inderpreet Singh, DevinderMadhwal, A Verma, A Kumar, S Rait, I Kaur, P.K. Bhatnagar, P.C. Mathur. **Journal of Luminescence 130, 2157-2160 (2010)**.
<https://doi.org/10.1016/j.jlumin.2010.06.011>
9. "Improved electrical and optical properties of MEH-PPV light emitting Diodes using Ba buffer layer and porphyrin" by Amit Kumar, P. K. Bhatnagar, P. C. Mathur **Applied Surface Science 252, 3953 (2006)**.
<https://doi.org/10.1016/j.apsusc.2005.09.028>
10. "Optical characterization of Alq₃/MEHPPV composite films" by Amit Kumar, P.K.Bhatnagar, P.C.Mathur, K.Tada, M.Onoda, **Journal of Material Science 40, 3849 (2005)**.
<https://doi.org/10.1007/s10853-005-2556-9>
11. "Temperature and electric field dependences of mobility in light emitting diodes based on poly [2-methoxy-5- (2-ethylhexoxy)-1, 4-phenylene vinylene]" by Amit Kumar, P. K. Bhatnagar, P. C. Mathur, M. Husain, SandipSengupta, Jayant Kumar, **Journal of Applied Physics 98, 024502 (2005)**.<https://doi.org/10.1063/1.1968445>

Publication in UGC CARE (Grp. I listed) Journals: (6)

12. "A study on effects of gate dielectrics in CNT-FET using non-equilibrium Green's function modeling" **Mapana Journal of Sciences**. 22(3), 149-157, 2023.
<https://doi.org/10.12723/mjs.66.8>
13. "Optoelectronic transitions in spherical Gold Nanoparticles: A Simulation Study," by Amit Kumar, **Mapana Journal of Sciences**.21(4), 85-97, 2022.<https://doi.org/10.12723/mjs.63.5>
14. "Analyzing the properties of quantum dots for optical applications," by Amit Kumar, **VigyaanPrakash**.20(1), 2022.<https://www.vigyanprakash.in/article.php?id=20.1.3>
15. "Advances and Challenges in VLSI designs for Nanotechnology" by Amit Kumar, 37(7),9 - pages, **Physics Education**, (ISSN: 0970-5953), 2021
<https://www.physedu.in/pub/2021/PE21-07-763>
16. "Study of Electro-optic interactions for Silver nanoparticles" by Amit Kumar, **Journal of Advanced Scientific Research** 12(4): ICITNAS 223-229 (2021), (ISSN: 0976-9595).
<https://sciensage.info/index.php/JASR/article/view/1563>
17. "Suggestive pedagogy for learning quantum confinement effects through online simulator Quantum Dots" by Amit Kumar, 37(7), 7-pages, **Physics Education**, (ISSN: 0970-5953), 2021.
<https://www.physedu.in/pub/2021/PE21-06-749>

Publication in Other Peer Reviewed Journals: (10)

18. "A study on supply chain management through emerging technologies" by Amit Kumar, **MAIMS Journal of Management** forthcoming issue, Volume 19, Number 1 (March 2024 issue).
19. "A Comparative Analysis of Electronic Waste Management in India and China" by Amit Kumar, **Akademios**, 2022, 132-152, (2022).
<http://akademios.in/2022/08/a-comparative-analysis-of-electronic-waste-management-in-india-and-china/>
20. Kumar A, *SciLAB console as a tool to explain Lissajous figures*, **Bulletin of IAPT (Journal of Education in Physics and related Areas)**, 14(3), 86-89, (2022).
<https://www.indapt.org/docs/publications/bulletin/2022/03-2022.pdf?id=1448594944>
21. Kumar A, *Proposed evaluation scheme for university's Physics & related courses*, **Bulletin of IAPT (Journal of Education in Physics and related Areas)**, 14(2), 47-51, (2022).
<https://www.indapt.org/docs/publications/bulletin/2022/02-2022.pdf?id=878304973>
22. "Electronic waste management in India: Review" by Amit Kumar, **IITM Journal of Management and IT**, 12 (1), 19-23, (2021).
https://www.iitmjanakpuri.com/iitmjournal/data/2021_Vol12_No1_it4a.pdf
23. "Teaching Physics through emerging disruptive technology of Augmented reality" by Amit Kumar, **Bulletin of IAPT (Journal of Education in Physics and related Areas)**, 13 (3), 86-90, (2021)
<https://www.indapt.org/docs/publications/bulletin/2021/03-2021.pdf?id=2121081447>
24. "Wavelet Signal Processing: A review for recent applications" by Amit Kumar, **International Journal of Engineering and Techniques**, 6(6), 52-60 (2020)
<http://www.ijetjournal.org/archives/ijet-v6i6p7.html>
25. "Sanskrit as Language for Artificial Intelligence and Robotics" by Amit Kumar, **Ajanta**, Volume IX, Issue II, April-June 2020. <https://doi.org/10.6084/M9.FIGSHARE.12853862>
26. "Enhanced performance of Single Layer MEH-PPV Polymer light Emitting Diodes: Effect of Alq3 Electron Transporting Layer anLiF:Al Cathode Contact on Single Layer MEH_PPV Polymer LEDs" by Amit Kumar, P.K. Bhatnagar, **International Journal of Creative Research Thoughts**, 8 (7), 3893-3897 (2020). <http://doi.org/10.1729/Journal.24174>
27. "Learning through Biomimicry" by Amit Kumar, **International Journal for Scientific Research and Development** [Conference 1 : NCIL 2015] (2015): 153-156.
<http://www.ijesrd.com/articles/NCILP038.pdf>
28. "Essence, trends and proposed design for Microbial sensing" by Tania, Srishtiprajapati, SarikaJha, Sohil Jain, Tejpal, Jitender Kumar, Amit Kumar, **International Journal for Scientific Research and Development** [Conference 1 : NCIL 2015] (2015): 30-33.
<http://www.ijesrd.com/articles/NCILP008.pdf>

Reviewer for Scopus index Journal:

Reviewed the manuscript for Journal: Bioinspired, Biomimetic and Nanobiomaterials (Scopus Indexed Journal with Web of Science Impact Factor 1.732) in June 2023.

Publication in International Conferences Proceedings Abroad: (4)

1. Paper: "*Analysis of current trends in higher education for SUN universities*" by Amit Kumar in International Conference on The Roles of Intellectuals for Enhancing Cultural Diversity along the Silk Roads, organized by International Association for Silk Road Studies (IASS) of SUN, National University of Mongolia, on November 24-25, 2021. [Online Mangolia]. http://www.sun-silkroadia.org/board/view?bd_id=IASS&wr_id=657
2. *Paper: "Development and Characterization polyfluorene based light emitting diodes and their color tuning using forester resonance energy transfer"* by P. C. Mathur, Amit Kumar, P. K. Bhatnagar, 10th Asian conference on solid state ionics, (12-16 June, 2006) [Sri Lanka] https://doi.org/10.1142/9789812773104_0090
3. *Abstract: "Electric Field and Temperature Dependence of Hole Mobility in Light Emitting Diodes Based on MEHPPV"*, Amit Kumar, P. K. Bhatnagar, P. C. Mathur, SandipSengupta, Jayant Kumar, ICMAT 2005 & IUMRS-ICAM (2005) [Singapore].
4. *Abstract: "Improved electrical and optical properties of MEH-PPV light emitting Diodes using Ba buffer layer and porphyrin"* by Amit Kumar, P. K. Bhatnagar, P. C. Mathur K. Tada and M. Onoda, ICMAT 2005 & IUMRS-ICAM (2005) [Singapore].

Paper Presented in International Conferences in India: (17)

5. Presented paper entitled "*A status review on publications in predatory journals in India*" International Conference on Academic Reserach in Developing Countries, organised by Departement of Chemistry, Nagarjuna College (A), Nalgonda, Terlangna (August 29-30, 2022)
6. Presented paper entitled "*Progress & Challenges in Chip Designs*" in One Day International Multidisciplinary e-Seminar on "Trends In Research" organized by Internal Quality Assurance Cell (IQAC) & Research Committee of RajarshiShahu Arts and Commerce College, Rukadi, Rotary Club of Ichalkaranji Central dated June 30, 2022.
7. Presented paper on '*Characterizing co-axial CNT-FET by varying gate dielectric*' in one day International E-Conference on '*Advances in Material Science, Bio-Science and Information Technology (ICAMSBSIT-2022)*' organized by Faculty of Science in association with Internal Quality Assurance Cell held on February 26, 2022.
8. "*AnalysingZnS quantum dots suitability for optical applications*" by Amit Kumar in the Second International Web Conference on Advanced Material Science & Nanotechnology (2nd NANOMAT-2021) organized by Department of Physics, VinayakVidnyanMahavidyalaya, NandgaonKhandeshwar, Dist. Amravati, Maharashtra, India from 23rd November – 25th November, 2021.
9. "*Electronic Waste Management in India & China: A Comparative Analysis*" by Amit Kumar in International Conference on Commerce, Management & Interdisciplinary Subjects (ICCMIS) organized by the Department of Commerce and International Business, School of Business Studies, Central University of Kerala, held on 28-29 October 2021.
10. Abstract: "*Study of Electro-optic interactions for Silver nanoparticles*" by Amit Kumar in Two-days International Conference on Innovative Trends in Natural and Applied Sciences

organized by Mahatma Gandhi College Of Science, Gadchandur, Tah. Korpana, Dist. Chandrapur, India. (17 -18 August 2021).

11. Abstract: *COMPARATIVE STUDY OF EMERGING ROOFTOP PHOTOVOLTAIC FOR URBAN GREENERY*, by Amit Kumar, in International Conference on Technological Advancements in Mechanical Engineering, Department of Mechanical Engineering, AMET, Chennai, India. (15-16 June 2021).

12. Full Paper: *"Advances in VLSI Designs due to Recent Progress in Nano Technology"* by Amit Kumar, International Conference on "Recent Advancements & Innovations in Management, Media, Science, Technology, Education and Legal Issues" held at JIMS Engineering Management Technical Campus, Greater Noida. (8th May 2021)

13. *"Role of National Education Policy on Rural Empowerment: Analysis amid Covid-19 Pandemic"*, Amit Kumar, AICTE Sponsored International e-Conference on Innovation in Rural Empowerment, Social Dynamic & Welfare in India, Nandha College of Technology (15 September 2020).

14. *"Electronic Waste, as a New Indo-Chinese Battlefield"*, Amit Kumar, Virtual International Conference on Innovation for New Normal, Govt. Degree College, Kakatiya University (23-25 August 2020).

15. *"Online-learning a Success Story: Report of One Day National Workshop on Primers of Artificial Intelligence"*, Amit Kumar, Virtual International Conference on Innovation for New Normal, Govt. Degree College, Kakatiya University (23-25 August 2020).

16. *"Recent Progress in Moletronics: A Review"*, Amit Kumar, International e-Conference on Cutting Edge Smart Materials & Nanotechnology, SadguruGadageMaharaj College, Karad, Kolhapur (20-21 August 2020).

17. Abstract: *"Wavelets as new mathematical tool for signal Processing"*, Amit Kumar, International e-conference on Advances in Information Technology, Bussiness Management and e-Commerce, The QuideMilleth College for Mens, Medvakkam, Chennai, TN (4-5, July 2020).

18. Abstract: *"Role of disruptive technologies in education during & after Covid-19 scenario"*, Amit Kumar, Multidisciplinary National e-Conference "Rejuvenation through Innovation: Need of the hour", Govt. P. G. College (B+ NAAC), Una, Himachal Pradesh (1-2, July 2020).

19. *"Indian Universities on Crossroads to Define New Normal"*, Amit Kumar, International e-conference on "Digital Education: Scope and Challenges in India, BhartiyaShikshanMandal& Ch. Charan Singh University (Meerut), (27-28, June 2020).

20. *"Clues for Improvements in Science Education from Ancient Indian Education System"*, Amit Kumar, International webinar on "Indian Culture: An Evergreen Relevant Foundation for Global Peace", Modern College of Professional Studies, (Ch. Charan Singh University), (June 12-13, 2020).

21. *"Current Status & Future Challenges for Electronic Industry in India"*, Amit Kumar, International e-Conference on Covid-19, Pandemic: Issues, Challenges and opportunities for trade, e-commerce and Employment, Economic & Commerce Department, ShriAsaramjiBhandwaladar Arts, Commerce and Science College,Aurangabad, Maharashtra (May 29, 2020).

Paper Presented in National Conferences: (25)

22. "Prospective End of Moore's Law & Imminent Remedies" at the session 25th May, 2024 of the National Webinar on the RECENT TRENDS IN PHYSICAL SCIENCE held during on 25th May, 2024, hosted by the Department of Physics, Government Model Science College, Rewa (M.P.).
23. **Invited talk** on "Electronic Waste Issues & Remedies-An Indian Perspective," at MahatmaPhuleMahavidyalaya, Kingaon (Latur) on October 10, 2023 during Online National Seminar Series October 1-25, 2023.
24. Presented a paper entitled 'A simulation study on optoelectronic transitions in metallic nanoparticles, organized by Society Towards Advancement of Rural Education in association with MaharanaPratap School of Pharmacy, Lucknow, held on September 05, 2023.
25. Presented a paper titled 'Material characterization using Python based toolkit' in the National e-Conference on Recent Advances in Engineering, Technology & Applied Sciences-2023 (RAETAS-2023), organized by Society Towards Advancement of Rural Education in association with MaharanaPratap School of Pharmacy, Lucknow, held on September 05, 2023.
26. Presented paper entitled "New Road Map for Academic Excellence Through Prospective Binary NAAC Accreditation" in NAAC sponsored Two day virtual Conference on Quality Enhancement of institutions of Higher Learning: Transformational Role of NEP 2020" Organized by Internal Quality Assurance Cell (IQAC). St. Aloysius College, Elthuruth, Thrissur, Kerala on 28th and 29th November 2022.
27. Presented a paper entitled "Sustainable Supply Chain Management Through Emerging Technologies:Literature Survey" in Two days National e-conference on "Industry 4.0 and Society 5.0" organised by Mahatma Gandhi Central University. (August 28-29, 2022)
28. Presented a paper entitled "UGC's Mentorship Programmes: Perusal & Perception" in the National Seminar on PROMOTING HUMAN VALUES AND CULTURE FOR PEACEFUL CO – EXISTENCE organized by Amity Centre for Sanskrit and Indic Studies, Amity School of Liberal Arts in Association with Academic Staff College Amity University Haryana dated 22nd July 2022.
29. Presented paper entitled "Emerging agriculture technologies: Current status review in Indian Perspective" in Two days National e-conference on "Sustainable agricultural innovations and transformations in India: Challenges and Possibilities" organized by MahatmaGhandhi Central University from April 23-24, 2022.
30. Presented e-poster entitled 'Search for natural carbon nanotubes in GUJCOST-DST' Sponsored Two Days Virtual National Conference on Advances and Innovations in Natural Product Research organized by B. Pharmacy College, Rampura held on February 18-19, 2022.
31. "Suggestive study on e-evaluation for university courses" by Amit Kumar at Indian Association of Physics Teachers – IAPT- RC1 (Delhi and Haryana) Annual Convention – 2021 (9-10 October 2021). <https://youtu.be/9KP2nYttvDE>
32. Abstract: "Simple Machine Learning algorithm for Business Forecasting" by Amit Kumar, National e-conference on Advances in Business, Management & Technology, At: Mahatma Gandhi Central University, Motihari, Bihar, (25-26 June 2021).
33. Abstract: "Study of Emerging Smart Irrigation Systems for Indian Farmers" by Amit Kumar in National Conference on Water Scarcity and Sustainability: A Jal Shakti Abhiyan Perspective, at AditiMahavidyalaya, University of Delhi, (9-March 2021). <https://sites.google.com/aditi.du.ac.in/jalshakti/abstract-book?authuser=0>
34. "Teaching Physics through Disruptive Technologies under NEP 2020" Amit Kumar, 8th Annual Convention organized by Indian Association of Physics Teachers, Indian Association of Physics Teachers (Delhi & Haryana Region) (10-11 October 2020).
35. **Abstract:**"Counteracting Indian Social Divide through National Education Policy 2020" Amit Kumar, National Webinar on Dimensions of National Education Policy 2020, Mahatma Gandhi ChitrakootGramodayaVishwavidyalaya, Chitrakoot, Madhya Pradesh (26-28 September 2020).

36. "Role of Recent Disruptive Technologies in Higher Education & National Education Policy 2020" Amit Kumar, National e-Conference on National Education Policy – 2020, Govt. P. G. College, Bilaspur(21-23 August 2020).
37. *Paper: "Computer vision: Adding more senses to Artificial Intelligence"* Amit Kumar, Recent Advances in Technology & Engineering (CRATE-2020), Dept. Compt Sc. & Engg. Vemu Institute of Technology (20-21 August 2020).
<https://doi.org/10.6084/m9.figshare.17711690.v1>
38. "Wavelet Signal Processing: An introduction & its recent application in Combat against Covid-19 Pandemic" Amit Kumar, National e-Conference on SDG-4, COVID-19 Re-calibrating Indian Education System, PHD Chamber of Commerce, New Delhi (24 July 2020).
39. "Online-teaching amid Covid-19 Pandemic: An Experience", Amit Kumar, National e-Conference on SDG-4, COVID-19 Re-calibrating Indian Education System, PHD Chamber of Commerce, New Delhi (24 July 2020).
40. "Recent trends in VLSI designs due to advances in Nanotechnology", Amit Kumar, National e-Conference on Emerging Trends in Physical Sciences, Arts, Science and Commerce College, Ramanadnagar (Burali) (22 July 2020).
41. *Paper: "Artificial Intelligence to Combat Corona Pandemic: Discussion Paper"*, Amit Kumar, National Conference on Industry 4.0: Exploring New Horizons and Challenges for New Normal Post Covid-19, JIMS Engineering Management Technical Campus, New Delhi (11 July 2020).
42. *Abstract: "Study of e-waste management in pre-Covid era with suggestions for post-Covid time in Indian perspective"*, Amit Kumar, National Webinar on "Environmental perspective of Covid-19", Mahatma Gandhi Central University (05 June 2020).
43. *Abstract: "Learning Physics through Augmented Reality"*, Amit Kumar, National Webinar on "Emerging Trends, Issues, Challenges & Opportunities Post Corona Crisis, Mahatma Gandhi Central University (30-31, May 2020).
44. "Suggestions for Higher Education in India during COVID pandemic", Amit Kumar, National webinar on "Impact of Covid-19 on India: Educational vis a vis Cultural Perspective, BhartiyaShikshanMandal,(Kashi) in association with IAMD (16-17, May 2020).
45. *Abstract: "Enhanced Performance of Single Layer MEH-PPV Light Emitting Diode using Alq3 Electron Transporting Layer and LiF:Al Cathode Contact"*, Amit Kumar, P. K. Bhatnagar, National Conference on Recent Trends and Advancements in Chemical Sciences, University of Delhi (29-31 March 2019).
46. *Abstract: "Circuit design and implementation for microbial detection and food quality analysis"* by Jitender Kumar, Amit Kumar, ShaliniSehgal, Vishal Singh, Ravinder Singh, KapilShrama, Manpreet K. Bagga, At innovation Conclave 25th – 26th October 2016, Organized by AcharyaNarenderDev College, University of Delhi, New Delhi.
47. *Paper: "Augmented Reality in Education"* by Amit Kumar, National Conference on "Striving & Thriving Towards Diffusion of Student-driven Research in Science and Technology for Inspired Learning" Maharaja Agrasen College, University of Delhi (16-17 October 2014).
<https://doi.org/10.6084/m9.figshare.12887090.v1>

Chapter in Edited Books:(6)

1. *Solving Schrodinger's Equation for Low-Dimensional Nanostructures for Understanding Quantum Confinement Effects*, in Sub-Micron Semiconductor Devices: Design and Applications, Edited By Ashish Raman, Deep Shekhar, Naveen Kumar. CRC Press (Taylor and Francis Group), 147-164 (18 pages). ISBN 9781003126393. (2022).<https://doi.org/10.1201/9781003126393>

2. *Role of Recent Disruptive Technologies in Higher Education & National Education Policy 2020*. In the Edited book: National Education Policy 2020. Neel Kamal Prakashan. (ISSN: 97893-87951-075) <https://doi.org/10.6084/m9.figshare.15657204.v2>
3. *Urgently adopted online teaching amid Covid-19 Pandemic: An Experience Sharing*. In the Edited Book: *Dynamics of Educational Psychology*. 1st Ed. October 2020. Asian Press Books (ISBN: 97893-90238-460) <https://doi.org/10.6084/m9.figshare.15834261.v1>
4. *Online-learning a success story: Report of One Day Online National Workshop on Primers of Artificial Intelligence*. In the Book: Digital Stress Management. 1 Ed. November 2020. Publisher: Asian Press Book (ISBN: 97893-90238-545) <https://doi.org/10.6084/m9.figshare.15834270.v1>
5. *Suggestive study for Indian Universities during Covid-19 Pandemic*. In the Edited Book: The Changing India amidst Covid-19 Catastrophe. Asian Press Books (ISBN: 97893-90238-286) <https://doi.org/10.6084/m9.figshare.12912443.v1>
6. *Study of Ancient Indian Education System to Get Clues for Improvements in Science Education amid Covid-19 Pandemic*. In the Edited Book: The Changing India amidst Covid-19 Catastrophe. Asian Press Books (ISBN: 97893-90238-286) <https://doi.org/10.6084/m9.figshare.12912386.v1>

E-contents:(5)

Authored more than 150 pages of *FIVE e-lessons/Chapters* and more than 30 animations which are published on www.illdu.edu.in (ILLU, DU) on the subject PH 301 Physics of Materials and Electronics <https://doi.org/10.6084/m9.figshare.12866921.v1>.

1. Semiconductor Theory
(<https://www.researchgate.net/publication/343888999> Semiconductor Theory)
2. Bipolar Junction Transistor
(<https://www.researchgate.net/publication/343889071> Bipolar junction Transistor)
3. Clipper & Clampers Circuits
(<https://www.researchgate.net/publication/343889081> Clipper and Clamper Circuits)
4. Diode based Power Supply
(<https://www.researchgate.net/publication/343888988> Diode based Power Supplies)
5. Transistor biasing
(<https://www.researchgate.net/publication/343889106> Transistor Biasing#fullTextFileContent)

Co-Investigator in 2 Research Projects:

○ Major Project entitled "Development of an accurate & reliable biosensor based on Raman Scattering & Photoluminescence emission in Single Walled Carbon Nanotubes for Medical Diagnostics and Mutation Detection in Diseased DNA" from Oct. 12, 2012 to Oct. 04, 2014, Sanctioned Amount 14.326 lakh from Department of Biotechnology, Ministry of Science & Technology, Govt. of India.

○ Minor Project entitled "Development of wireless sensor for detection and real time monitoring of microorganisms" from August 31, 2015 to November 4, 2016, Sanctioned Amount 4.5 lakh from University of Delhi under UG Research Initiative in College, Innovation Project 2015-16

Orientation & Refresher's Programme: (3)

1. Completed the Refresher's Course in Physics held at Center for Professional Development in Higher Education (CPDHE), (UGC-ASC) University of Delhi from Oct. 13 – Nov. 3, 2016.
2. Completed the 3 week Special Winter School held at UGC Academic Staff College, JamiaMilliaIslamia, New Delhi from 17 December 2014 to 08 January 2015.
3. Completed the Orientation Programme held at Center for Professional Development in Higher Education (CPDHE), (UGC-ASC) University of Delhi. June 25 - July 21, 2012.

FDPs & Workshops (At least One Week Duration): (52)

1. Participated Faculty Development Program for Outcome Based Education for effective Learning and Teaching organised by Academic & Administrative Development Centre, AMET University and Association of Indian Universities, New Delhi, from January 5-12, 2024.
2. Participated in One Week National Faculty Development Programme on "Integrating AUTODESK Fusion - 360 in Engineering subjects" organised by Department of Mechanical Engineering, Lendi Institute of Engineering & Technology, Andhara Pradesh in association with Autodesk (Academic & Learning Partner) from June 26-July 1, 2023.
3. Participated in the International Short Term Training Programme- IX "On Environment Pollution: A threat to Life Below Water & World Environment Day Celebration Week" organized by Raj Rishi Govt. Autonomous College from 5th -11th June 2023
4. Participated in the DST Sponsored Two Weeks Faculty Development Programme on "Development of Entrepreneurship and Innovation" from 29th May – 9th June 2023 in online mode Organized by Academy of Maritime Education and Training Deemed to be University, Chennai. During
5. Participated in Five days Online International FDP on "Application of Machine learning & Artificial Intelligence in Research & Innovations" held from 2nd – 6th May 2023 at regional College of Education Research & Technology, Jaipur.
6. Participated in Five Days Online Short term training Program on Recent Advancements in Medicinal Chemistry and Material Science held on 24-28th April 2023 Organised by Department of Humanities & Sciences (Chemistry) ,Vardhman Collge of Engineering, Kacharam, Shamshabad, Hyderabad in association with JNTU, Hydrabad.
7. Participated in the International Short Term Training Programme-VIII "Energy and Environment Conservation" organized by Raj Rishi Govt. Autontomous College from 18th -24th April 2023.
8. Participated and successfully completed Online Faculty Development Program (FDP) on "EMERGING TRENDS IN COMPUTING SCIENCE AND INFORMATICS" from 27.02.2023 to 03.03.2023. organized by Department of Computer Science & Engineering Sri Krishna College of Technology, Coimbatore
9. International Short Term Training Programme-V "On PRODUCTION AND REGULATION OF CHEMICALS AND TOXINS FOR ENVIRONMENTAL CONSERVATION " organized by Raj Rishi Govt. Autonomous College from 7 th -13th Dec. 2022.
10. Attended One Week Online Faculty Development Program on "Role of Chemistry in Advanced Engineering Materials (RCAEM-2022)" from 10th to 15th October, 2022 organized by the Department of Chemistry, Vasavi College of Engineering (A), Hyderabad.
11. One week Faculty Development Program On "Amazon Web Services" During the period of 22nd August 2022 to 27th August 2022 Organized by Megha Institute of Engineering and Technology for Women in collaboration with Brainovision Solution India Pvt. Ltd. & All India Council for Technical Education (AICTE)
12. One Week e-Workshop on "Materials and Manufacturing: Insights to Modern Technologies (MMIMT-2022)" organized by Department of Production & Industrial Engineering, BIT Sindri, Dhanbad from 1st August to 5th August 2022.
13. Participated in One Week FDP on RESEARCH TRENDS AND METHODOLOGIES IN MACHINE LEARNING during 25TH – 29TH, July, 2022, organized by Departments of Science & Engineering, Computer Science & Engineering (AIML), Computer Science & Engineering(CS), Computer
14. IEEE SPS Seasonal School on AI for Optimisation in Signal Processing (AIOSP) organised by IEEE Signal Processing Society Delhi Chapter from 11 July 2022 to 15 July 2022.
15. International Short Term Training Programme-3 on "Contrivance of Sustainable Development Goals (SDGs) for Environmental Conservation" organized by Raj Rishi Govt. Autonomous College from 24th -30th June 2022
16. One week FDP on ICT tools for effective teaching learning organized by Kamala Nehru Mahavidyalya, Nagpur from May 23-28, 2022.
17. One week NAAC sponsored online workshop on "Comprehending Quality aspects in NAAC Accreditation Process" organised by Jhulelal Institute of Technology, Nagpur, Maharashtra, from MAY 03-07, 2022.
18. Completed 'FDP on Deep Learning and its Applications' organized by the Department of Information Technology VelTechRangarajanDr.Sagunthala R&D Institute of Science and Technology held from January 17-22, 2022.

19. Five day's virtual lecture series "ANVESHAN" on the occasion of 'National Mathematics Day' organized by Department of Mathematics, SRMS College of Engineering & Technology, Bareilly held from 20-24 December, 2021.
20. *Online ATAL FDP on Quantum Computing from December 13-17, 2021*, from ATAL Academy, Amity Institute of Information Technology, Amity University Uttar Pradesh, Lucknow Campus.
21. Online International FDP on emerging trends in Nanotechnology, November 9-13, 2021 from Department of Basic Sciences, Vishnu Institute of Technology, Bhimavaram, AP in association with Physical Research Laboratory, Ahmedabad, Gujraat.
22. Online FDP on Learning through virtual LABS for technical institutions from October 18-22, 2021 from Department of Mechanical Engineering, Lendi Institute of Engineering and Technology, Jonnada in association with National Institute of technology, Karnataka, Surathkal.
23. Online International FDP on Research tools & Methodologies from September 27-October 1, 2021 from Department of Mechanical Engineering, Lendi Institute of Engineering and Technology, Jonnada.
24. AICTE sponsored One Week Online Short Term Training Programme from September 20-25, 2021 from Indo Global College of Engineering, Abhipur, New Chandigarh.
25. Online Six days Faculty Development Programme on Research Challenges in Cognitive Networks from September 20-25, 2021 organized by Department of Electronics and Communication Engineering, Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Chennai.
26. Online FDP on Graphical System Design in Engineering & Research Applications from September 6-11, 2021 from Department of Electronics & Communication Engineering, Vidyavardhaka College of Engineering, Mysuru in association with VI Solutions, Bengaluru.
27. Online FDP on Professional Ethics from August 2 - 6, 2021 from REVA University, Bengaluru.
28. Online FDP on Research Methodology from August 2 - 6, 2021 from Dr. D Y Patil School of MCA, Charholi, Pune.
29. *Online ATAL FDP on Electro spinning Nanofibers: Science, Technology & Applications from July 12-16, 2021*, from ATAL Academy, Indian Institute of Information Technology, Nagpur.
30. Online FDP on *Innovative Pedagogy for Effective teaching & e-learning during Covid Era* from June 2-8, 2021 conducted by Institution's Innovative Council (Ministry of Education initiative) IIMT College of Management, Greater Noida.
31. 2-Week Online International Short term training programme on Full Stack AI & Deep Learning Practitioner Approach during June 7- 19, 2021, from Department of Electronics & Computer Science in association with Academic Staff College, Koneru Lakshaiiah Education Foundation, Guntur, Andhra Pradesh.
32. *Online ATAL FDP on Recent trends in Digital Image Processing from June 7-11, 2021*, from ATAL Academy, Poornima Institute of Engineering & Technology.
33. 3-Week Online International FDP on *Research Perspectives on AI, ML, Data Science & IoT* during May 17- June 5, 2021, from Department of Electronics & Computer Science in association with Academic Staff College, Koneru Lakshaiiah Education Foundation, Guntur, Andhra Pradesh.

34. Online AICTE sponsored FDP on *Machine learning on Recent Trends and Applications Phase-I* during May 10-15, 2021, from Department of Electronics & Communication Engineering, SrinivasaRamanujan Institute of Technology, Ananthpuramu.
35. Online National FDP on *Research Methodology* from April 26-May 1, 2021, from Kamla Nehru Mahavidyalaya, Nagpur.
36. Online AICTE sponsored FDP on *Design of Nanoelectronics and Nanophotonic Devices using Advanced Software Tools* during April 26-May 8, 2021, from Department of Electronics & Communication Engineering, GITA Autonomous College, Bhubaneswar.
37. Online Short term training programme on Recent Advances in Industrial Robotics & Application during March 8-13, 2021 from Department of Mechanical Engineering, SRES's Shree Ramachandra College of Engineering, Pune under AICTE Quality Improvement Scheme.
38. *Online ATAL FDP on Data Science* from January 18-22, 2021, from ATAL Academy, *SAINT GITS College of Engineering*.
39. *Online ATAL FDP on Productivity Enhancement"* from November 3-7, 2020, from ATAL Academy, *National Institute of Technology, Warangal*.
40. *Online FDP on Machine Learning and Computer Vision Applications Research Challenges*, August 24-28, 2020 from National Institute of Technology, Silchar, Assam.
41. *Online FDP on Machine Learning held from August 10-14, 2020*, Organized by Department of Information Science and Engineering, VVCE, Mysuru.
42. *Online FDP on Educational Video Creation i.e. e-content development for teachers* from 22-27 July 2020, organized by RajashiChhatrapatiShahu College, Kolhapur.
43. *Online workshop on Emerging trends in Science & Technology: Issues in these unprecedented times* from August 4-8, 2020 organized by ShyamLal College, University of Delhi
44. 6-Days Online FDP on Future Nano Electronic Devices & Circuits from 6-10 July 2020, Deptt. of Electronics & Communication Engineering.
45. *Online ATAL FDP on Augmented Reality & Virtual Reality* from June 16-20, 2020, from ATAL Academy, *National Institute of Technology, Warangal*.
46. Online FDP on Internet of Things and Artificial Intelligence Applications, June 1-6, 2020, K L Deemed to be University, Guntur.
47. Online FDP on Moodle: Learning Management System, May 13-17, 2020, Sanatan Dharma College, AmbalaCantt.
48. Online FDP on Moodle: Learning Management System" May 07-12, 2020, from MGM University, Aurangabad.
49. "2-weeks *Online FDP on Managing online classes and co-creating MOOCs*" from April 20-May 06, 2020, from TLC, Ramanujan College, University of Delhi, Sponsored by MoHRD under Pt. MMM Mission on Teachers and Teaching.
50. "*FDP on Salesforce Fundamentals for Business Administration Specialist*" from 09-14, December 2019 ICT Academy at Department of Computer Sc., Ram LalAnand College.
51. "*Workshop on MOOCs, e-content development and Open Educational Resources*" from March 13-19, 2019 held at Center for Professional Development in Higher Education (CPDHE), (UGC-ASC) University of Delhi.

52. "ILLL Workshop (Tier II)" from 26th – 31st July 2010 organized by Institute of Life Long Learning (University of Delhi) at Sri Aurobindo College, Delhi.

Other Conferences, Workshops, Seminars, FDPs Participation (At least One day): (35)

1. Participated in the 53rd Edition of BRIDGE 2023 - Delhi (A High Impact Industry-Institute Interaction Event of India) Organized by ICT Academy held on 16 Oct 2023 at Hyatt Regency, Delhi
2. Participated in One day Industry Oriented Workshop on Recent Trends and Research Perspectives on VLSI and Power Electronics organized by School of Electronics Engineering (SENSE) at VIT-AP University, Amaravati on 4th October 2022.
3. National Seminar (Virtual) "On "Recent NAAC Accreditation Process with Special Emphasis on SSR"" Under the Umbrella of IQAC & MPHEQIP's Academic Initiative on August 30, 2022.
4. International Conference on Expanding Fournier of Knowledge, Organised by Centre of Reserach, Maitreyi College, University of Delhi. August 11-13, 2022
5. International Conference on Recent Innovations in Mechanical Artificial Intelligence and Bio-Mechanical Engineering - ICRIMAIBE 2022 organized by Department of Mechanical Engineering. Navodaya Institute of Technology, Raichur held virtually on 29th and 30th July 2022
6. One Day Interdisciplinary International E-Conference on "IDEAS, ACHIEVEMENTS AND RESOLVE" organised by Ratanlal College of Arts, Science &Commerece, Bhandup, Maharashtra on July 15, 2022.
7. One day online workshop on New trends in Research Methodology, organized by RKDF University, Bhopal, MP in association with Research for Resurgence Foundation on May 26, 2022.
8. One day National Conference on changing trends and management for progressive India organized by KaramveerBharowPatil College, Navi Mumbai on May 14, 2022.
9. Two days International web conference on "Current treands and challenges in Education research and social sciences organized by International Council for Education and Research and Government College Hisar on May 22, 2022.
10. One day multidisciplinary blended mode conference on "Recent Advancements in commerce and management, Innovations and entrepreneurship, Science and technology, humanities and social sciences, Education and Environment" organized by Lt. Ramesh Warpudarkar's Art Commerce and Science College, Parbhani, Maharashtra.
11. Participated in an Online three-day National Workshop on 'Design and Implementation of Solar Rooftop Systems' organized by Parul Institute of Engineering and Technology, Vadodra held on March 10-12, 2022.
12. 2-days Online National Workshop on "Application of Solar Power in Irrigation" Organized by Department of Physics, VinayakraoPatilMahavidyalaya, Vaijapur, Dist. Aurangabad, Under UGC Scheme, STRIDE Component – I (Research Capacity Building) during 10th &11th December2021.
13. 2-days Online International Conference on "Sustainable & Futuristic Materials (SFM-2021)" November 29-30, 2021, organized by International Research Centre and Department of Chemistry, Kalasalingam Academy of research and education, Krishnankoil, Department of Chemistry, J. M. Patel Arts, commerce and Sciences College, Bhandara& Department of Chemistry, Kamala Nehru Mavidyalaya, Nagpur.
14. 2-days Online Workshop on "Recent Advancements in Biomedical Imaging and Image Processing" November 8-9, 2021, organized by Department of Biomedical Engineering, School of Technology, North-Eastern Hill University, Shillong, Meghalaya.
15. National Conference on Advanced Materials, technology, applications & education on October 16, 2021, conducted by Department of Physics, Hon. BalasahebJadhav Arts, Commerce & Science College, Pune.
16. International Conference on Recent Advances in Statistics during October 11-12, 2021, conducted by SadguruGadageMaharaj College, Karad, Maharashtra.
17. International Conference on Advances in Nano Technology during September 24-25, 2021, conducted by Department of Physics & Electronics, Vaagdevi Degree and PG College, Telangana.
18. National Webinar/Seminar on Teacher's e-kit: A four Quadrant Approach for development of OERs' ' on September 9, 2021, from Guru AngadDev Teaching Learning Center, Khalsa College, University of Delhi.
19. 3 days Faculty Development Programme on "Geo-Spatial technology, inclusive and accessible disaster risk reduction (DRR)" conducted by National Institute of Disaster Management, Ministry of Home Affair, Govt. of India and Shyama Prasad Mukherji College for Women during March 4-6, 2021.

20. 3 days Faculty Development Programme on "Teaching Techniques" conducted by ICT Academy on December 26-28, 2019 at Jagannath International Management School, GGS Indraprastha University.
21. Workshop on VLSI Current Trends using Mentor Graphics & Xilinx, Department of Electronic Science, University of Delhi South Campus March 21-22, 2018
22. Workshop on Linux, Bhaskaracharya College of Applied Sciences, September 5, 2017
23. Workshop on Robotics, at Bhaskaracharya College of Applied Sciences, October 5-6, 2016
24. *Workshop on AVR Microcontroller*, at Bhaskaracharya College of Applied Sciences, February 01, 2016
25. Workshop on emerging technologies & ITIL v 3.0, Milestone Achievers at Bhaskaracharya College of Applied Sciences on September 5, 2015,
26. Workshop on "Wireless Robotics" at Bhaskaracharya College of Applied Sciences on 11-12 March 2015.
27. "National Workshop on VLSI Designing using VERILOG coding" from 16TH – 18TH July 2013 at Bhaskaracharya College of Applied Sciences, Delhi.
28. "Workshop on Foundation Course Information Technology" from 12TH – 14TH June 2013 at CPDHE, University of Delhi, Delhi.
29. "Joint academic Lecture workshop on History, Aspects and Prospects of Electronics in India" from 12TH – 13TH October 2012 at University of Delhi South Campus, Delhi.
30. "Workshop on Experiments & Research Application with National Instruments LabVIEW" from 2ND – 3RD February 2012 at Bhaskaracharya College of Applied Sciences, Delhi.
31. "Workshop on Training on ExpEYES design Kit" on 28TH January 2012 at Bhaskaracharya College of Applied Sciences, Delhi.
32. "Workshop on Scilab and its Applications" from 10th – 11th March 2011 passing the on-line test conducted during the workshop at Acharya Narendra Dev College, Delhi.
33. "National Conference on Sustainable Management of e-waste" from 14th – 15th December 2010 at Bhaskaracharya College of Applied Sciences, Delhi.
34. "National Seminar on Management of Waste from Electronics & Renewable Energies" from 29th – 30th January 2010 at Bhaskaracharya College of Applied Sciences, Delhi.
35. "National Seminar and Workshop on Integrating Multiple Technologies to support teaching and learning" from 24th – 26th September 2009 at Institute of Informatics and Communication, University of Delhi South Campus, Delhi

Member, Organizing Committees for National Workshops/Conferences: (4)

1. Member of Organizing Committee, National Conference on Recent Trends and Advancement in Chemical Sciences at University of Delhi, March 29-31, 2019.
2. Member of organizing committee for National workshop on Printed Circuit Board Designing, March 24-26, 2015
3. Member of organizing committee of three days National Workshop on *VLSI designing using VERILOG Coding*" from July 16-18, 2013.
4. Member of organizing committee of two days *Workshop on Experiments & Research Application with National Instruments LabVIEW*" from February 2-3, 2012.

Administrative Positions:

- Deputy Superintendent Examination: 2015-16, 2022-23
- Teacher-in Charge, Department of Electronics: 2017-18 & 2018-19.
- NSS-Programme Officer: 2020-23
- Nodal Officer Exams: 2022-23

Staff Council Committees:

- **Sports Committee:** As a member of Sports Committee facilitated the sports team's selection, team's management and team's activities in the inter-University tournaments held in the session 2011-2012, 2012-2013, 2013-14, 2014-15, 2021-22.
- **Prize and Degree Distribution Committee:** As a convener of looked after the work of the prize, certificates and degrees distribution to all who are entitled for the same in the session 2011-12, 2012-2013, 2013-14, 2014-15.

- **Discipline Committee:** As a member of Discipline Committee facilitated the various issues raised in the college campus about the discipline 2011-12, 2012-13.
- **NSS:** Organized Blood donation camp & other activities 2012-2013, 2014-15
- **NSS Programme Officer:** From August 10, 2020 onwards.
- **Prospectus Committee:** As member prospectus committee Prospectus 2013 published.
- **Canteen Committee:** Member 2013-14.
- **Student Advisory Committee:** As member various issues of Student's Advisory carried out especially at referendum (Sept.-Oct.2013).
- **Astronomy Club:** As convener of this club, we organized Quiz-Talk contest in 2012-13 and a one day programme VYOM-I is scheduled 2013-14.
- **Admission Committee:** Co-Convener, Committee 2014-15, Convener 2015-16, Convener 2016-17.
- **Proctorial Committee:** Co-Convener 2017-18 and Convener 2018-19
- **AMC Committee:** As member participated in Tendering process during 2019-20 & 2020-21
- **Web-site & Internet Committee:** As member participated in Tendering & Designing process during 2019-20 & 2020-21
- **Magazine Committee:** Convener and Editor for Resonance 2020, Bhaskarjyoti Vol. 3 & 4. (2019-20 & 2020-21)
- **Placement Committee:** 2019-20 & 2020-21
- **Departmental Coordinator** for Star College Scheme during Application and processing period i.e. 2017-19
- **Co-coordinator** for VidyaVistaar Scheme (2021-22)
- **Member NIRF ranking committee** (2020-21) (2021-22) (2022-23)

Some other student related activities:

- **Coordinated** the three days *Entrepreneurship Awareness Camp* for College Students, held from 04TH – 06TH January 2012.
- **Campus Placement's:** Facilitated the campus placements of final year students through WIPRO's Wista-Waseprogramme 2012.
- **Insurance for DU-PCs** : 2013-14
- **Coordinated** Annual departmental Fest Techmania 2018 & 2019.
- **Coordinated** One day Workshop on *Embedded Systems* in association with DUCAT for students on September 20, 2019.
- **Coordinated** One day Workshop online Workshop on *Primer's of Artificial Intelligence* in association with DUCAT for students on July 3, 2020.
- **Coordinated** Online *National Symposium on Exploring Young Minds for Holistic Development* on Oct. 2, 2020

Additional Important Recent College Works:

- **Convene** the Energy, Green & Environment Audits as per NAAC requirements for 2020-22, 2022-24.
- **Convene** the ISO certification process ISO 14001:2015 for 2023-25 periods.
- **Convene** the Campus-Cleanliness and beatification committee during the NAAC peer visit.
- **Nodal Officer (Exams)** AY 2022-23.
- **NSS Programme Officer** AY 2020-21, 2021-22, 2022-23
- **NIRF Nodal Officer** for 2024-ranking
- **AMC Convener**(AY 2023-24)

Date: June, 2024

Place: New Delhi

Amit Kumar