

# Dr. Gurjit Kaur

Ph.D. (ECE), M.TECH. (ECE), B.Tech. (ECE)

## Associate Professor

Department of Electronics and Communication Engineering,

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## Address:

House No. 705, Tower 3,  
Purvanchal Royal Park, Sector  
137, Noida, UP, India

## Personal Details

Date of Birth: August 04,1980

Nationality: Indian

Sex: Female

Marital Status: Married

## Research and teaching Experience: 16 Years

Ph.D. Awarded	04
Ph.D. Pursuing	03

Research Projects	02
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Books Published	04
Books Ongoing	02
Book Chapters Published	17

Publications :	106
International Journal:	52
National Journal:	03
International Conference:	44
National Conference:	07
Abstract:	26
Major Project:	10
Dissertation:	25

## Academic Events Conducted

Conferences:	02
International Conference	02
Workshop	02

Expert Talk	05
Session Chair	10

## Languages Known

Hindi, English, Punjabi

## Summary and Work Experience

**Ph.D. in Optical CDMA** and two times topper in Punjab, **Gold Medalist awarded by the President of India Dr. A. P. J. Abdul Kalam**, backed with sixteen years of experience in teaching and research at various reputed institutes like PEC University of Technology, Panjab University, Jaypee University and Gautam Buddha University, Greater Noida. Presently working as an Associate Professor at the Department of Electronics and Communication Engineering, Delhi Technological University, Delhi. I have **authored 4 books** and published more than 100 research papers. I also working in the capacity of **Principal Investigator and scientific mentor in multiple research projects** with institutes like Department of Science and Technology (Ministry of India) and delivered various expert talks.

## Educational Background

### Doctorate in Philosophy (Ph.D.) in ECE

#### Specialization: Optical Communication

Performance Evaluation and Comparative Analysis of Improved Prime Sequence Codes and Super imposed Optical Orthogonal codes in OCDMA system

PEC University of Technology, Chandigarh

### Masters in Engineering (Electronics) (Topper)

PEC University of Technology, Chandigarh

### Bachelors in Engineering ECE (Gold Medal awarded by President of India)

Punjab Technical University, Jalandhar

## Awards and Honors

- Received a **Gold medal** from President of India **Dr. A. P. J. Abdul Kalam** for being **topper in the Punjab Technical University by securing 82% marks.**
- Received prize from Chief Minister **S. Prakash Singh Badal** for being **topper in Punjab (Diploma: E&EC).**
- Bharat Vikas Award (2017) given by Institute of Self Reliance in National Seminar on Diversity of Cultural and Social Environment at Bhubaneswar, Odisha, INDIA.
- Received Prof. Indira Parikh 50 Women in Education Leader Award** (2017) in world Education Congress, Mumbai, India on 23rd Nov 2017.
- Throughout topper in ME Program.
- Received a cash prize and **Roll of Honour** by **Guru Harkrishan Education Society** for being topper among all the colleges and all the disciplines of PTU, Jalandhar.
- Biography selected by **International Biographic Center, Great Britain** as 2000 Outstanding Scientists.
- Biography selected in **Who's Who in Science and Engineering Directory, USA.**

## Research Interests

Optical Communication System, Optical CDMA, Free Space Optical Communication, Optoelectronics Devices, Internet of Things, Green Technologies, Wireless Communication

## **TEACHING EXPERIENCE**

1. Working as Associate Professor in the Department of Electronics and Communication Engineering, Delhi Technological University, Delhi, INDIA.  
06th March, 2018 to till date
2. Worked as an Assistant Professor in the Department of Electronics and Communication Engineering, School of Information and Communication Technology, Gautam Buddha University, Greater Noida, Uttar Pradesh, INDIA.  
Programme Name: B.Tech+M.Tech. ICT 06th June, 2011 to 05th March, 2018
3. Worked as an Assistant Professor in the Department of Electronics and Communication Engineering, Jaypee Institute of Information Technology, Noida, Uttar Pradesh, INDIA.  
Programme Name: B. Tech (ECE), M.Tech (ECE) 01st October, 2010 to 04th June, 2011
4. Worked as Senior Lecturer in the Department of Electronics and Communication Engineering, Jaypee Institute of Information Technology, Noida, Uttar Pradesh, INDIA.  
Programme Name: B.Tech (ECE), M.Tech (ECE) 18th August, 2008 to 30th September, 2010
5. Worked as a Lecturer in the Department of Electronics and Communication Engineering, University Institute of Engineering & Technology, Panjab University, Chandigarh, INDIA.  
Programme Name: B.E.(ECE), M.E. (ECE) 20th September, 2005 to 14th August, 2008
6. Worked as a Lecturer in the Department of Electronics and Communication Engineering, PEC University of Technology, Chandigarh, INDIA.  
Programme Name: B.Tech (ECE), M.E. (Electronics) 22nd January, 2003 to 19th September, 2005

## **EDUCATIONAL QUALIFICATION**

### **Ph.D. Doctorate in Philosophy (Ph.D) in Optical Communication 2006-2010**

Topic: Performance Evaluation and Comparative Analysis of Improved Prime Sequence Codes and Super-imposed Optical Orthogonal codes in OCDMA system.

### **Department of Electronics and Communication Engineering**

PEC University of Technology, Chandigarh, INDIA.

Date of Registration: 22/03/2006 Date of Submission: 05/08/2008 Date of Award: 10/02/2010

**M.E. Master of Engineering in Electronics 72% (Topper) 2001-2003**  
PEC University of Technology, Chandigarh, INDIA.

**B.E. Bachelors in Engineering in ECE 82% (Gold medalist) 1998-2001**  
Punjab Technical University, Jalandhar, Punjab, INDIA.

## **ABOUT THE RESEARCH WORK DURING Ph.D.**

During Ph.D. research, two successful and 2 Dimensional (2D) encoding and decoding techniques i.e. Modified Prime Sequence Codes and Superimposed Cyclic Optical Orthogonal Codes for OCDMA system have been designed by remodeling and improvising the existing concept of Prime Sequence Codes and Optical Orthogonal Codes. The work done further verifies the performance of these codes by designing a realistic simulation setup of the same; by considering all the practical impairments e.g. transmitter, channel and receiver noise etc. The performance evaluation of the designed OCDMA system has been carried out for Metropolitan Area Network at 1Gbps, 2.5Gbps and 5Gbps bit rate over a fiber length of 60Km by taking into consideration a large number of parameters such as bit rate, received power, number of users, quality factor etc. A three way correlation is designed between various input parameters e.g. bit rate, received power with respect to number of users and performance indicators i.e. BER and quality factor. A complete set of possible values of input parameters with respect to number of users is derived for adequate standard of performance e.g. to achieve minimum bit error rate of  $10^{-9}$ , minimum received power for various number of users, quality factor etc.

## **Ph.D. SUPERVISION**

1. Development of Improved Spectrum Sensing Techniques for Cognitive Radio Networks, Bhawna Ahuja, SICT, GBU, Greater Noida, U.P., INDIA. (Thesis Awarded: 30/03/2016).
2. Design and Implementation of 3D Codes for Optical CDMA Systems, Rajesh Yadav, SICT, GBU, Greater Noida, U.P., INDIA. (Thesis Submitted: 24/03/2017 and Thesis Awarded: 13/10/2017).
3. Development of Optical Interconnects for Low Power High Speed Transceiver, Priyanka Goyal, SICT, GBU, Greater Noida, U.P., INDIA. (Thesis Submitted: 06/11/2017).
4. Analysis and Evaluation of ECG Signal for Emotion Recognition using Computational Intelligence, Supriya Goel, SICT, GBU, Greater Noida, U.P., INDIA. (Thesis Submitted: 23/10/2017).
5. Analysis and Development of efficient optical networks for smart cities , Garima Singh, ECE Dept, DTU, Delhi, India (Pursuing)
6. Development of Deep Space Communication system, "Dushyant , ECE Dept, DTU, Delhi, India (Pursuing)
7. Akanksha Srivastava, "Green EARTH: Green Energy Aware Radio Technology for Cognitive Network with Heterogeneity" ECE Dept, DTU, Delhi, India (Pursuing)

## **RESEARCH PROJECT**

1. Working as Principal Investigator of the project entitled, "Development of Flexible and efficient optical fiber Network for smart cities" under the scheme , "Research Project Grant to the faculty of DTU vide DTU/Council/BOM-AC/Notification/31/2018/5738 dated 28.03.2019" for the grant Rs. 4,45,000 vide F.No.DTU/IRD/619/2019/2103 dated 19.06.2019 at Delhi Technological University, Delhi.

2. Working as a scientific mentor for the project “Green EARTH: Green Energy Aware Radio Technology for Cognitive Network with Heterogeneity” under the WOS-A Scheme of DST. vide File No. SR/WOS-A/ET-154/2017 worth Rs. 18,50,000.
3. Research project at Pre Incubation Center of IIT Patna entitled Wireless charging of Pacemaker.
4. Was involved in research project “Selection of Downlink Transmission Technique for IRNSS Data” project from ISRO at Ahmadabad in November 2008 under RESPOND programme. The goal of this project was to identify/develop suitable communication technique for reliable downlink transmission of IRNSS data through a satellite channel with the following specifications: (i) Bandwidth (16 MHz) (ii) Signal Strength  $\sim -160$  dBW (iii) Interference Protection Ratio (15-20 dB) and (iv) BER  $< 10^{-9}$ . The tentative estimate of this project was Rs.5 Lac.

### **BOOK PUBLICATIONS**

1. Tomar, P. and Kaur, G. (2018). “Green and Smart Technologies for Smart Cities, **CRC Press, Taylor & Francis Group**, (Will be Published in early 2020).
2. Kaur, G. and Tomar, P. (2018). “Handbook of Research on Big Data and the IoT, **IGI-Global**, International Publisher of Progressive Information Science and Technology Research USA. Total Pages, 568, ISBN13: 9781522574323|ISBN10: 1522574328| DOI: 10.4018/978-1-5225-743, EISBN13: 9781522574330
3. Kaur, G., Tomar, P. and Tanque, M. (2019). “Integrating Artificial Intelligence to Solve Pervasive IoT Issues, **Elsevier, Cambridge, MA, USA** (Book Proposal Accepted)
4. Tomar, P. and Kaur, G. (2019). “Artificial Intelligence and IoT-Based Technologies for Sustainable Farming and Smart Agriculture, **IGI-Global**, International Publisher of Progressive Information Science and Technology Research Books and Journals, USA. (Book Proposal Accepted)
5. Tomar, P. and Kaur, G. (2017). “Examining Cloud Computing Technologies through the Internet of Things, **IGI-Global**, International Publisher of Progressive Information Science and Technology Research Books and Journals, USA, DOI: 10.4018/978-1-5225-3445-7, ISBN13: 9781522534457, Pages 311.
6. Prasad, R. S. and Kaur, G. (2005) “Optical Communication”, **Galgotia Publications**, ISBN : 9788175154858, 8175154853.

### **BOOK CHAPTER PUBLICATIONS**

#### **2019**

1. Akanksha Srivastava, Mani Shekhar Gupta, Gurjit Kaur, "Green Smart Cities" in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group (Will be published in Jan 2020).
2. Yaman Parasher, Prabhjot Singh and Gurjit Kaur , "Green Smart Town Planning" in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group (Will be published in Jan 2020).

3. Dushyant Singh Chauhan and Gurjit Kaur , "Green Smart Buildings For Smart Cities ", in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group, (Will be published in Jan 2020).
4. Yaman Parasher, Gurjit Kaur and Pradeep Tomar, "Green Smart Environment For Smart Cities", in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group ( Will be published in Jan 2020).
5. Garima Singh and Gurjit Kaur, " Green Smart Agriculture system", in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group (Will be published in Jan 2020).
6. Yaman Parasher, Prabhjot Singh and Gurjit Kaur, " Green Smart Security system" in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group, (Will be published in Jan 2020).
7. Garima Singh and Gurjit Kaur, " Green Smart Energy Management System " in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group, (Will be published in Jan 2020).
8. Dimpal Tomar, Pradeep Tomar and Gurjit Kaur, " Green Smart Waste Management System"" in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group, (Will be published in Jan 2020).
9. Priya Singh, Garima Singh and Gurjit Kaur, " Green Smart Water and Sanitation system ", in the book entitled Green and Smart Technologies for Smart Cities, CRC Press, Taylor & Francis Group, (Will be published in Jan 2020).
10. Singh, Garima, and Gurjit Kaur. "Role of Communication Technologies for Smart Applications in IoT." In Handbook of Research on Big Data and the IoT, pp. 300-313. IGI Global, 2019.
11. Tomar, Dimpal, Jai Prakash Bhati, Pradeep Tomar, and Gurjit Kaur. "Migration of healthcare relational database to NoSQL cloud database for healthcare analytics and management." In Healthcare Data Analytics and Management, pp. 59-87. Academic Press, 2019.
12. Suman, Gurjit Kaur, "Renewable energy distribution and management in green buildings" in Green Building Management and Smart Automation, IGI Publication , pp 208-219.

## **2017**

13. Tomar, P.; Kaur, G. and Singh, P. (2017) "A Prototype of IoT-Based Real Time Smart Street Parking System for Smart Cities", in book entitled "Internet of Things and Big Data Analytics towards Next Generation Intelligence", N. Dey et al. (eds.), Springer, Vol. 30, ISBN: 978-3-319-60434-3, pp. 243-263.
14. Kaur, G.; Tomar, P. and Singh, P. (2017) "Design of Cloud-Based Green IoT Architecture for Smart Cities", in book entitled "Internet of Things and Big Data Analytics towards Next Generation Intelligence", N. Dey et al. (eds.), Springer, Vol. 30, ISBN: 978-3-319-60434-3, pp. 315-333.
15. Kaur, G. and Tomar, P. (2017). "Genesis of Cloud-Based IoT Systems for Smart Generation" in a book entitled "Examining Cloud Computing Technologies through the Internet of Things, IGI-Global, International Publisher of Progressive Information Science and Technology Research Books and Journals, ISBN13: 978152253445, pp. 1-9

16. Kedia, D. and Kaur, G. (2017). "Examining Different Applications of Cloud-Based IoT" in a book entitled "Examining Cloud Computing Technologies through the Internet of Things, IGI-Global, International Publisher of Progressive Information Science and Technology Research Books and Journals, ISBN13: 978152253445, pp. 1125-1146.

## **2007**

17. Kaur, G. (2007) "WiMAX Technology for Broadband Wireless Communication" in handbook of WiMAX "WiMAX Standards and Applications" (Volume III) of Florida Atlantic University Boca Raton, Florida, CRC Press, CRC-45474 CH003, 18: 31, pp. 37-55.

## ***BOOK CHAPTERS ACCEPTED***

18. Garima Singh and Gurjit Kaur "Role of Artificial Intelligence with IoT in Optical Communication" in the book "Integrating Artificial Intelligence to Solve Pervasive IoT Issues," Elsevier.
19. Garima Singh and Gurjit Kaur "Real time crop Monitoring System," in the book, "Artificial Intelligence and IoT-Based Technologies for Sustainable Farming and Smart Agriculture," IGI.
20. Garima Singh and Manish Bansla "Role of Artificial Intelligence and IoT in Agriculture" in the book "Integrating Artificial Intelligence to Solve Pervasive IoT Issues," Elsevier.

## **MEMBERSHIP**

- Life membership (Memo No: M-227824, S. No: 120583) of Institution of Electronics and Telecommunication Engineers (IETE).
- Life membership (LM 78467) of Indian Society for Technical Education
- Membership of International Association of Engineering (IAENG).
- Member of IEEE
- Member of OSA
- Member of SPIE

## **PUBLICATIONS**

### ***INTERNATIONAL JOURNALS***

## **2019**

1. Singh, G., and Kaur, G, "Development of mathematical model for multi-user coded-cooperation based cognitive radio system and its outage probability analysis" Wireless Networks, Springer. (SCI Indexed). (Under Review)
2. Singh, G., and Kaur, G, "Performance Analysis of Diffusion based Molecular Communication Channel using Finite Spherical Receiver" IEEE Transactions on Information Theory. (SCI Indexed). (Under Review)

3. Goyal, P., & Kaur, G., "Design and Analysis of Static Characteristics of VCSEL at 1160 nm for Optical Interconnects ", Journal of Optical Communications. May 2019. doi : <https://doi.org/10.1515/joc-2019-0043> (Scopus Indexed).
4. Ahuja, B., & Kaur, G. (2019). Two-Stage Spectrum Sensing Using Fuzzy Logic for Cognitive Radio Networks. Proceedings of the National Academy of Sciences, India Section A: Physical Sciences, 1-11. **(Springer, SCI Indexed)**
5. Srivastava, D., Kaur, G., & Singh, P. (2019). Design of novel hybrid WDM/multiple-beam FSO system to improve the link length in rainy season. Journal of Optics, 48(2), 184-188. **(Springer, Scopus Indexed)**
6. Kaur, G., Srivastava, D., Singh, P., & Parasher, Y. (2019). Development of a novel hybrid PDM/OFDM technique for FSO system and its performance analysis. Optics & Laser Technology, 109, 256-262. <https://doi.org/10.1016/j.optlastec.2018.08.008> **(Elsevier, SCI Indexed)**

## 2018

7. Gurjit Kaur, Ashwini Kumar, Yaman Prasher, Prabhjot Singh (2018), " Design of Multichannel Optical OFDM System Using Advanced Modulation Techniques" , in Journal of Optical Communications · June 2018, DOI: 10.1515/joc-2018-0062. **(Scopus Indexed)**
8. Gurjit Kaur, Neha Rani, Yaman Prasher, Prabhjot Singh (2018), " Journal of Optical Communications in Design and Implementation of Electro-Optic 2×2 Switch and Optical Gates using MZI" February 2018, DOI: 10.1515/joc-2017-0198. **(Scopus Indexed)**
9. Yadav, R. & Kaur, G. (2018). Simulation and analysis of three-dimensional OCDMA system <https://doi.org/10.1007/s12596-018-0453-2>, Springer India, Print ISSN0972-8821, Online ISSN0974-690 ,Journal of Optics , pp 1–6 . **(Scopus Indexed)**

## 2017

10. Goyal, P., Gupta, S., Kaur, G., and Kaushik, B., "Performance Analysis of VCSEL using Finite Difference Time Domain Method", Optik, International Journal of Light and Electron Optics, Elsevier, 2017 (DOI: 10.1016/j.ijleo.2017.11.201), ISSN:0030-4026 **(Elsevier, SCI, Scopus, UGC Indexed, IF=0.835)**
11. Goyal, P., and Kaur, G. (2017), "High responsivity germanium on silicon photodetectors using FDTD for high speed optical interconnects" Arabian Journal for Science and Engineering, Springer, pp. 1-7, 2193-567X (Print), 2191-4281 (Online). **[Springer, SCI Expanded, Scopus, UGC Indexed, IF=0.865]**
12. Apoorva, Priyanka, Wadhwa, H., Kaur, G., (2017) " Performance analysis of hybrid optical amplifiers for 32 channel WDM system at 10Gbps bit rate for WAN applications", Journal of Optical Communications, Degruyter DOI 10.1515/joc-2017-0139 ISSN (Online) 2191-6322, ISSN (Print) 0173-4911. **[Scopus, UGC, WOS Indexed]**
13. Goyal, P., Kaur, G., (2017), "Noise Removal in ECG Signal using Windowing Technique and its Optimization", in Advances in Biotechnology and Microbiology, Vol 6, Issue 1, DOI: ISSN 2474-7637.

14. Goel, S., Kaur, G., & Tomar, P. (2017). A novel technique for stress recognition using ECG signal pattern. *Current Pediatric Research*, 21(4). **[Scopus Indexed]**
15. Ahuja, B. and Kaur, G. (2017), "Design of an Improved Spectrum Sensing Technique Using Dynamic Double Thresholds for Cognitive Radio Networks" *Wireless Personal Communication*, Springer, 0.1007/s11277-017-4539-y, pp. 821–844, ISSN 0929-6212 (Print) 1572-834X (Online) **[SCI Expanded, Scopus, IF=0.951]**
16. Bajaj, R., Mishra H., Goyal, P., Kaur, G., and Kaushik, B.K., (2017), "Design of Oxide-Confined and Temperature Stable Long Wavelength Vertical Cavity Surface Emitting Laser for Optical Interconnects", *Optik International Journal for Light and Electron Optics* Vol. 131, ISSN: 0030-4026, pp. 506–514 **[Elsevier, SCI Indexed, IF=0.835]**.
17. Singh G., Kaur G., Dwivedi V. K. and Yadav P. K., (2017), "Development of coded-cooperation based multi-relay system for cognitive radio using mathematical modeling and its performance analysis", *Wireless Networks*, DOI 10.1007/s11276-017-1453-x, Volume 97, Issue 1, pp. 1-7, ISSN 1022-0038 **[Springer, SCI Indexed, Scopus, UGC, IF=1.584]**.
18. Srivastava, D., and Kaur, G., (2017) "Optimization of FSO system parameters under Varying meteorological conditions in Delhi", *IUP journal of telecommunications*, ISSN. 0975-5551, Vol. 9, No. 1, pp. 29-39.

## 2016

19. Yadav, R. and Kaur, G. (2016), "Design and Performance Analysis of 1D, 2D and 3D Prime Sequence Code Family for Optical CDMA Network", *Journal of Optics*, Vol.45, No.4, ISSN: 0972-8821, pp. 343-356, Dec. 2016. [Springer, Scopus, E-SCI, UGC Indexed].
20. R. Yadav and Kaur, G. (2016), "Modified Three Dimensional Multicarrier Optical Prime Codes", *International Journal of Optics*, vol. 2016, pp. 1-7, ISSN No. 1687-9384, Sep. 2016. [Hindawi, Thomson Reuters, E-SCI, Web of Science, Scopus, UGC]
21. Yadav, R., Kaur, G., Srivastava, D., Bhardwaj, A., Gangwar M. and Nidhi, (2016), "Simulation and Analysis of Optimum Golomb Ruler based 2D codes for OCDMA system", *International Journal of Advanced Computer Science and Applications*, Vol. 7, Issue 7, pp. 382– 391, ISSN No. 2156-5570, 2016. [Thomson Reuters, Emerging SCI, Web of Science]
22. Yadav, R., Kaur, G., and Zaman M., (2016), "Designing of 16 DPSK Modulator and Direct Detection Receiver for DWDM System", *ICTACT Journal on Communication Technology*, Vol. 7, Issue 2, pp. 1321 – 1325, ISSN No. 2229-6948, June 2016.
23. R. Yadav and Kaur, G., (2016), "Two Dimensional Tunable Optical-CDMA System", *Indonesian Journal on Electrical Engineering and Computer Science*, vol. 4, issue 1, pp. 125-132, ISSN No. 2502-4752 [Scopus and UGC]
24. Goel, S.; Tomar, P. and Kaur, G. (2016), "ECG Feature Extraction for Stress Recognition in Automobile Drivers", *Electronic Journal of Biology*, Vol. 12, Issue 2, ISSN: 1860-3122, pp 156-160. [Thomson Reuter Indexed].
25. Goel, S.; Tomar, P. and Kaur, G. (2016) "A Fuzzy Based Approach for Denoising of ECG Signal using Wavelet Transform", *International Journal of Bio-Science and Bio-Technology*, Vol. 8, No. 2, ISSN: 2233-7849, pp. 143-156. [Scopus Indexed]



26. Priyanka and Kaur, G. (2016) "A Review on High Speed and Low Power CMOS Optical Interconnects", International Journal of Computer Networks and Wireless Communications, Vol. 6, No. 1, ISSN: 2250-3501, pp.1-6.
27. Kaur, G. and Gupta, N. (2016) "Performance Evaluation of One and Two Dimensional Prime Codes for Optical Code Division Multiple Access Systems", World Academy of Science, Engineering and Technology International Journal of Computer, Electrical, Automation, Control and Information Engineering Vol:10, No:7, ISSN: 1000-4999, pp.1348-1354.
28. Goel, S.; Tomar, P. and Kaur, G. (2016) "An Optimal Wavelet Approach for ECG Noise Cancellation", International Journal of Bio-Science and Bio-Technology, Vol. 8, No. 4, ISSN: 2233-7849, pp. 39-52. [Scopus Indexed]
29. Bhati, R.; Goel, S.; Kaur, G. and Tomar, P. (2016) "Noise Suppression From ECG Signal Using Adaptive Filter Technique", International Journal of Computer Science and Information Security, Vol. 14, No. 8, ISSN 1947-5500, pp. 135-139.
30. Tomar, P.; Singh, P. Kaur, G. and Sharma, S. (2016) "Maintainability of Software by using Computational Intelligence from Software Erosion", Journal of Global Information Technology, Pub: MTMI, USA, ISSN 1931-8162, Vol. 11, No. 1, pp. 23-36 (Indexed : UGC)

## 2015

31. Ahuja, B. and Kaur, G. (2015) "Throughput Analysis of Cooperative Spectrum Sensing for Cognitive Radio Network", International Journal of Computer Networking, Wireless & Mobile Comm., Vol. 5, No. 6, ISSN: 2278-9448, pp. 1-8.
32. Sharma, M. and Kaur, G. (2015) "Implementation of 64-Bit Pipelined Floating Point ALU Using Verilog", International Journal of Computer System, Vol. 02, Issue 04, ISSN: 2394-1065, pp. 124-128.
33. Singh, A. and Kaur, G. (2015) "Analysis of VCSEL for Different Input Signals with Gaussian and White Noise for Optical Interconnects Applications", International Journal of Computer Systems, Vol. 02, Issue 04, ISSN: 2394-1065, pp. 129-132.
34. Singh, C. and Kaur, G. (2015) "Mathematical Analysis of Different Noises for 3D Perfect Difference Codes based OCDMA System", International Journal of Signal Processing, Image Processing and Pattern Recognition, Vol. 8, No. 7, ISSN: 2005-4254, pp.9-16. <http://dx.doi.org/10.14257/ijsp.2015.8.7.02>.
35. Yadav, S. and Kaur, G. (2015) "Aplanatic Point Analysis of Solid Immersion Lens in Photonics", International Journal of Advances in Engineering and Technology, Vol. 8, Issue 3, ISSN: 2231-1963, pp. 385-396.
36. Yadav, S. and Kaur, G. (2015) "Cellular Design – An approach to Increase the Signal to Interference Ratio", International Journal of Engineering Research and Industrial Applications, Vol. 8, No.2, ISSN 0974-1518, pp. 61-75.
37. Ahuja, B. and Kaur, G. (2015) "A Novel Design of Improved Hybrid Spectrum Sensing Technique for Cognitive Radio Network", International Journal of Computer Applications, Vol. 125, Issue 13, ISSN: 0975 - 8887, pp. 7-10.

38. Ozha, A., and Kaur, G. (2015) , "An Inductor-Less Broadband Low Noise Amplifier Using Switched Capacitor with Composite Transistor Pair in 90 nm CMOS Technology", IOSR Journal of VLSI and Signal Processing (IOSR-JVSP) Volume 5, Issue 5, Ver. I (Sep - Oct. 2015), pp. 09-14, e-ISSN: 2319 – 4200, p-ISSN No. : 2319 – 4197 [www.iosrjournals.org](http://www.iosrjournals.org) DOI: 10.9790/4200-05510914.

## **2013**

39. Tripathi, S. and Kaur, G. (2013) "Analysis of Noise Figure of GaN HEMT at High Frequency Range for Microwave Applications", International Journal of Computer Applications, Vol. 70, No. 20, ISSN: 0975-8887, pp. 15-18.
40. Singh, B. and Kaur, G. (2013) "Performance Evaluation of DWDM System Along with Consideration of Soliton Pulses at 1550 nm up to 1Tbps", International Journal of Advances in Computer Networks, Vol. 1, Issue 1, ISSN: 1793-8244.
41. Ahuja, B. and Kaur, G. (2013) "Performance Analysis of Energy Detection-based Spectrum Sensing in Cognitive Radio", International Journal of Information and Computation Technology, Vol. 3, Issue 2, ISSN: 0974-2239., pp. 111-114.

## **2012**

42. Puri, P. and Kumar, G.; Tripathi, B. and Kaur, G. (2012), "Analysis of DelAck based TCP-NewReno with Varying window Size over Mobile Ad Hoc Networks", International Journal of Computer Science and Information Security, Vol. 10, Issue 1, E-ISSN : 9475500, pp. 62-67.
43. Nagar, R. and Kaur, G. (2012) "Simulation and Performance Analysis of 2-D Codes at 1 Gbps and 1.25 Gbps Data Rate for OCDMA LAN Applications", International Journal of Computer Application., Vol. 49, Issue 8, ISSN: 0975–8887, pp. 42-48.
44. Kumar, S. and Kaur, G. (2012) "Design and Performance Analysis of Nine Stages CMOS Based Ring Oscillator", International Journal of VLSI Design & Communication Systems), Vol.3, No.3, ISSN: 0976-1357, pp. 57-69.
45. Zaman, M. U. and Kaur, G. (2012) "Analysis of DWDM System Performance using 16 DPSK Modulation Technique and Amplifier Combination", Journal of Global Information Technology, Vol. 7, No. 1 & 2, ISSN 1931-8162, pp. 19-24.
46. Kumar, R. and Kaur, G. (2012) "A Novel Approach to Design of 6T (8 X 8) SRAM Cell Low Power Dissipation Using MCML Technique on 45 Nm", International Journal of Engineering Research and Applications, Vol. 2, Issue 4, ISSN: 2248-9622, pp.093-097.
47. Charu; Mittal, R. and Kaur, G. (2012) "Effect on Performance of OCDMA System due to Increasing Fiber Length", Review of Business and Technology Research Vol. 5, No.1, ISSN:, pp. 400-404.

## **2011**

48. Jaimini, K.; Agarwal, M.; Grewal, M. and Kaur, G. (2011) "Performance Comparison of BPSK and BFSK Modulation Schemes in Presence of Phase Error and AWGN", International Journal of

Multi Disciplinary Research & Advances in Engineering, Vol. 3, No. 4, ISSN 0975-7074, pp. 263-270.

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2. Bhati, R., Goel, S., Kaur, G., Tomar, P., (2016) "Denoising of ECG using adaptive filter algorithm", International Journal of Control Theory and Applications ISSN: 0974- , Volume 9, No. 46 , pp. 125-132.
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2. Kaur, G., Tomar, P., Agrawal, A., & Singh, P. (2020). Attacks and Their Solution at Data Link Layer in Cognitive Radio Networks. In *Smart Systems and IoT: Innovations in Computing* (pp. 351-361). Springer, Singapore.
3. Yadav, V., Tomar, P., Singh, P., & Kaur, G. (2020). Improvement in XML Keyword Search and Ranking for Data Analytics. In *Smart Systems and IoT: Innovations in Computing* (pp. 339-349). Springer, Singapore.
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#### **Abstract Published in National / International Conference**

1. **Kaur G.** and Arora, R. (2004) "Optical Communication in space: A new Challenge" in proceedings of National Conference on Optoelectronics and MEMS Technologies, ISBN:, pp 50.
2. Kapil and **Kaur, G.**, (2004) "Biomedical Optical Sensors" in proceedings of National Conference on Optoelectronics and MEMS Technologies, ISBN:, pp. 74.
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#### **PAPERS PRESENTED IN INTERNATIONAL /NATIONAL CONFERENCES**

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23. Gupta, N., and Kaur, G., (2003) "Indoor Networking Planning", in proceedings of IETE National Symposium on Emerging trends in Networking and Mobile Communication, PEC Chandigarh, ISBN:, pp. 72.
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### **ME /M.TECH. DISSERTATION SUPERVISED**

#### **2017-2018**

1. Security Of Data On Distributed Cloud In Context Of Green Iot, 13/IEC/049, Swati Singh
2. Design And Analysis Of Devices For On Chip Optical Interconnects 13/IEC/059, Yaman Parasher
3. Performance Analysis Of Non-Binary Hamming Codes In Molecular Communication, 13/IEC/007, Ankita Saini
4. To Design And Analyse The Performance Of Optical OCDMA System Using WDM Based One Dimensional And Two Dimensional Code. 13/IEC/042, Shalini
5. Dispersion Compensation In OFDM OCDMA Equalizer And Chirped FBG for ROF Transmission. Satyarth Prakash, 13/IEC/037,

#### **2016-2017**

6. Design and simulation of an improved FSO system using amplifiers and spatial diversity, Archit Malik, 12/IEC/023, SICT, GBU, Greater Noida, U.P., INDIA.
7. Design of high capacity ROF system using 16-QAM modulation technique Deeksha, 12/IEC/024 SICT, GBU, Greater Noida, U.P., INDIA.
8. Design and Analysis of All-optical logic gates and their application in optical computing, Varun Kumar, 12/IEC/047, SICT, GBU, Greater Noida, U.P., INDIA.
9. Optimal Backhaul System Design using Hybrid RF/FSO System, Niharika Dubey, 12/IEC/044, SICT, GBU, Greater Noida, U.P., INDIA.
10. Design of multichannel OFDM system and its performance analysis on the basis of input power, Ashwani Kumar, 12/IEC/069, SICT, GBU, Greater Noida, U.P., INDIA.
11. Design of Free Space Optical Communication System, Shubham Goel, 12/ICS/055, SICT, GBU, Greater Noida, U.P., INDIA.
12. An Enhanced QoS Routing Protocol For Hybrid Wireless Networks, Surbhi Singh, 15/PIT/066, SICT, GBU, Greater Noida, U.P., INDIA.

13. Bit Error Rate Performance of WDM EPON and its QOS parameters, Ram Awadh Ram12/IEC/034, SICT, GBU, Greater Noida, U.P., INDIA.

## **2015-2016**

14. Integration of optical OFDM with different techniques in RoF optical communication for high data rate, Nidhi, SICT, GBU, Greater Noida, U.P., INDIA.
15. Wireless channel analysis for wireless underground sensor networks, Pavnesh Kumar, SICT, GBU, Greater Noida, U.P., INDIA.
16. RZ-FSK transmission at 40Gbps over long distance, Sehaj Manchanda, SICT, GBU, Greater Noida, U.P., INDIA.
17. Analysis and minimization of delay in cognitive radio mesh networks, Vinay Kumar, SICT, GBU, Greater Noida, U.P., INDIA.
18. Design and implementation of energy conserving D-AOMR protocol with delay minimization for Ad-Hoc Networks, Arushi Saxena, SICT, GBU, Greater Noida, U.P., INDIA.
19. Multiple length optical orthogonal code with variable cross correlation with point insertion technique, Mohit Kumar, SICT, GBU, Greater Noida, U.P., INDIA.
20. Design of long wavelength energy efficient VCSEL for optical interconnects, Rohan Bajaj, SICT, GBU, Greater Noida, U.P., INDIA.
21. Efficient integration of high order models using FDTD-TDMA method for error minimization, Mayank, SICT, GBU, Greater Noida, U.P., INDIA.
22. Bandwidth optimization in vehicular Ad-Hoc network using cognitive radio, Aman Sharma, SICT, GBU, Greater Noida, U.P., INDIA.
23. Noise removal in ECG signal using windowing technique and its optimization, Priyanka, SICT, GBU, Greater Noida, U.P., INDIA.
24. Security attacks and their solutions at data link layer in cognitive radio network, Archit Aggarwal, SICT, GBU, Greater Noida, U.P., INDIA.
25. Noise suppression from ECG signal using adaptive filter technique, Ravina Bhati, SICT, GBU, Greater Noida, U.P., INDIA.
26. Enhancement of outcoupling light in an OLED using Microlens grating, Karan Bhatia, SICT, GBU, Greater Noida, U.P., INDIA.
27. Design and analysis of silicon based arrow RIB waveguides, Himanshu Wadhwa, SICT, GBU, Greater Noida, U.P., INDIA.
28. OFDM signal improvement using Radio over fiber, Siddarth Soam, SICT, GBU, Greater Noida, U.P., INDIA.
29. Mitigation of Atmospheric effects on the performance of a free space optical communication link employing polarization shift keying modulation, Disha Srivastava, SICT, GBU, Greater Noida, U.P., INDIA.
30. System model design and performance analysis of denoising techniques in biomedical signals, Apoorva, SICT, GBU, Greater Noida, U.P., INDIA.

## **2014-2015**

31. Aplantic Point Analysis of Solid Immersion lens in Photonics, Sumit Yadav, SICT, GBU, Greater Noida, U.P., INDIA.
32. Design & Simulation of Multidimensional codes for OCDMA System, Nikhil Devgan, SICT, GBU, Greater Noida, U.P., INDIA.
33. Simulation of High Speed DWDM for Meteropolitan Area Networks, Mayur Sharma, SICT, GBU, Greater Noida, U.P., INDIA.
34. Improved Modleach using Probability Function in Wireless Sensors Networks, Tarun Bhati, SICT, GBU, Greater Noida, U.P., INDIA.
35. Multihop Approach in Stable Election Protocol, Utkarsh, SICT, GBU, Greater Noida, U.P., INDIA.
36. Implementation of 64-bi Pipelined Floating Point ALU using Verilog, Megha Singh, SICT, GBU, Greater Noida, U.P., INDIA.
37. An Inductor Less Broadband Low Noise Amplifier using Switched Capacitor with Composite Transistor Pair in 90nmCMOS Technology, Ozha Arvind Vinod, SICT, GBU, Greater Noida, U.P., INDIA.
38. Optical Interconnects in VLSI, Anamika Singh, SICT, GBU, Greater Noida, U.P., INDIA.
39. A Hybrid Approach for Optimizing Search Engine Results, Anil Kumar Sami, SICT, GBU, Greater Noida, U.P., INDIA.

## **2012-2013**

40. Design and Performance Analysis of CMOS Ring Oscillator, Sushil Kumar, SICT, GBU, Greater Noida, U.P., INDIA.
41. Design and Implementation of Different CMOS Circuits based on Adiabatic Logics for Ultralow Power Communication Systems, Sanjay Kumar Sharma, SICT, GBU, Greater Noida, U.P., INDIA.
42. Performance Analysis and Comparison of One Dimensional Code for OCDMA System, Amod Kumar, SICT, GBU, Greater Noida, U.P., INDIA.
43. Design and Simulation of 6T SRAM cell using MCML Technique, Ravinder Kumar, SICT, GBU, Greater Noida, U.P., INDIA.
44. Design and Performance Analysis of CMOS Ring Oscillator, Faimuddin, SICT, GBU, Greater Noida, U.P., INDIA.
45. Simulation and Performance Analysis of Hybrid 2-D Codes for OCDMA System, Ravinder Nagar, SICT, GBU, Greater Noida, U.P., INDIA.
46. Implementation of OFDM modem in VLSI, Tanya Sharma, SICT, GBU, Greater Noida, U.P., INDIA.
47. Connectivity in Vehicular Ad-Hoc Network, Ankit Sharma, SICT, GBU, Greater Noida, U.P., INDIA.
48. Simulation of 3D Codes for Optical Code Division Multiple Access Systems, Charu Singh, SICT, GBU, Greater Noida, U.P., INDIA.
49. Design of Hybrid Amplifier, Amit Kumar Gautam, SICT, GBU, Greater Noida, U.P., INDIA.
50. Design and Analysis of Improved Dense Wavelength Division Multiplexing Systems, Brahm Raj Singh, SICT, GBU, Greater Noida, U.P., INDIA.

51. Design of GaN HEMT based Class E Amplifier and CNTFET based Class E Amplifier, Shakti Tripathi, SICT, GBU, Greater Noida, U.P., INDIA.

#### **2007-2008**

52. Performance Evaluation of FWM based DWDM system, A. K. Sharda, UIET, Panjab University, Chandigarh, INDIA.

53. Performance Evaluation of OCDMA System using Cyclic Perfect Difference Codes, Tarun Kumar, UIET, Panjab University, Chandigarh, INDIA.

54. 2006-2007

55. Performance Evaluation of OCDMA using Optical Orthogonal Codes, Navtej Singh, UIET, Panjab University, Chandigarh, INDIA.

#### **2004-2005**

56. Performance Analysis of Optical Hard limiter OCDMA System using 2D Codes, Sharavan Kumar, PEC University of Engineering and Technology, Chandigarh, INDIA.

#### **MAJOR PROJECT GUIDED**

##### **2018-2019**

1. Hybrid Switch based on PIC Micro-Controller Using Android Application by Arvind 2K15/EC/041, Arvind Kumar 2K15/EC/043, Ramjan 2K15/EC/124.
2. Low power analysis of adders, major project , " M.Tech , VLSI design and embedded systems, Vishesh jain, 2K18/VLSI/18 .
3. Guided a M.Tech project entitled, "Free space optical communications using DPSK modulation" , M.Tech, MOCE, Navya Siringi, 2K18/MOC/01.

##### **2016-2017**

4. Predictive Modelling in Spatial division multiplexing system using regression techniques Yaman Parashar, 13/IEC/59, May 2016.
5. Development of a new code family based on SAC -OCDMA system using large cardinality for OCDMA network Satyarth Prakash by (13/IEC/37), Shaina Singh(13/IEC/41), Narendra Pratap Singh(13/IEC/25) May 2016.
6. Performance analysis of FSO communication technique Tarun Gupta by (13/IEC/51), Shalini (13/IEC/042) May 2016.

##### **2014-2015**

7. Enhancing security in PON using WDM-PON by 11/IEC/082, 11/IEC/099, 11/IEC/109, 11/IEC/100 , May 2014.
8. Performance analysis of hybrid amplifiers in 32 channel WDM system at 10 Gb/s. by 11/IEC /017, 11/IEC/021 ,11/IEC/024,11/IEC/40, May 2014.

9. System simulation methodology of optical interconnects for HPC systems by 11/IEC/002,11/IEC/030,11/IEC/007,11/IEC/091 May 2014.
10. FTTH design and analysis using OCDMA structure by 11/IEC/001,11/IEC/039, 11/IEC/057,11/IEC/058, May 2014.

### **2012-2013**

11. Simulation and design of WDMA optical system using prime codes, Bhupinder Singh, 11/PIT/016, May 2012.
12. Simulation and design of WDMA optical system using prime codes, Charu Singh, 11/PIT/020 May 2012.
13. Simulation and design of WDMA optical system using prime codes, Rohini Mittal, 11/PIT/044 May 2012

### **INVITED LECTURERS**

#### **2019**

1. Delivered an expert lecture in one week FDP (11-15 March 2019) on Emerging trends in optical for all domain applications (ETODA-19) at "Optical Networks" at Deen Bandhu Chottu Ram University of Science and Technology, Murthal (Haryana)- India

#### **2018**

2. Delivered an expert lecture on "Research trends in optical communication networks" in one week FDP-(TEQIP-III) on "Emerging Trends in Antenna Design and Communication Technologies"-ETADCT(2018), from 16 - 20, JULY, 2018 at GCET- campus-ONE on 20th July 2018.
3. Delivered an expert lecture on "Spread Spectrum : Fundamentals and Applications" in the International Conference on "Emerging Paradigms and Practice in Information & Communication Technology and Management" from July 26 to July 28, 2012 in collaboration with MTMI, USA, University of Maryland Eastern Shore, USA and Frostburg State University, USA.
4. Delivered an invited lecture on 19th March, 2017 at the topic entitled "Role of Optical Communication in Internet of Things and computer technologies for making digital India in National Conference on Electrical, Electronics and Computer Technologies in making Digital India (REECTMDI-2017)", organized by Kautiliya Institute of Technology and Engineering, Sitapura, Jaipur, Rajasthan, INDIA and Technically sponsored by The Institution of Engineering, Computer Society of India and Indian Society for Technical Education, 18th-19th February, 2017.
5. Delivered an expert lecture in faculty development program on Advances in Electronics Engineering for next generation funded by TEQIP-II at IFTM at IFTM university Moradabad on 4th Nov 2015.

### **SESSION CHAIRS**

1. Chaired a session in "5th International Conference On Signal Processing" March 7th-9th, 2019 at Jaypee Institute of Information Technology, Noida (INDIA)
2. Chaired a session in "4th International Conference on Computing Communication and automation 2018 (ICCCA 2018) " technically co-sponsored by IEEE up section at Galgotia university, Greater Noida, India on 14-15 December 2018.
3. Chaired a session in "5th international conference on signal processing and communication (icsc-2019) on march 7th-9th, 2019 organized by ECE department Jaypee Institute of Information Technology, Noida (India).
4. Chaired a session International conference on Signal processing, VLSI and Communication Engineering (icspvce-2019) on 28-30th March, 2019 at Delhi Technological University, Delhi.
5. Chair a Technical Session on 17th November, 2017, in the 3rd IEEE Nanotechnology for Instrumentation and Measurement Workshop Nanofim- 2017, School of Engineering, Gautam Buddha University, Greater Noida, U.P., INDIA from 16th - 17th November, 2017.
6. Chair a Technical Session on 06th May, 2017, in the IEEE International Conference Computing, Communication and Automation ICCCA - 2017, School of Computing Science and Engineering, Galgotia University, Greater Noida, U.P., INDIA from 05th - 06th May, 2017.
7. Chair a session in the International Conference on Innovations in Control , communication and Information Systems (ICICCI-2017) at United Group of Institutions, Greater Noida, on 12-13 August 2017.
8. Chair a Technical Session (Communication & Broadcasting Technology) on 7th October, 2016, in the First International Conference on Information Technology- InCITe 2016: The Next Generation IT Summit on the theme Internet of Things: Connect your conference was organized in association with IEEE UP Section, India at Department of Information Technology, Amity School of Engineering and Technology, Amity University, Uttar Pradesh, Noida, U.P., India on 06th-07th October, 2016.
9. Chaired the sessions at International Conference on Innovations and Advancement in Information & Communication Technology (ICIAICT-2012) organized by School of ICT, Gautam Buddha University, Greater Noida, Gautam Buddh Nagar, Uttar Pradesh, 30-31 March, 2012.
10. Chaired the Technical Sessions on Information & Communication Technology at International Conference on Emerging Paradigms and Practice in Information & Communication Technology and Management, School of ICT, Gautam Buddha University, Greater Noida, Gautam Buddh Nagar, Uttar Pradesh, In collaboration with University of Maryland Eastern Shore, Maryland, USA, Frostberg State University, Frostburg, USA and MTMI, USA 26-28 July, 2012.

#### **REVIEWER IN INTERNATIONAL/NATIONAL JOURNALS/CONFERENCES**

1. Reviewed papers in "International conference on signal processing, VLSI and Communication engineering (icspvce-2019) at Delhi Technological University, 28-20 March 2019.



2. Reviewed papers in the 1st International Conference on Innovative Trends and Advances in Engineering and Technology (ICITAET-2019) organized by Shri Sant Gajanan Maharaj College of Engineering (SSGMCE), Shegaon and Shri Gajanan Invention and Advance Research Center (SGIARC), Shegaon. ICITAET-2019, technically co-sponsored by IEEE Bombay Section in Shegaon, Maharashtra State, India on 27-28 December 2019.
3. Reviewed papers in 5th International Conference On Signal Processing" March 7th-9th, 2019 at Jaypee Institute of Information Technology, Noida (INDIA)
4. Reviewer in international conference ICANI (International Conference on Advanced Computing, Networking & Informatics)-2018. This conference will be held in Medi-Caps University, Indore, Madhya Pradesh, India during February 22-24, 2018.
5. Reviewer in international conference CONFLUENCE-2018, 8th International Conference on Cloud Computing, Data Science & Engineering technically Co-Sponsored by IEEE UP SECTION- 11-12 Jan 2018.
6. Reviewer in Journal of Optical communication , Degryuter.
7. International Journal of Electronics and Communications, Elsevier.
8. International Conference on Information, Communication and Computing Technology (ICICCT-2017) in collaboration with Springer CCIS and Computer Society of India (CSI)
9. Reviewer in International Conference on "Emerging Paradigms and Practice in Information & Communication Technology and Management" from July 26 to July 28, 2012 in collaboration with MTMI, USA, University of Maryland Eastern Shore, USA and Frostburg State University, USA.
10. Reviewer in First International Conference on Innovations and advancements in information and communication technology, from March 30-31st, 2012 organized by Gautam Buddha University, Greater Noida, U.P., INDIA.
11. Reviewer in IEEE Transactions on Communication.
12. Reviewer in Journal of Engineering Science and Technology (JESTEC), Taylor's University College, Malaysia.
13. Reviewer in international conference Third International Conference on Wireless Communication and Sensor Networks, December 13-15, 2007, Organized by Indian Institute of Information Technology, Allahabad.
14. Reviewer in IEEE Sponsored International Conference on Multimedia Signal Processing and Communication Technologies from 17th to 19th Dec. 2011.

### **INTERNATIONAL CONFERENCES ATTENDED**

1. Attended an "International conference on signal processing, VLSI and Communication engineering (ICSPVCE-2019) at Delhi Technological University, 28-20 March 2019.
2. Attended a 5th International Conference On Signal Processing" March 7th-9th, 2019 at Jaypee Institute of Information Technology, Noida (INDIA)
3. Attended and presented a paper in fourth International Conference on Wireless and Optical Communications Networks (WOCN2007) at Singapore from 2-4 July, 2007 co-organized by Universities in Singapore and sponsored by IFIPTC6 WG6.8 (Mobile and Wireless

Communications).IEEE Catalog No. 07EX1696C, ISBN-1- 4244.1005-3 and presented a paper entitled Performance analysis of new modified prime sequence codes for OCDMA system.

4. Attended and presented a paper in International Conference on Computer Science and Engineering organized by World Congress on Engineering and International Association of Engineers (IAENG), 30th June -2nd July, 2010, London, UK.
5. Attended and presented a paper in International Conference of Information Engineering organized by World Congress on Engineering and International Association of Engineers (IAENG), 30th June -2nd July, 2010, London, UK. [Indexed in Scopus]
6. Attended and presented paper in the First International conference on Innovations and advancements in information and communication technology, ICIAICT 2012 on March 30-31st 2012 organized by Gautam Buddha University , Greater Noida.
7. Attended and presented paper in the International Conference on “Emerging Paradigms and Practice in Information & Communication Technology and Management” from July 26 (Thursday) to July 28 (Saturday), 2012 in collaboration with MTMI, USA, University of Maryland Eastern Shore, USA and Frostburg State University, USA.

#### **SHORT TERM TRAINING PROGRAM / WORKSHOP/ SYMPOSIUM ATTENDED**

- Attended and organised the lecture on " Internet of things" by Nishit Narang , Assistant Vice President-Technology, Aricent, Gurgaon, organized by CEX department at delhi Technological University, in collaboration with IEEE Delhi Section on October 12, 2018.
- Participated in the MHRD sponsored GIAN course on ,"Video Surveillance" from July 30th-August 3rd , 2018 at ECE department at Delhi Technological University with A grade.
- Participated in the one week TEQIP-III sponsored faculty development programme on "Advances in Image Processing and Computer vision " organised by ECE department , Delhi Technological University, Delhi April 2-6 , 2018.
- Participated in the one day workshop on " Raising awareness on plagiarism and copyrights", organized by ECE department of DTU on March 20th , 2018.
- Attended one day workshop on " Teaching Pedagogy" organized by Academic Section (UG), Delhi Technological University, Delhi on April 7, 2018.
- Attended one week CE and QIP course on " Electromagnetic fields and waves: Pedagogy and computation " conducted by IIT Bombay during November 12-16 , 2018.
- Attended the International conference on Signal processing, VLSI and Communication Engineering (icspvce-2019) on 28-30th March, 2019 at Delhi Technological University, Delhi.
- One Week Short Term Training Program on Application of Techniques / Tools in Engineering in technical collaboration with Soft Computing Research Society, IEEE Power and Energy Society, IEEE Power Electronics, and Institute of Civil Engineering and organized by the School of Engineering and School of Vocational Studies & Applied Sciences, Gautam Buddha University, Greater Noida, UP, India from 9th - 14th October, 2017.
- One Week Short Term Training Program on Research Techniques in Information and Communication Technology in collaboration with Spoken Tutorials of IIT Bombay, Computer Society of India NOIDA Chapter and IEEE GBU Student Branch, sponsored by Council of

Scientific and Industrial Research (CSIR) and organized by the School of Information and Communication Technology, Gautam Buddha University, Greater Noida, UP, India from 30th January to 04th February, 2017.

- One Week Workshop on Cutting Edge Technologies of ICT organized by the School of Information and Communication Technology, Gautam Buddha University, Greater Noida, UP, India from 24th to 28th September, 2016.
- Attended one day workshop on organized by Gautam Buddha University, Greater Noida on 17.02.2016.
- Attended one Week Faculty Development programme on "Recent Trends of Soft Computing Techniques in Software Engineering and Applications" by Spoken Tutorials (IIT Bombay), Computer Society of India, NOIDA Chapter and IEEE GBU Chapter from 19/12/2016 to 24/12/2016.
- Attended the FDP on "Mobile Computing on Mobile Technology: Theoretical & Practical Aspects" from 13th July – 18th July 2015 organized by Department of Computer Science & Information Technology, Jaypee Institute of Information Technology, Noida.
- Attended workshop on "Entrepreneurship", organized by School of ICT, Gautam Buddha University, Greater Noida, Gautam Budh Nagar, Uttar Pradesh, conducted by NSIC, Aligarh 14th September, 2012.
- Attended workshop on "Robotics and PCB workshop" April 2013, School of ICT, Gautam Buddha University, Greater Noida.
- Attended "International Workshop on Cloud Computing and its Applications (IWCCA 2013)" on 17th February 2013 at School of ICT, Gautam Buddha University, Greater Noida.
- IT Summit-2012, organized by School of ICT, Gautam Buddha University, Greater Noida, Gautam Buddh Nagar, Uttar Pradesh, 10th February, 2012.
- Half day workshop on "Careers in Ethical Hacking & Information Security" organized by School of ICT, Gautam Buddha University, Greater Noida, Gautam Buddh Nagar, Uttar Pradesh, supported by Torrid Networks on 9th Sept. 2011.
- Attended a workshop on Software Testing and Reliability at Gautam Buddha Univeristy on 2nd – 3rd Sep 2011.
- Attended two days workshop on "Mobile Architecture and mobile programming" at Indraprastha university on 12-13th April 2010.
- Attended a workshop on " Matlab " in DIAS.
- Attended and organized One Day Intensive Workshop on "Spread Spectrum Techniques and CDMA" on Sunday December 14, 2008 at Jaypee Institute of Information technology, Noida.
- Attended a Third International Conference on Contemporary Computing at Jaypee Institute of Information technology, Noida, 2009.
- Attended a lecture delivered by Prof. A. Chakroborty, Professor and Dean, E&EC (Continuing Education Program), IIT, Kharagpur on "Electromagnetic Compatibility and Electromagnetic Interference" , on 6th Nov 2009.
- Attended and assisted in Organizing a Short Term Training Program of 15 days duration on "Optical Communications, Emerging Trends- It's Role and Technology Appreciations"

sponsored by ISTE & AICTE during March-April, 2003 at E&EC Deptt., Punjab Engineering College, Chandigarh.

- Attended and assisted in Organizing a National Symposium on “Emerging Trends in Networking & Mobile Communication” (NSNM-2003)” on the occasion of Golden Jubilee of IETE, Delhi and Silver Jubilee celebration of IETE Chandigarh chapter during 5-6, Sept., 2003 at Punjab Engineering College, Chandigarh.
- Attended IETE National Conference on “Nanotechnology” at CSIO Chandigarh in 2002. Attended National Conference on OPTO and MEMS Technology (NCOMP) 16th -17th April 2004 at CSIO, Chandigarh, organized by IETE.
- Attended Microsoft co-branded seminar on c# and VB.net at Punjab Engineering College Chandigarh.
- Attended seminar on “E Governance” on the occasion of National Productivity week on 12th Feb at Institute of Engineers, Sec 19 Chandigarh.
- Attended seminar on “Ergonic Designing of Computer Input Devices for Healthier working and efficiency” delivered by Mr J W P Maarseen on 25th Feb 2003 at Punjab Engineering College, Chandigarh.
- Attended National Conference on OPTO and MEMS Technology (NCOMP) 16th -17th April 2004 at CSIO, Chandigarh. Organized by IETE.
- Attended a 3 Weeks UGC Refresher Course on “Advanced Signal Processing Techniques In Wireless Communication RCASPTWC-2006”, being organized in the department of Electronics and Communication Engineering in Thapar Institute of Engineering and Technology, Patiala from 4-23 December, 2006.
- Attended a seminar on Advances in Frontier Technologies in March 27, 2008 at University Institute of Engg. and Technology, Punjab University, Chandigarh.
- Attended a seminar on “soft skills” at University Institute of Engineering and Technology, Punjab University, Chandigarh.
- Attended One Day Intensive workshop on Microwave Tubes Jaypee Institute of Information Technology, Noida, 21nov 2010

#### **INTERNATIONAL AND NATIONAL CONFERENCES / FDP/ SHORT TERM TRAINING PROGRAM / WORKSHOP/ SYMPOSIUM /LECTURES ORGANIZED**

- Organised the lecture on " Internet of things" by Nishit Narang , Assistant Vice President- Technology, Aricent, Gurgaon, organized by CEX department at delhi Technological University, in collaboration with IEEE Delhi Section on October 12, 2018.
- Organised a visit of Professor Stephen Smith, Deputy Head of the University of York's Department of Electronic Engineering on 5<sup>th</sup> March 2019.
- Member of organizing team for Faculty Development program on “Simulation & Data Analysis” on 9-14th July 2012 at Gautam Buddha University.
- Member of organizing team for Faculty Development program on “Recent Advancements in Software Engineering & Networking Technologies” on 11-15 June 2012 at Gautam Buddha University.

- Member of organizing team for Faculty Development program on “Soft Computing Techniques ” on 4-8 June 2012 at Gautam Buddha University.
- Worked as a convener of 1st International Conference on “Innovations and Advancements in Information and Communication Technology” (ICIAICT 2012) on 30-31 March 2012 at School of Information and Communication Technology, Gautam Buddha University, Greater NOIDA, Uttar Pradesh, INDIA.
- Worked as a convener of International Conference on “Emerging Paradigms and Practice in Information & Communication Technology and Management” from July 26 to July 28, 2012 in collaboration with MTMI, USA, University of Maryland Eastern Shore, USA and Frostburg State University, USA.
- Member of advisory committee on a Conference on “Technical & Innovative Advancement in Computing and Communication Engineering-2013 Department of Computer Science & Engineering and Information Technology, MEC Bikaner.
- Member of the organizing team on 9th International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness January 11–12, 2013 Greater Noida, India.
- Member of (OPTIMA-2012) International Conference on Optimization Modeling and Applications November 29 - December 01, 2012 organized by Operational research Society of India, Delhi Chapter.

#### **MAJOR ACADEMIC/ADMINISTRATIVE RESPONSIBILITIES**

- SRC member of various Ph.D. research scholars in DTU and outside DTU
- Member of Department Purchase Committee of ECE department, Delhi Technological University since 1st June 2018
- Worked as a member of screening committee of Non Teaching positions during May 2019
- Member of Ph.D. students registration committee, August 2018
- Member of 1st year orientation program, August 2018
- Panel member of Seminar and Major project evaluation in ECE department, May 2018
- Panel member of Major project evaluation in ECE department, May 2019
- Member of NAAC committee for documentation of Criteria IV at department level
- Chairperson of NAAC Welcome Committee at ECE department.
- Chairperson of registration committee in the First international conference on signal processing, VLSI and communication engineering (28th -30th March, 2019) organized by ECE department
- Member of NBA committee of ECE department
- Time Table Incharge of Electronics and Communication Engineering Department at Delhi Technological University since June 2018 to June 2019
- Member of Syllabus revision committee for MOCE specialization.
- Member of MOOC standing committee
- Co-Advisor of B.Tech Program

- Member of orientation team of IIInd year students of ECE department
- Head of registration committee in the first international conference on signal processing, VLSI and communication engineering (28-30 March 2019) organized by ECE department .
- Worked as a judge in the event Technophillia'17 for the event Ethical Hacking on 15 Nov 2017 at School of Engineering, Gautam Buddha University, Greater Noida.
- Guiding Ph.D., ME thesis, Student Grading, Conducting Examination, Project Supervisor etc.
- Worked as incharge of ME Electronics.
- Worked as Joint Co-coordinator of all technical Societies of Punjab Engineering College, Chandigarh
- Worked as departmental representative for UGC/NAAC/MHRD related activities at Jaypee Institute of Information Technology.
- Worked as Ph.D. Coordinator, Jaypee Institute of Information Technology, Noida.
- Working as a timetable coordinator at Gautam Buddha University.
- Faculty incharge of various laboratories like Analog and Digital Communication, Optical Communication and Electronic Workshop at Gautam Buddha University.
- Worked as a member of the admission committee.
- Member of Proctorial Board and Discipline Committee.
- Worked as a convener of First International conference on Innovations and advancements in information and communication technology, ICIAICT 2012 on March 30-31, 2012 organized by Gautam Buddha University, Greater Noida.
- Worked as a member of anti ragging committee at Gautam Buddha University, Greater Noida.
- Worked as a convener of International Conference on “Emerging Paradigms and Practice in Information & Communication Technology and Management” from July 26 (Thursday) to July 28 (Saturday), 2012 in collaboration with MTMI, USA, University of Maryland Eastern Shore, USA and Frostburg State University, USA.
- Member of registration committee in University admission for registration of new entrants (Graduation & Post Graduation dated 23 July 2011)
- Expert for evaluation of OMR sheets of GPTR Jan 2012.
- Member of selection committee for guest faculty
- Panel member of pre-RDC & RDC of PhD.
- Internal & panel evaluator for M.Tech dissertation part 1 & 2
- Internal & panel evaluator for Major Project for M.Tech.
- Paper evaluation for mid term & end term exam.
- Performed invigilation duty in mid term & end term examination.
- Performed invigilation duty in GPTU entrance examination (2012-13).
- Subject Expert in Screening for ongoing faculty recruitment.
- PhD Coordinator since Sep 2015 in SoICT , GBU.
- Member of Board of Studies

#### **MEMBER OF CONFERENCE/WORKSHOP/SEMINAR/ACADEMIC ADVISORY COMMITTEE**

- Member of Technical Program Committee in First International Conference on Internet of Things, Embedded Systems and Communications (IINTEC 2017) will be held in Gafsa, Tunisia

from 20th to 22th October 2017.

<http://www.iintec.org/committees/Technical-program-committee>.

- Member of technical advisory committee for the International conference on computational intelligence, cyber security & smart grid at HMR Institute of technology and management, Sonapat during 20-21 April 2017.  
<http://hmritm.ac.in/ICCCS2017/committee.html>
- Member of Advisory Committee in MTMI Annual International Conference o Worked as Convener and Organizing Secretary in International Conference on “2012 Emerging Paradigms and Practices in Information & Communication Technology and Management (2012 EPPICTM)” at the School of Information and Communication Technology, Gautam Buddha University, Greater Noida, U.P., INDIA in collaboration with MTMI, USA, University of Maryland Eastern Shore, USA and Frostburg State University, USA, from July 26 to July 28, 2012.
- Worked as Convener, Organizing Secretary and Technical Programme Co-Chair in 1st International Conference on Innovations and Advancements in Information and Communication Technology, 2012 (ICIAICT 2012), jointly organized by School of Information and Communication Technology, Gautam Buddha University, Greater Noida, U.P., INDIA and Computer Society of India, Noida Chapter, Noida, Uttar Pradesh, India, held from March 30 - 31, 2012.

#### **PANEL MEMBER/ VIVA/EXAMINER OF VARIOUS STUDENTS**

- External expert for state of art seminar of two Ph.D. candidate Mr. Atul Goyal, and Paramjit Kaur at ECE department, PEC university of Technology on 22nd July 2019 .
- External examiner of M.Tech viva of electronics engineering students Taniya and Pankaj at ECE department, PEC university of Technology on 20th July 2019 .
- External examiner for Electronics and communication Engineering M.Tech. Dissertation on 29th May, 2019 at IIIT Noida.
- Worked as SRC external expert of the Ph.D candidate Vimlesh Kumar at Gautam Buddha University, Greater Noida during his whole Ph.D.
- Worked as SRC external expert of the Ph.D candidate Alasmash Sheikh at Gautam Buddha University, Greater Noida during his Ph.D.
- Worked as SRC external expert of the Ph.D candidate Mukesh Garg at Gautam Buddha University, Greater Noida during his Ph.D.
- Worked as SRC external expert of the Ph.D candidate R.B. Singh at Gautam Buddha University, Greater Noida during his Ph.D.
- Worked as SRC external expert of the Ph.D candidate Shilpi Gadi at Gautam Buddha University, Greater Noida during her Ph.D.
- Worked as SRC external expert of the Ph.D candidate Sonu at Gautam Buddha University, Greater Noida during his Ph.D.
- Worked as SRC external expert of the Ph.D candidate Gaurav Verma at Gautam Buddha University, Greater Noida during his Ph.D.

- Worked as SRC external expert of the Ph.D candidate at Electrical Department, Delhi Technological University, Delhi during his Ph.D.
- Worked as SRC external expert of the Ph.D candidate Mr. Isaka J. Mwakitalima (2K18/PHD/EE/21) at Electrical Department, Delhi Technological University, Delhi.
- Worked as SRC external expert of the Ph.D candidate Mr. Mohd. Bilal (2K17/PHD/EE/05) at Electrical Department, Delhi Technological University, Delhi.

#### **DETAILS OF INDUSTRIAL INTERACTION/ PROFESSIONAL CONSULTANCY/ PATENT OBTAINED**

- Interacted with Indian Air Force, 13 BRD, Delhi and delivered an expert lecture on the topic, " Research Trends In Optical Communication Systems & Photonics For Armed Forces Applications" on 13th Feb 2019.
- Organized the lecture on " Internet of things" by Nishit Narang Assistant Vice President- Technology, Aricent, Gurgaon, organized by CEX department at Delhi Technological University, in collaboration with IEEE Delhi Section on October 12, 2018.
- Organized a visit of Professor Stephen Smith, Deputy Head of the University of York's Department of Electronic Engineering of Delhi Technological University on 5th March 2019.
- Interacted with the Faculty of Deen Bandhu Chhotu Ram University of Science and Technology, Murthal (Haryana)- India and delivered an expert lecture in one week FDP (11-15 March 2019) on Emerging trends in optical for all domain applications (ETODA-19) at "Optical Networks"
- Delivered an expert lecture on " Research trends in optical communication networks" in one week FDP-(TEQIP-III) on "Emerging Trends in Antenna Design and Communication Technologies"-ETADCT(2018), from 16 - 20, JULY, 2018 at GCET- campus-ONE on 20th July 2018.
- Attended India Mobile Congress (IMC-2018) from October 25-27, 2018, organized by Department of Telecommunications (DoT) and Cellular Operators Association of India (COAI) at Delhi.

#### **EXTRA CURRICULUM ACTIVITIES OF STUDENTS**

- Judge at abhivanjana 2017 painting event
- Judge for the event in I-Tech at Gautam Buddha University, Greater Noida on 15 March 2012.
- Team member in cultural event at Gautam Buddha University, Greater Noida in 2011-2012.
- Worked as Joint Co-coordinator of all technical Societies of Punjab Engineering College, Chandigarh.
- Worked as Judge for Technical Fest at Punjab Engineering College, Chandigarh in 2005.
- Worked as Judge for Technical Fest at UIET, Chandigarh 2006.
- Worked as Judge in JIVE 2007 at Jaypee Institute of Information Technology University, Noida.
- Involved in industrial tour for students to Delhi Doordarshan.



*Gurjit Kaur*

(Dr. Gurjit Kaur)