

Profile Page



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Research Interests :

Optical Communication Systems: Performance Analysis and Dispersion Compensation for Broadband Optical Systems and Networks (Linear and Non-linear), Radio-over-Fiber, Soliton Transmission links.

Optical Networks: WDM/DWDM Networks their performance analysis and cross-talk evaluation.

Wireless Communication Systems: Performance analysis and simulation of wireless systems, wireless LAN and wireless sensor networks using MATLAB, OPNET, OMNeT++ and NS2.

Other Profile Links :

Google Scholar Link :

<https://scholar.google.com/citations?user=aOrKknsAAAAJ&hl=en&authuser=1> [Click Here](#)

Personal Web Link :

Dr Ajay K Sharma [Click Here](#)

Journal Publications :

Year	Journal	Publication
2021	Ad Hoc Networks 116 (2021) 102473, March 6, 2021. SCI IF: 3.643	Kalpna Guleria, Anil Kumar Verma, Nitin Goyal, Ajay K. Sharma, Abderrahim Benslimane, Aman Singh "An enhanced energy proficient clustering (EEPC) algorithm for relay selection in heterogeneous WSNs"
2020	IEEE Sensor Journal, July 2020, SCI IF: 3.0	Sandeep Verma, Satnam Kaur, Ajay K. Sharma, Ankit Kathuria, Md. Jalil Piran "Dual sink-based optimized sensing for Intelligent Transportation System"

2020	IEEE Transaction on Industrial Informatics, July 2020 SCI IF: 9.1	Shiv Raj Pokhrel, Sandeep Verma, Sahil Garg, Ajay K. Sharma, Jinho Choi "An Efficient Clustering Framework for Massive Communication of Industrial Sensors"
2020	Transactions on Emerging Telecommunications Technologies, Wiley Online Library, August 2020, Volume 31, Issue 9, e4052. SCIE IF: 1.594.	Prachi Maheshwari, Ajay K. Sharma, Karan Verma, "Game theoretic application for energy efficient mobility handling in wireless sensor network"
2020	Ad Hoc Networks, Elsevier, October 2020, Volume 110(2021) Article 102317. SCIE IF: 3.643.	Prachi Maheshwari, Ajay K. Sharma, Karan Verma, "Energy efficient cluster based routing protocol for WSN using butterfly optimization algorithm and ant colony optimization"
2020	Wireless Networks, Online 6th March, 2020, Springer Science+Business Media, LLC, part of Springer Nature. SCI IF: 2.405	Gunjan, Ajay K. Sharma and Karan Verma "NSGA-II with ENLU inspired clustering for wireless sensor networks"
2020	Recent Advances in Computer Science and Communications, Bentham Science Publishers, Vol. 12, No. 1.	Sandeep Verma, Neetu Sood and Ajay K. Sharma "Cost-Effective Cluster-based Energy Efficient Routing for Green Wireless Sensor Network"
2019	IEEE Communication Letters, Vol. 23, No. 2. SCI, IF: 1.988	Rohit Kumar , Sumit J. Darak, Manjesh K. Hanawal, Ajay K. Sharma, and Rajiv K. Tripathi "Distributed Algorithm for Learning to Coordinate in Infrastructure-Less Network"
2019	Wireless Networks: The Journal of Mobile Communication, Computation and Information. SCI, IF: 1.98	Vibha Nehra, Ajay K. Sharma and Rajiv K. Tripathi "NMR inspired energy efficient protocol for heterogeneous wireless sensor network"
2019	Optics and Laser Technology, vol. 115, pp. 268–276. SCI, IF	Jaspinder Kaur, Rikmantra Basu and Ajay K Sharma "Effect of separate confinement hetero-structure layer on tunnel injection transistor laser-based transmitter for high-speed optical communication networks"
2019	Analog Integrated Circuits and Signal Processing, Published online. SCI, IF: 0.80	Preeti Verma, Ajay K. Sharma, Arti Noor, Alok Kumar Mishra and Vinay S. Pandey "A Novel approach for noise tolerant energy efficient TSPC dynamic circuit design"
2019	Soft computing: METHODOLOGIES AND APPLICATION, Springer-Verlag GmbH Germany, Part of Springer Nature 2019, Published online. SCI, IF: 2.37	Prateek Gupta, Ajay K. Sharma "Clustering-based Heterogeneous Optimized-HEED Protocols for WSNs"
2019	Modern Physics Letters A, vol. 34, World Scientific Publishing Company. SCIE, IF: 1.3.	Sandeep Verma, Neetu Sood, Ajay K. Sharma "QoS provisioning-based routing protocols using multiple data sink in IoT-based WSN"
2019	Springer, Science plus Business Media, LLC, part of Springer Nature. SCIE, IF: 2.4.	Sandeep Verma, Neetu Sood, Ajay K. Sharma "A novelistic approach for energy efficient routing using single and multiple data sinks in heterogeneous wireless sensor network," Peer-to-Peer Networking and Applications"
2019	Applied Soft Computing, Elsevier, Vol. 85. SCIE, IF: 4.8.	Sandeep Verma, Neetu Sood, Ajay K. Sharma "Genetic Algorithm-based Optimized Cluster Head selection for single and multiple data sinks in Heterogeneous Wireless Sensor Network"
2019	Journal of ELECTRONIC MATERIALS, Published Online.	Rikmantra Basu, Jaspinder Kaur and Ajay K. Sharma "Analysis of a Direct-Bandgap GeSn-Based MQW Transistor Laser for Mid-Infrared Applications"

2019	Springer-Verlag GmbH Germany, part of Springer Nature. SCIE, IF: 1.910.	Vibha Nehra, Ajay K. Sharma and Rajiv K. Tripathi “I?DEEC: improved DEEC for blanket coverage in heterogeneous wireless sensor networks”, <i>Journal of Ambient Intelligence and Humanized Computing</i> ”
2018	Wireless Personal Communications, Vol. 99 (2), Pages 651-680	R Mishra, V Jha, RK Tripathi, Ajay K. Sharma “Design of Probability Density Function Targeting Energy Efficient Network for Coalition Based WSNs”
2018	Wireless Networks: the journal of Mobile Communications, Computation and Information, Springer US, Pages 1-18	Mohit Sajwan, D Gosain and Ajay K. Sharma “CAMP: Cluster Aided Multi-path Routing Protocol for Wireless Sensor Networks”
2018	Journal of Optical Communications, Walter de Gruyter GmbH, Vol. 39 (2), Pages 215-221	M Bharti, M Kumar, Ajay K. Sharma “A Novel Technique to Detect Code for SAC-OCDMA System”
2018	Wireless Personal Communications, Vol. 98 (4), Pages 3505-3526	A K Sohal, Ajay K Sharma, Neetu Sood “Enhancing Coverage Using Weight Based Clustering in Wireless Sensor Networks”
2018	Journal of Ambient Intelligence and Humanized Computing, Pages 1-20	P Gupta, Ajay K. Sharma “Designing of energy efficient stable clustering protocols based on BFOA for WSNs”
2018	The Institution of Engineering and Technology, IET Wireless Sensor Systems, Vol. 8, No. 6, pp. 284-294	Sandeep Verma, Neetu Sood, Ajay K. Sharma “Design of a Novel Routing Architecture for Harsh Environment monitoring in Heterogeneous WSN”
2018	Wireless Networks, Springer Science & Business Media, LLC, part of Springer Nature	R Mishra, V Jha, R K Tripathi, Ajay K Sharma “Corona based node distribution scheme targeting energy balancing in wireless sensor networks for the sensors having limited sensing range”
2018	Computers & Electrical Engineering 67, 96-113	Mohit Sajwan, D Gosain, Ajay K. Sharma “Hybrid energy-efficient multi-path routing for wireless sensor networks”
2018	Mapan Springer	Preeti Verma, Vinay Shanker Pandey, Ajay K. Sharma and Arti Noor “Estimation and Analysis of Novel Dynamic Body Biased TSPC Design Technique”
2018	Evolving Systems, Springer-Verlag, GmbH Germany, Part of Springer Nature	P Gupta, Ajay K. Sharma “Energy Efficient Clustering Protocol for WSNs based on Bio-Inspired ICHB Algorithm and Fuzzy Logic System”
2017	IEEE COMMUNICATIONS LETTERS, Vol. 21, No. 10.	Rohit Kumar, Sumit J. Darak, Ankit Yadav, Ajay K. Sharma, and Rajiv K. Tripathi “Channel Selection for Secondary Users in Decentralized Network of Unknown Size”
2017	Analog Integrated Circuits and Signal Processing, Springer, pp 1–12.	Preeti Verma, Ajay K. Sharma, Arti Noor and Vinay S. Pandey “SDTSPC-technique for low power noise aware 1-bit full adder”
2017	Wireless Personal Communications, Springer US, Pages 1-23.	Richa Mishra, Vivekanand Jha, Rajeev K Tripathi, Ajay K. Sharma “Energy Efficient Approach in Wireless Sensor Networks Using Game Theoretic Approach and Ant Colony Optimization”
2017	Soft Computing, Springer, SCI Indexed, https://doi.org/10.1007/s00500-017-2837-7	Prateek Gupta and Ajay K. Sharma “Clustering-based Optimized HEED protocols for WSNs using bacterial foraging optimization and fuzzy logic system”
2016	Elsevier, Perspectives in Science, Volume 8, Pages 760-763, July 2016.	Preeti Verma, Ajay K. Sharma, Vinay Shankar Pandey, Arti Noor, Anand Tanwar, “Estimation of leakage power and delay in CMOS circuits using parametric variation”

2016	International Journal of Wireless Information Networks, Vol. 23, No. 2 pp. 43-47, July 2016.	Nischay Bahl, Ajay K. Sharma and Harsh K Verma, "On the Energy Efficiency of WSN Communication Operating under Non-Coherent M-FSK and M-QAM"
2016	Indian Academy of Sciences, Sadhana, Vol. 41, No. 3, pp. 283-288, March 2016.	Nonita Sharma and Ajay K Sharma, "Cost Analysis of Hybrid Adaptive Routing Protocol for Heterogeneous Wireless Sensor Network"
2016	Optik-International Journal for Light and Electron Optics 127 (2), 544-547, 2016.	H Kaur, M Kumar, Ajay K Sharma, HP Singh, "Performance analysis of DWT based OFDM over fading environments for mobile WiMax"
2016	Optik-International Journal for Light and Electron Optics 127 (1), 122-126, 2016.	P Singh, Ajay K Sharma, TS Kamal, "An adaptive neuro-fuzzy inference system modeling for VoIP based IEEE 802.11 g MANET"
2016	International Journal of Computer Network and Information Security (IJCNIS), 2016.	H Kaur, M Kumar, Ajay K Sharma, HP Singh, "Implementation of SRRF Filter in Mobile WiMax with DWT Based OFDM System"
2016	Optik - International Journal for Light and Electron Optics 127 (20), 9474-9478, 2016.	R Bhatia, AK Sharma, J Saxena, "analysis of four wave mixing with sub-plank higher-order dispersion parameters in optical communication systems"
2016	Journal of Optical Communications, January 2016.	Manisha Bharti, Ajay K. Sharma and Manoj Kumar, "Design and Performance Analysis of 2D OCDMA System with Polarization States"
2016	Springer, Optical Memory and Neural Networks, Volume 25, Issue 3, pp. 149-159, 2016.	M Bharti, M Kumar and Ajay K Sharma, "Comparative analysis of optical 2D codes using (n, w, ?a, ?c) optical orthogonal codes for optical CDMA"
2016	Springer, Wireless Networks, Pages 1-15, 2016	R Kumar, S J Darak, Ajay K. Sharma and R Tripathi, "Two-stage decision making policy for opportunistic spectrum access and validation on USRP testbed"
2015	International Journal of Applied Mathematics, Electronics and Computers, Vol. 3, Issue 3, pp.178-183, 2015.	Gausia Qazi, Ajay K Sharma, Najeeb Ud-din Hakim, Moin Ud-din, "Simulative Extraction and Performance investigation of Improved Compensated DFB Laser for an IM-DD SCM Optical Link"
2015	Wiley, International Journal of Communication Systems, issue 29, pp. 1084-1090, 2015.	Richa Bhatia, Ajay K Sharma, Jyoti Saxena, "Comparative investigations of DWDM transmission system with PMD for different orthogonally modulated signals at 80 Gb/s"
2015	Springer US, Wireless Networks, vol. 21 issue 4, pp. 1155-1162, 2015.	N Kumar, C Ghanshyam, Ajay K Sharma, "Effect of multi-path fading model on T-ANT clustering protocol for WSN"
2015	International Journal of Wireless Information Networks 22 (3), 180-187, 2015.	Nischay Bahl, Ajay K Sharma, HK Verma, "On the Energy Utilization of WSN Communications Using Space-Time Block Coding Over BPSK and M-QAM Modulations"
2015	AEU - International Journal of Electronics and Communications, Volume 69, Issue 9, Pages 1346-1353, September 2015.	Nischay Bahl, Ajay K. Sharma, Harsh K. Verma, "Asymptotic multicast throughput analysis and energy efficiency in WSN under double Nakagami fading channel using Extreme value theory"
2015	International Journal of Advanced Computer Science & Applications, Volume 6, No 11, pp. 185-191, 2015.	Nonita Sharma, Ajay K Sharma and Kumar Shashvat, "Impact of Heterogeneous Deployment on Source Initiated Reactive Approach"
2014	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 15, Pages 4085-4087, August 2014.	Naresh Kumar, Ajay K. Sharma, Vinod Kapoor, "Modified SRS-induced crosstalk with variety of fiber in SCM-WDM transmission links"

2014	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 9, Pages 2066-2069, May 2014.	Baljeet Kaur, Ajay K. Sharma, Vinod Kapoor, "On WDM RoF-EPON link using OSSB transmission with and without DCF + FBG"
2014	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 9, Pages 2062-2065, May 2014.	Baljeet Kaur, Ajay K. Sharma, Vinod Kapoor, "Performance improvement on OVSB based WDM RoF-EPON link using SOA with DCF and FBG"
2014	Optics Communications, Volume 319, 15 Pages 178-187, May 2014.	Gausia Qazi, Ajay K. Sharma, H. Najeeb-ud-din Shah, Moin Uddin, "Performance investigation on clipping and RIN induced degradation for a single- and two-tone IM-DD SCM optical link"
2014	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 9, Pages 2148-2153, May 2014.	Gausia Qazi, Ajay K. Sharma, H. Najeeb-ud-din Shah, Moin-ud-din, "Performance investigation on harmonic distortion and inter-modulation distortion induced degradation for a single- and two-tone IM-DD SCM optical link"
2014	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 7, Pages 1864-1867, April 2014.	Naresh Kumar, Ajay K. Sharma, Vinod Kapoor, "Enhanced performance analysis of 10 Gbit/s optical OFDM-RoF transmission links"
2014	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 5, Pages 1629-1633, March 2014.	Gausia Qazi, Ajay K. Sharma, H. Najeeb-ud-din Shah, Moin Uddin, "Investigation on inter-modulation products (IMPs) for IM-DD SCM optical links"
2014	Optik - International Journal for Light and Electron Optics, Volume 125, Issue 1, Pages 93-96, January 2014.	Jagjit Singh Malhotra, Manoj Kumar, Ajay K. Sharma, "Low cost solution to high capacity 32×32 channel FTTH duplex link employing triple play services"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 23, Pages 6013-6016, December 2013.	Richa Bhatia, Ajay K. Sharma, Jyoti Saxena, "Performance improvement for $N \times 80$ -Gb/s WDM transmission link with optimized alternate polarization"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 20, Pages 4120-4122, October 2013.	Jagjit Singh Malhotra, Manoj Kumar, Ajay K. Sharma, Alok Kumar, "Performance evaluation of 16 channel DWDM radio-over-fiber link"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 17, Pages 3029-3032, September 2013.	Jagjit Singh Malhotra, Manoj Kumar, Ajay K. Sharma, "Estimation and mitigation of FWM penalties in dispersion managed 32 channel long haul DWDM soliton link"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 16, Pages 2424-2427, August 2013.	Jagjit Singh Malhotra, Manoj Kumar, Ajay K. Sharma, "Performance optimization of high capacity long reach 32 channel FTTH downstream link employing triple play services"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 15, Pages 2125-2127, August 2013.	Naresh Kumar, Ajay K. Sharma, Vinod Kapoor, "XPM-induced crosstalk with variety of fiber in SCM-WDM optical transmission link"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 13, Pages 1536-1541, July 2013.	Vishal Sharma, Amarpal Singh, Ajay K. Sharma, "RF- and optical-integrated radio-over-fiber (RoF) network with high channel allocation capability"

2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 13, Pages 1555-1559, July 2013.	Vishal Sharma, Amarpal Singh, Ajay K. Sharma, "Transmission performance of OSSB-RoF system using MZM electro-optical external modulator"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 12, Pages 1334-1337, June 2013.	Baljeet Kaur, Vinod Kapoor, Ajay K. Sharma, "On WDM RoF-EPON link using OSSB transmission with and without square root module"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 10, Pages 967-971, May 2013.	Baljeet Kaur, Vinod Kapoor, Ajay K. Sharma, "Performance enhancement with square root module for WDM RoF-EPON link"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 10, Pages 962-964, May 2013.	Naresh Kumar, Ajay K. Sharma, Vinod Kapoor, "XPM-induced crosstalk with combined effect of 2OD and 3OD in SCM-WDM optical transmission link"
2013	Optik - International Journal for Light and Electron Optics, Volume 124, Issue 10, Pages 941-944, May 2013.	Naresh Kumar, Ajay K. Sharma, Vinod Kapoor, "Improved XPM-induced crosstalk with higher order dispersion in SCM-WDM optical transmission link"
2013	International Journal of Sensor and Its Applications for Control Systems Vol.1, No.1, pp.13-22, 2013.	Deepti Gupta and Ajay K Sharma, "Fuzzy Cost Metric based Adaptive (FCMA) Routing Protocols for WSNs"
2013	International Journal of Communication Networks and Distributed Systems (IJCND), Inderscience Publications, Volume 10, Number 1, pages 52-65, January 2013.	Neetu Sood, Ajay K Sharma and Moin Uddin, "Diversity Performance Analysis of OFDM- BPSK and-QPSK over Nakagami-m Flat Fading Channels"
2012	International Journal of Computer Applications, Foundation of Computer Science, New York, USA, (0975-8887), Vol. 43, No. 6 pp. 43-47, April 2012.	Nischay Bahl, Ajay K. Sharma and Harsh K Verma, "On Denial of Service Attacks for Wireless Sensor Networks"
2012	International Journal of Computer Network and Information Security (IJCNIS), MECS, (2074-9104), Vol. 7, pp. 51-56, 2012.	Nischay Bahl, Ajay K. Sharma, and Harsh K. Verma, "Impact of Physical Layer Jamming on Wireless Sensor Networks with Shadowing and Multicasting"
2012	Optik - International Journal for Light and Electron Optics, (0030-4026), Volume 123, Issue 4, pp. 338-342, February 2012.	Vishal Sharma, Amarpal Singh, and Ajay K Sharma, "Challenges to radio over fiber (RoF) technology and its mitigation schemes - A review"
2012	International Journal of Computer Applications, USA, (0975-8887), vol. 37-No.10, pp. 1-6, January 2012.	Ashish Kumar, Ajay K. Sharma and Arun Singh, "Performance Evaluation of Centralized Multicasting Network over ICMP Ping Flood for DDoS"
2012	Int. J. Emerg. Sci. (2222-4254), Vol. 2(2), pp. 268-279, June 2012.	Arun Singh, Ajay K. Sharma and Ashish Kumar, "Designing and Comparing Centralized TCP File Server with TCP and UDP based Enhanced Unicast and Multicast Multimedia File Servers"

2012	Optik-International Journal for Light and Electron Optics, Volume 123, Issue 22,, Pages 2056-2061, November 2012.	Naresh Kumar, Ajay K. Sharma, Vinod Kapoor, "XPM-induced crosstalk with higher order dispersion in SCM-WDM optical transmission link"
2012	International Journal of Computer Theory and Engineering, Vol. 4, No.4, pp 523-526, August 2012.	Shiv Kumar Singh, Neetu Sood and Ajay K Sharma, "Performance Evaluation of LDPC and Turbocoded OFDM System in Nakagami-m Fading"
2011	International Journal of Energy Information and Communications (IJEIC), (2093-9655), Science & Engineering Research Support society, (SERSC) Publications, Korea, Vol. 3, Issue 4, pp. 181-194, November 2011.	Deepti Gupta and Ajay K Sharma, "On performance Evaluation of WSN Routing Protocols for MICA and MICAz using Different Radio Models"
2011	Optik - International Journal for Light and Electron Optics, USA, Volume 122, Issue 20, Pages 1862-1864, October 2011.	Naresh Kumar, Ajay K. Sharma, Vinod Kapoor, "Performance evaluation of SCM-WDM communication in the presence of SRS induced crosstalk for different types of fiber"
2011	International Journal of Future Generation Communication and Networking, (2233 - 7857), Vol. 4, No. 3, pp. 61 – 72, September 2011.	Deepti Gupta and Ajay K Sharma, "Investigations on Energy Efficiency for WSN Routing Protocols for Realistic Radio Models"
2011	International Journal of Applied Engineering Research (0973 - 4562), Vol. 6, No.12, pp. 1461 – 1480, September 2011.	Deepti Gupta and Ajay K Sharma, "Performance Investigations of Routing Protocols for WSNs based on Congestion-Aware Routing with Different Radio Models"
2011	International Journal of Advanced Science & Technology (2005 - 4238), Vol. 31, pp. 37 – 46, June 2011.	Vinit Grewal and Ajay K Sharma, "On Performance Enhancements of WiMax PHY Layer with Turbo Coding for Mobile Environments"
2011	International Journal of Computer Applications, USA (0975-8887), vol. 23-No.8, pp. 24-29, June 2011.	Arun Singh, Ajay k Sharma and Ashish Kumar, "MultiClient Multi-Instance Centralized File Server using TCP protocol in Java Sockets"
2011	International Journal of Electrical, Electronics and Computer Systems, Bangladesh (2221-7258), vol.1, Issue 2, pp. 47-52, April 2011.	Arun Singh, Ajay k Sharma and Ashish Kumar, "Comparing Centralised and Distributed Servers Using Java Sockets for Small Scale Implementation"
2011	International Journal of Computer Applications, USA (0975-8887), vol.19-No.9, pp. 25-29, April 2011.	Arun Singh, Ajay k Sharma and Ashish Kumar, "MultiClient Multi-Instance Secured Distributed File Server"
2011	International Journal of Advanced Science & Technology (2005 - 4238), Vol. 29, pp. 101 – 112, April 2011.	Deepti Gupta and Ajay K Sharma, "Comparative Investigations on Performance of Routing Protocols in Presence of Realistic Radio Models for WSNs"
2011	Optik - International Journal for Light and Electron Optics, (0030-4026), Volume 122, Issue 5, March 2011, Pages 371-374	Vishal Sharma, Amarपाल Singh, Ajay K. Sharma, "Simulative investigation the impact of optical amplification techniques on single- and dual-electrode MZM and direct modulator's in single-tone RoF system"

2011	International Journal of Computer Applications, USA (0975-8887), vol. 22-No.6, pp. 29-33, March 2011.	Ashish Kumar, Ajay K Sharma and Arun Singh, "Comparison and Analysis of PIM-DM and BST Multicasting Network over Drop Tail Queuing Technology"
2011	International Journal of Communication and Computer, David Publishing, USA, (ISSN: 1930-1553), Vol. 8, No. 3, pp. 201-210, March 2011.	Sukhvinder S. Bamber and Ajay K Sharma, "Simulative Performance Evaluation of 802.15.4 with different Modulations for Wireless Sensor Networks"
2011	Journal of Optics, Springer, ISSN 0972-8821, Vol. 40, No. 1, Jan-March 2011.	Manjit Singh, Ajay K. Sharma and R. S. Kaler, "Investigations on Optical Timing Jitter in Dispersion Managed Higher Order Soliton System"
2011	International Journal of Computer Applications (IJCA), Published by Foundation of Computer Science, Vol. 17, No. 8, pp 1-3, March 2011.	Mukesh Mishra, Neetu Sood, Ajay K Sharma, "BER Performance of OFDM-BPSK Over Nakagami Fading Channels"
2011	International Journal of Computer Science, Engineering and Information Technology (IJCSEIT), Vol.1, No.3, pp. 12-20, August 2011.	Mukesh Mishra, Neetu Sood and Ajay K Sharma, "New BER Analysis of OFDM System Over Nakagami- n (Rice) Fading Channel"
2010	Journal of Advances in Information Technology, Vol 1, No 4, pp. 204-218, November 2010.	Deepti Gupta and Ajay K Sharma, "On Routing Protocols for WSNs with Additional Layers: Future Technology for IT"
2010	International Journal of Computer Networks (IJCN), Volume (2): Issue (4), pp. 181-189, Kuala Lumpur Malaysia, October 2010.	Sukhvinder S. Bamber and Ajay K. Sharma, "Queue Size Trade Off with Modulation in 802.15.4 for Wireless Sensor Networks"
2010	International Journal of Computer Applications, Published by Foundation of Computer Science, USA, ISSN: 0975 – 8887, Volume 7, No.10, pp. 22-28, October 2010.	Neeraj Choudhary and Ajay K Sharma, "Performance Evaluation of LR-WPAN for different Path-Loss Models"
2010	International Journal of Computer Applications, Published by Foundation of Computer Science, USA, Volume 6, No. 7, pp. 12-17, September 2010.	Vinit Grewal and Ajay K Sharma, "On Performance Evaluation of Different QoS Mechanisms and AMC scheme for an IEEE 802.16 based WiMAX Network"
2010	Optik - International Journal for Light and Electron Optics, Volume 121, Issue 17, Pages 1545-1549, September 2010.	Vishal Sharma, Amarpal Singh, Ajay K. Sharma, "Simulative investigation of nonlinear distortion in single- and two-tone RoF systems using direct- and external-modulation techniques"
2010	International Journal of Computer Applications, Published By Foundation of Computer Science, USA, Volume 6, No. 2, pp. 30-36, September 2010.	Parul Saini and Ajay K Sharma, "Energy Efficient Scheme for Clustering Protocol Prolonging the Lifetime of Heterogeneous Wireless Sensor Networks"

2010	International Journal of Computer Applications, Published By Foundation of Computer Science, USA, Volume 6, No.1, pp. 16-20, September 2010.	Sukhvinder S Bamber and Ajay K Sharma, "Enhancing network output load in IEEE 802.15.4 with different modulations for wireless sensor networks"
2010	International Journal of Computer Networks and Communications, Volume 2, No. 5, pp. 174-190, September 2010.	Monica and Ajay K Sharma, "Comparative Investigation for Energy Consumption of Different Chipsets Based on Scheduling for Wireless Sensor Networks"
2010	International Journal of Computer Applications, Published By Foundation of Computer Science, USA, Volume 6, No. 1, pp. 28-35, September 2010.	Monica and Ajay K Sharma, "Comparative Study of Energy Consumption for Wireless Sensor Networks based on Random and Grid Deployment Strategies"
2010	Optik - International Journal for Light and Electron Optics, Volume 121, Issue 14, Pages 1280-1284, August 2010.	Vishal Sharma, Amarpal Singh, Ajay K. Sharma, "Simulative investigation of nonlinear distortion in single- and two-tone RoF systems using direct- and external-modulation techniques"
2010	Optik - International Journal for Light and Electron Optics, Germany, Volume 121, Issue 14, Pages 1280-1284, August 2010.	Vishal Sharma, Amarpal Singh and Ajay K. Sharma, "Simulative investigation of the impact of EDFA and SOA over BER of a single-tone RoF system"
2010	International Journal of Computer Applications, Published By Foundation of Computer Science, USA, Volume 4, No. 9, pp 1-3, August 2010.	Neha Singh Ajay K. Sharma, "Performance Improvement of video based applications in WFQ using Committed Access Rate"
2010	International Journal of Computer Applications, Published by Foundation of Computer Science.USA, July 2010. (0975 – 8887), Volume 4 – No.2, pp. 17-18, July 2010.	Samayveer Singh and Ajay K. Sharma, "Energy-Efficient Data Gathering Algorithms for Improving Lifetime of WSNs with Heterogeneity and Adjustable Sensing Range"
2010	International Journal of Computer Applications, Published by Foundation of Computer Science.USA, (0975 – 8887), Volume 4 – No.6, pp. 1-5, July 2010.	Harneet Kour and Ajay K. Sharma, "Hybrid Energy Efficient Distributed Protocol for Heterogeneous Wireless Sensor Network"
2010	International Journal of Computer Applications (0975 – 8887), Volume 6, No.1, pp. 16-20, September 2010.	Sukhvinder S. Bamber and Ajay K. Sharma, "Enhancing Network Output Load in IEEE 802.15.4 with Different Modulations for Wireless Sensor Networks"
2010	International Journal of Computer Applications, Published by Foundation of Computer Science. Published by Foundation of Computer Science. USA, (0975 – 8887), Volume 3, No.12, pp. 6-14, July 2010.	Deepti Gupta and Ajay K Sharma, "Performance Evaluation of Routing Protocols for WSNs Based on Energy-aware Routing with different Radio Models"

2010	International Journal of Computer Applications, Published by Foundation of Computer Science. Published by Foundation of Computer Science. USA, (0975 – 8887), Volume 3, No.6, pp. 13-16, June 2010.	Neetu Sood, Ajay K Sharma and Moin Uddin, “BER Performance of OFDM-BPSK and -QPSK Over Generalized Gamma Fading Channel”
2010	Elsevier Science, Optik - International Journal for Light and Electron Optics, (0030-4026), Volume 121, pp 1036–1041, May 2010.	Gousia, G.M. Rather and Ajay K. Sharma, “WDM–OTDM based spectral efficient hybrid multiplexing technique inherent with properties of bandwidth elasticity and scalability”
2010	International Journal of Communications, Network and System Sciences, Scientific Research Publishing, Volume 3, Number 4, pp. 339--424, April 2010.	Neetu Sood, Ajay K Sharma and Moin Uddin, “On Channel Estimation of OFDM-BPSK and -QPSK over Generalized Alpha-Mu Fading Distribution”
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Conference Publications :

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2019	ICETIT 2019 : International Conference on Emerging Trends in Information Technology- 2019 at IIT Madras, In Proceedings of ICETIT 2019 pp. 107-116, June 21-22, 2019 , Springer, Cham., Switzerland.	Mohit Sajwan, Ajay K. Sharma, & K. Verma Analysis of Scalability for Hierarchical Routing Protocols in Wireless Sensor Networks.
2019	International Conference on Information, Communication and Computing Technology, ICICCT-19, New Delhi, In Proceedings of ICICCT-19, pp. 61-71, May 11, 2019, Springer, Singapore	Mohit Sajwan, Ajay K. Sharma, & K. Verma Impact of Sink Location in the Routing of Wireless Sensor Networks.
2018	Power Electronics, Intelligent Control and Energy Systems (ICPEICES), IEEE International Conference, New Delhi, October 22-24, 2018.	Preeti Verma, Ajay K. Sharma, Vinay Shanker Pandey and Arti Noor "FSDPRO - A Technique for Low Power Noise Tolerant TSPC Design"
2018	IEEE International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET) held on 22-24 March 2018 at Chennai, India	Gunjan, Prachi Maheshwari and Ajay K. Sharma "Modified TEEN for Handling Inconsistent Cluster Size Problem in WSN"
2018	IEEE International Conference on New Trends in Engineering and Technology, ICNTET 2018, May 14, 2018, Chennai.	Richa Mishra, Rajiv Tripathi and Ajay K. Sharma "Coalition Based Energy Efficient Multi-Hop Routing for a PDF Based Node Distribution Scheme in Wireless Sensor Networks"
2016	Springer: Proceedings of the International Conference on Signal, Networks, Computing, and Systems, (ICSNCS-2016), Feb. 25-27, 2016, Volume 395 of the series Lecture Notes in Electrical Engineering pp 261-268,14 October 2016.	Manisha Bharti , Ajay K. Sharma and Manoj Kumar "Effect and Suppression of Noise in 2D PC/OOC Scheme for Optical CDMA Systems"

2016	IEEE 1st International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES) on July 4-6, 2016 Pages: 1 - 6, Delhi, India	Preeti Verma, Arti Noor, Ajay K. Sharma, and Sampath Kumar V. "Power gating and its repercussions-a review"
2016	IEEE 8th International Conference on Computing, Communication and Networking Technologies (ICCCNT) on July 3-5, 2017 Pages 1-6, Delhi, India.	Preeti Singh ; J. K. Rai , Ajay K. Sharma "Optical packet switch architectures evaluation using optical cost and physical loss"
2016	International Conference on Big Data and Advanced Wireless technologies, Blagoevgrad, Bulgaria, November 10-11, 2016.	Rohit Kumar, S. J. Darak, Ajay K. Sharma, and Rajiv Tripathi, "Two-Stage Decision Making Policy for Opportunistic Spectrum Access"
2016	IEEE- SCOPES International Conference on Signal Processing, Communication, Power and Embedded System, organised by C U T M (Centurion University of Technology and Management), Paralakhemundi, Odissa, India, 3-5 October 2016.	Harpreet Kaur, Manoj Kumar, Ajay K. Sharma and Harjit P. Singh "Performance analysis of wavelet based multiuser environment in mobile WiMax with SRRC filter"
2015	IEEE International Conference on Computing, Communication and Automation (ICCCA-2015), pp. 464-468, May 15-16, 2015, Greater Noida, [UP], India	Nonita Sharma and Ajay K. Sharma "Comparative Analysis of SIR and SID in Wireless Sensor Networks using Temporal Correlation"
2015	IEEE International Conference on Signal Processing and Communication (ICSC), pp. 94-98, March 16-18, 2015, Noida, India	Manisha Bharti, Manoj Kumar, Ajay K. Sharma "Comparative analysis of FBGs as encoders for optical CDMA systems"
2015	IEEE, International Conference on Communication, Information & Computing Technology (ICCICT), 15-17 Jan. 2015, Pages: 1-5, Mumbai, India.	Manisha Bharti, Manoj Kumar, Ajay K. Sharma "Design and analysis of OCDMA system using W/T codes at different bit rates"
2015	IEEE International Conference on Computer, Communication and Control (IC4-2015), pp. 1-5, September 10-12, 2015, Indore, Madhya Pradesh, India.	H Kour and Ajay K. Sharma "Performance evaluation of HEED and H-HEED protocol for realistic models in WSN"
2014	IEEE International Conference on Electronics, Computing and Communication Technologies (IEEE CONECCCT), pp. 1-6, January 6-7, 2014, Bangalore, India.	Mayank Mani, Manpreet Kaur, Ajay K. Sharma "Fitness based Enhanced Stable Election Protocol: A hybrid approach"
2014	Recent Advances in Engineering and Computational Sciences (RAECS), pp. 1-4, 2014	Richa Bhatia, Ajay K. Sharma and Jyoti Saxena "Optimized alternate polarization and Four Wave Mixing in 60-Gb/s DWDM transmission system"
2014	IEEE International Conference on Data Mining and Intelligent Computing (ICDMIC), 5-6 Sept. 2014, Pages: 1-6, New Delhi.	Manisha Bharti, Ajay K. Sharma and Manoj Kumar "Simulative analysis of 2-code keying approach using Walsh Hadamard codes to enhance security and reduce dispersion in OCDMA system"
2013	International Journal of Grid and Distributed Computing, Volume 6, Issue 3, pp. 1-10, 2013.	Deepti Gupta and Ajay K. Sharma "Effect of the Aggregate Queue and Transmit Duplicate Layers on the WSN Routing Protocols for MICA and MICAz"
2013	IEEE High Capacity Optical Networks and Emerging/Enabling Technologies, on 11-13 Dec. 2013, Pages: 170-174, Magosa, Cyprus	Richa Bhatia, Ajay K. Sharma and Jyoti Saxena "Effect of optimized alternate polarization on performance of N X 60-gb/s WDM transmission system"
2013	Springer Berlin Heidelberg, International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness, pp. 104-114, 2013.	Raju Pal, Ritu Sindhu and Ajay K. Sharma "SEP-E (RCH): Enhanced Stable Election Protocol Based on Redundant Cluster Head Selection for HWSNs"

2013	IEEE Sixth International Conference on Contemporary Computing (IC3), pp. 427-432, 2013.	Raju Pal and Ajay K. Sharma "FSEP-E: Enhanced stable election protocol based on fuzzy Logic for cluster head selection in WSNs"
2012	International Conference on Mechanical, Electronics and Mechatronics Engineering (ICMEME'2012) March 17-18, 2012 Bangkok.	Vinod Kumar, Baljeet Kaur and Ajay K Sharma "A Comparative Analysis of WDM RoF-EPON Link with and without DCF"
2010	The 7th International Symposium on High Capacity Optical Networks and Enabling Technologies (HONET'10), NILES, Cairo University, Cairo, Egypt, December 19-21, 2010.	Deepti Gupta and Ajay K Sharma "On Performance of WSN with Routing Protocols in presence of Realistic Radio Models"
2010	The First International Conference on Parallel, Distributed and Grid Computing (PDGC-2010) held at Jaypee University of Information Technology, Wagnaghat, Solan, Himachal Pradesh, India, PDGC-94, October 28 to 30, 2010.	Deepti Gupta and Ajay K Sharma "Performance Evaluation of Constrained Flooding Routing Protocol for WSNs Based on Path Loss Exponent"
2010	The First International Conference on Parallel, Distributed and Grid Computing (PDGC-2010) held at Jaypee University of Information Technology, Wagnaghat, Solan, Himachal Pradesh, India, PDGC-208, October 28 to 30, 2010.	Samayveer Singh and Ajay K Sharma "A Heterogeneous Power Efficient Load Balancing Target-Monitoring Protocol for Sensor Networks"
2010	The First International Conference on Parallel, Distributed and Grid Computing (PDGC-2010) held at Jaypee University of Information Technology, Wagnaghat, Solan, Himachal Pradesh, India, PDGC-227, October 28 to 30, 2010.	Parul Saini and Ajay K. Sharma "E-DEEC- Enhanced Distributed Energy Efficient Clustering Scheme for heterogeneous"
2010	IEEE 2nd International Advance Computing Conference (IEEE IACC 2010) held at Thapar University, Patiala, pp 181-184, 19-20th February, 2010.	Vinit Grewal and Ajay K Sharma "On QoS Aspects with Different Coding and Channel Conditions for a WiMAX based Network"
2010	2nd IEEE International Advance Computing Conference, IACC-2010, pp 88-90, Feb. 2010, Patiala, India.	Neetu Sood, Ajay K. Sharma and Moin Uddin, "BER Performance of OFDM-BPSK and-QPSK over Nakagami-m Fading Channels"
2009	IEEE International Advance Computing Conference (IACC 2009), Thapar University Patiala, India, pp. 1197-1199, 6-7 March 2009	Neetu Sood, Ajay K Sharma and Moin Uddin "BER Performance of OFDM-BPSK and -QPSK over Generalized Alpha-Mu Fading Distribution"
2009	IEEE International Advance Computing Conference (IACC 2009), Thapar University Patiala, India, pp. 770-773, 6-7 March 2009	Vinit Grewal and Ajay K Sharma "Comparative Investigations on Mobility Protocols for WLAN and UMTS Interworking"
2008	International Conference on Computer Science, ICCS-2008, organized by World Academy of Science, Engineering and Technology (PWASET) to be held during April 25-27, 2008 Rome, Italy.	Vasudha, Ajay K Sharma and Manoj Kumar "HTTP Response for RIPv2 with EIGRP"
2008	5th IEEE sponsored International Conference on Electrical and Computer Engineering ICECE 2008, Dhaka, Bangladesh, pp. 227-231, 20-22 December 2008.	Jyoteesh Malhotra, Ajay K Sharma and R S Kaler "Investigation on Stochastic Tap Delay line Model of UWB Indoor Channel"
2008	International Conference on Computer Science and Engineering, CSE-2008, organized by World Academy of Science, Engineering and Technology (PWASET) to be held during May 21-23, 2008 at Bangkok, Thailand.	Vasudha, Ajay K Sharma and Manoj Kumar "Investigations on Routing Protocols for Inbound/Outbound Traffic"

2008	World Congress on Science, Engineering and Technology (WCSET-2008), Sponsored & Endorsed by World Academy of Science, Engineering and Technology (WASET), August 30-31, September 1, 2008, Singapore.	Jyoteesh Malhotra, Ajay K. Sharma and R.S.Kaler “Moments-based Performance Analysis of Diversity Combining Receiver in Generic-Gamma Channel”
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Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Text Book	Frequently Asked Questions in Electronics and Communication Engineering	Galgotia Publications Pvt. Ltd	Ajay K Sharma and Shatendra K. Sharma	81-7515-486-1	2005
Text Book	Advanced Communication Systems (Communication Engineering-II)	Satya Prakashan, New Delhi	Ajay K Sharma	81-7684-108-0	2005
Text Book	Communication Engineering-II	Satya Prakashan, New Delhi	Ajay K Sharma	81-7684-278-8	2004
Text Book	Electrical Engineering and Electronic Components	Dhanpat Rai Publishing Company, New Delhi	M L Gupta and Ajay K Sharma		2003
Text Book	Communication Engineering-I	Satya Prakashan, New Delhi	Ajay K Sharma and Manoj Kumar	81-7684-099-8	2003
Text Book	Analog Circuits and Digital Fundamentals	Dhanpat Rai Publishing Company, New Delhi	Ajay K Sharma	81-87433-64-7	2002
Text Book	Microwave Engineering	Satya Prakashan, New Delhi	Ajay K Sharma and Shatendra K. Sharma	81-7684-091-2	2001
Text Book	Television Engineering	Satya Prakashan, New Delhi	Ajay K Sharma and Shatendra K. Sharma	81-7684-112-2	2001
Text Book	Modern Electronic Communications: principles and practice	Dhanpat Rai publishing Co. (P) Ltd., New Delhi	Ajay K Sharma and R.K. Sinha		1999
Text Book	Electronic Manufacturing and Soldering Techniques	Dhanpat Rai and Co. (P) Ltd, Delhi	Ajay K Sharma		1993
Text Book	Audio Video and TV Engineering (Consumer Electronics)	Dhanpat Rai and Co. (P) Ltd., Delhi	Ajay K Sharma	81-7700-005-5	1991

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
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Principal Investigator	R & D Vide Sanction order F26-14/2003 TS.V dated 14-01-2004	Designing and Simulation of High Data Rate Optical Fiber Transmission Systems	Funded by Ministry of Human Resource Development (MHRD) Govt. of India, New Delhi	2004	2007	12 lacs	Completed	
Principal Investigator	R & D Vide Sanction order F28-2/2000 TS.V dated 28-03-2001	Studies on Dispersion and Fiber Nonlinearities for Optical Communication Systems and Networks	Ministry of Human Resource Development (MHRD) Govt. of India, New Delhi	2000	2003	6 lacs	Completed	
Co-Principal Investigator	R & D	Studies on broadband optical communication systems	All India council for Technical Education (AICTE), New Delhi	1995	1999	6 lacs	Completed	Dr R K Sinha
Principal investigator	Govt. of India Funding	Special Manpower Development Programme for Chips to System Design (SMDP-C2SD)	Ministry of Communication & IT, New Delhi	2015	2020	20 lacs	Completed	Dr Rikmantra Basu
Co Principal Investigator	R & D Project	High-Density Wireless Access Coverage for Crowded Events & Locations	Funded by ISOC, Internet Society (Beyond the Net), USA	2017	2019	\$27000 USD for Three Years	Completed	Dr Karan Verma
Co Principal Investigator	R & D Project	Big Data Analytics in Healthcare	INDO-MOST Joint Research Cooperation Project by DST	2018	2020	45 lacs	Ongoing	Dr Karan Verma
Co Principal Investigator	R & D Project	Agile Modeling of SMART CITY – “a fusion of IoT and Big Data	INDIAN-French Joint Cooperation Project by DST	2018	2020	30 lacs	Ongoing	Dr Karan Verma

Co Principal Investigator	R & D Project	Development of Near Infrared Spectrometer for Plant Disease Detection	DST, Government of Indi	2018	2020	88 lacs	Ongoing	Dr Gyanendra Sheoran
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Professional Affiliations :

Designation	Organization
Member, Standing Finance Committee, Standing Selection Committee, Standing Academic Committee (w.e.f. January 2020 to till date)	AIIMS Bathinda
Member Board of Governors (w.e.f. 27.03.18 to till date)	IKG Punjab Technical University, Jalandhar
Chairman Academic Council (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Chairman Building Construction Committee (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Chairman, Human Resource Committee (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Chairman, Sports Executive Committee (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Chairman, Internal Quality Assurance Cell (IQAC) (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Chairman, College Development Council (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Chairman, University Research Board (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Chairman, Cultural Executive Committee (w.e.f. 27.03.18 to till date)	I.K.Gujral Punjab Technical University, Jalandhar
Member, BoG and Finance Committee (w.e.f. 27.03.2018 to May, 2019)	NITTTR Chandigarh
Chairman Finance Committee (w.e.f. 27.03.18 to till date)	IKG Punjab Technical University, Jalandhar
Member, Managing Body & Annual General meeting (w.e.f. 27.03.18 to till date)	Indian Red Cross Society, Punjab State Branch, Chandigarh
Member, PGSC Society and Governing Body (w.e.f. 27.03.18 to till date)	Pushpa Gujral Science City, Kapurthala

Member Board of Governors (w.e.f 27.03.18 to till date)	Beant College of Engg. & Tech, Gurdaspur
Member Board of Governors (w.e.f 27.03.18 to till date)	MRSPTU, Bathinda
Member Board of Governors and Finance (w.e.f 27.03.18 to till date)	Punjab School Education Board, Mohali
Member Governing Board	Inter University Centre for Teacher Education, BHU Varanasi
Member, BoG and Finance Committee (w.e.f 27.03.18 to May 2019)	NITTTR, Chandigarh
Member, Planning and Monitoring Board (P&MB) (Three years w.e.f. 06.08.18-05.08.21)	Himachal Pradesh Technical University, Hamirpur, HP
Member, Governing Council (Three years w.e.f. 29.08.2018-28.08.2021)	Sardar Swaran Singh National Institute of Bio Energy (GOI), Kapurthala, Punjab
Chairperson, Board of Governors (w.e.f 24.11.2017 to 22.03.2018)	NIT, Hamirpur
Member, Selection cum Search Committee (Feb, 17-19 2017)	YCMOU, Nasik
Member, Selection cum Search Committee	Central University Bihar
Member, 7th Pay Review Committee	MHRD, New Delhi
Chairperson, To examine and finalise the revised DPR of eleven new NITs	MHRD, New Delhi
Member, Selection of Innovation Scholars for the "Innovation Scholars in-residence" scheme at the Rashtrapati Bhavan	President's Secretariat, Government of India, New Delhi
Member Secretary, To frame policy and portal for Student Grievance Redressal Cell of NITs.	MHRD, New Delhi
Chairman, Grievance Committee to look into the grievances of faculty of NIT Srinagar.	NIT Srinagar
Member, BoG and Finance Committee (w.e.f 03.05.2016 to 21.03.2018)	NIT, Hamirpur
Chairman, Buildings & Works Committee (w.e.f 03.05.2016 to 21.03.2018)	NIT, Hamirpur
Member Governing Body (w.e.f 03.05.2016 to 22.03.2018)	IIIT, Una

Member, Board of Governors (w.e.f. 03.05.2016 to 22.03.2018)	Himachal Pradesh Technical University, Hamirpur
Member, Board of Governors (w.e.f 03.05.2016 to 22.03.2018)	HP School Education Board Dharamsala
Chairperson, Board of Governors (w.e.f 19.04.2015 -14.11. 2016)	NIT, Delhi
Member, Partner Institute (NIT Delhi)	President's Secretariat, Government of India, New Delhi
Member	National Disaster Management Authority, New Delhi
Chairman, Oversight Committee to look into various anomalies of non-teaching staff of NITs and to propose uniform solution across the NIT system.	MHRD, New Delhi
Member, BoG and Finance Committee (w.e.f 10.10.2013 to 26.03.2018)	NIT, Delhi
Chairman Senate (w.e.f 10.10.2013 to 26.03.2018)	NIT, Delhi

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Mohit Sajwan	Energy Efficient Routing Protocols in Wireless Sensor Networks	Defended	2021	
Jaspinder Kaur	Material based Performance Analysis of Advanced Photonics Devices,	Defended	2021	
Prachi Maheshwari	Energy Efficiency in Wireless Sensor Network	Submitted	2021	
Gunjan	Energy Efficient Techniques for Wireless Sensor Networks	Defended	2021	
Vibha Nehra	Energy Efficiency in Heterogeneous Wireless Sensor Networks and Blockchain	Defended	2020	
Sadeep Verma	Lifetime Optimization for a Heterogeneous Wireless Sensor Network with Multiple Data Sinks	Defended	2020	
Rohit Kumar	Distributed Algorithms for Dynamic Spectrum Access in Decentralized Cognitive Radio Networks	Defended	2019	
Parteek Gupta	Performance Evaluation and Optimisation of Clustering Protocols for Wireless Sensor Networks	Defended	2019	
Amandeep Kaur Sohal	Design and Development of an Optimized Energy Efficient Algorithm for Wireless Sensor Networks	Submitted	2019	
Harpreet Bajaj	Investigations on Mobility Management of Wireless Networks	Defended	2019	

Richa Mishra	Energy Efficient Algorithms for Wireless Sensor Networks	Defended	2018	
Preeti Verma	Design and Analysis of Energy Efficient Noise Aware Dynamic Circuits	Defended	2018	
Nonita Sharma	Proficient Hybrid Adaptive Routing Algorithm for Heterogeneous Wireless Sensor Networks	Defended	2017	
Manisha Bharti	SIMULATIVE PERFORMANCE INVESTIGATIONS on OCDMA SYSTEMS BASED ON ADVANCED MODULATION and CODING TECHNIQUES	Defended	2017	
Nishchay Bhal	Development of Energy Efficient WSN Architecture and Performance Evaluation in the Presence of Various Impairments	Defended	2016	Harsh Verma
Guzia Qazi	Impact of Laser Originating Impairments and Design of Improved Laser Source for IM-DD SCM Lightwave System	Defended	2016	Najee-U-Din and Moin-Uddin
Richa Bhatia	Performance Evaluation of High Bit Rate Optical Systems with Polarisation Mode Dispersion	Defended	2016	
Deepti Gupta	Performance Investigations and Design of Energy Efficient Routing Protocols for Wireless Sensor Networks	Defended	2015	
Jagjit Malhotra	Performance Investigations on Multi-Channel Optical Communication Systems & Networks	Defended	2014	Dr Manoj Kumar
Naresh Rana	Performance Investigations on OFDM-, SCM and RoF Transmission Link	Defended	2013	Dr Vinod Kapoor
Vishal Sharma	Performance Analysis in Single and Multi Tone Radio Over Fiber Transmission System	Defended	2013	Dr Amarpal Singh
Neetu Sood	Performance Analysis of Orthogonal Frequency Division Multiplexing in Generalized Flat Fading Channels	Defended	2013	
Vinit Grewal	Design and Performance Study of QoS Provisioning in WiMax Networks	Defended	2013	
Sukhwinder S Bamber	Design and Performance Evaluation of IEEE 802.15.4 for Broadband Wireless Access	Defended	2012	
Anu Shital	Analysis and Simulation of Fiber Nonlinearities due to Kerr's Effect for Optical Communication Systems and Networks	Defended	2012	Dr R S Kaler
Manjit Singh	Analysis and Simulation of Timing Jitter in Optical Communication Systems and Networks	Defended	2010	
S. K. Wadhwa	Physical Impairments in Wavelength Switched Optical Networks	Defended	2009	
Shaveta Rani	Investigations on the Survivability Strategies for Wavelength Division Multiplexing (WDM) Optical Networks	Defended	2009	
Jyotesh Malhotra	Performance Evaluation and Simulation of Wireless Communication Systems in the presence of Fading	Defended	2009	
Pramjeet Singh	Investigations on Routing and Wavelength Assignment Algorithms in WDM Optical Networks	Defended	2008	
Sandeep Arya	Higher-Order Dispersion and Nonlinearities in Optical Communication Systems and Networks	Defended	2008	

Amarpal Singh	Analysis and Simulation of WDM Systems in the Presence of Four Wave Mixing	Defended	2008	
Manoj Kumar	Analysis, Simulation and performance evaluation of Optical Soliton Systems	Defended	2007	
Vinod Kapoor	Cross Talk Effects in Optical Communication Systems and Networks	Defended	2006	
Vishal S Sharma	On Line Tool Condition Monitoring	Defended	2005	
R. S. Kaler	Performance Analysis of Broadband Optical Communication Systems and Networks with Dispersion and Fiber Nonlinearities	Defended	2003	

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Manpreet Kour, M.Tech CSE Student, NITJ	Chaining Based Proficient Routing Protocols for Wireless Sensor Networks	Awarded	2013	
Mayank Mani, M.Tech CSE Student, NITJ	Stable and Energy Efficient Routing Protocols for Wireless Sensor Networks	Awarded	2013	
Ankur, M.Tech CSE Student, NITJ	Optimal Election Clustering Protocol with Improved Routing and Trade-off Function for Heterogeneous WSNs	Awarded	2013	
Neha Fotedar, M.Tech CSE Student, NITJ	Energy Proficient and Time Synchronized Wireless Sensor Network Using Minimum Distance Clustering Algorithm	Awarded	2013	
Raju Pal, M.Tech CSE Student, NITJ	Prolonging Lifetime for Heterogeneous Wireless Sensor Network Using Modified SEP-E	Awarded	2012	
Nitin Kumar, M.Tech CSE Student, NITJ	Performance Investigations on Biological Inspired Clustering for Wireless Sensor Networks	Awarded	2012	
Vibha Nehra, M.Tech CSE Student, NITJ	Development of Energy Proficient Pegasus Protocol for Wireless Sensor Network	Awarded	2012	
Neha Sharma, M.Tech ECE Student, NITJ	Performance Evaluation of the Cluster Tree Wireless Sensor Networks	Awarded	2011	
Jasdeep Kaur, M.Tech ECE Student, NITJ	Performance evaluation for UWB with different Radio Propagation channels	Awarded	2011	
Mandeep Kaur, M.Tech ECE Student, NITJ	Performance Evaluation in Bidirectional Broadband Passive Optical Networks	Awarded	2011	
Shiv Kumar Singh, M.Tech ECE Student, NITJ	Comparative Investigations on BER in Coded OFDM Systems with Nakagami-M and Alpha-Mu wireless Fading Distributions	Awarded	2011	
Arun Singh, M.Tech CSE Student, NITJ	Multiclient Multimedia Secured File Server using JAVA Sockets and RMI	Awarded	2011	

Ashish Kumar, M.Tech CSE Student, NITJ	Performance Evaluation of Multicasting Networks over ICMP Ping Flood for DDoS	Awarded	2011	
Amandeep Kaur, M.Tech CSE Student, NITJ	Performance Investigations for Cognitive Radio over Fading Scenarios with Encoding Techniques	Awarded	2011	
Samayveer Singh, M.Tech CSE Student, NITJ	Performance Investigations on Distributed and Centralized Algorithms for Wireless Sensor Networks	Awarded	2010	
Harneet Kour, M.Tech CSE Student, NITJ	Performance Investigations on HEED Protocol with different Approaches for Hetrogenious Wireless Sensor Networks	Awarded	2010	
Anu Bala, M.Tech CSE Student, NITJ	Comparative Investigations on Energy Consumption for Wireless Sensor Networks with Different Deployment Models	Awarded	2010	
Parul Saini, M.Tech CSE Student, NITJ	Comparative Investigations of Distributed Energy Efficient Clustering Protocols for Heterogeneous Wireless Sensor Networks	Awarded	2010	
Monica, M.Tech CSE Student, NITJ	Simulative Investigations on Energy Consumption for Wireless Sensor Networks using OMNeT++	Awarded	2009	
Deepti Gupta, M.Tech CSE Student, NITJ	Performance Evaluation of Routing Protocols for Wireless Sensor Networks with different Radio Models	Awarded	2009	
Neeraj Chaudhry, M.Tech CSE Student, NITJ	Simulation and Performance Evaluation of Wireless Sensor Networks for Different Path Models	Awarded	2009	
Vinod Kumar, M.Tech CSE Student, NITJ	Modeling and Performance Evaluation of Dynamic Routing over an Ad-Hoc Network	Awarded	2008	
Rakesh Jha, M.Tech ECE Student, NITJ	Security Issues in Ad-hoc and Infrastructure Networks	Awarded	2008	
Hemkant Gupta, M.Tech ECE Student, NITJ	Performance Aspects and Handover Study of UMTS Systems and Networks	Awarded	2008	
Suruchi Razdan, M.Tech CSE Student, NITJ	Simulative Investigations for Enhancing Security of Network using Modified Techniques	Awarded	2008	
Neha Singh, M.Tech CSE Student, NITJ	Effect of Queuing Disciplines on the Network Performance	Awarded	2008	
Gaurav Sharma, M.Tech CSE Student, NITJ	Watermarking of Multimedia Images by Color Plane Separations	Awarded	2008	
Jagdeep Singh, JTO, BSNL, Chandigarh	Simulation and Performance Analysis of WDM & ROF Transmission Link for Fiber-to-the-home	Awarded	2008	
Vasudha Bahl, Lecturer, NITJ	Investigations on Performance Issues and Comparative study for Routed Local Area Network based on OPNET	Awarded	2008	

Aarti Gupta, M.Tech ECE Student, NITJ	Simulative Investigations on the Performance of WLAN	Awarded	2008	
Kamaljit Kaur, M.Tech CSE Student, NITJ	Simulative Investigations on the Performance of VoIP in Wi-Fi Networks	Awarded	2008	
Gaurav Kumar Tyagi, M.Tech CSE Student, NITJ	Implementation of Modified TIMIP for Overlay Networks With Enhanced Handover & QoS	Awarded	2008	
Narinderjit Kaur, M.Tech CSE Student, NITJ	Performance Investigations on Ad Hoc Network Routing Protocols	Awarded	2008	
Vishal Sharma, Lecturer EC, CET, Kapurthala	Investigations on Power Penalty, Intensity Noise and Spectral Width with Higher-order Dispersion Parameters for Optical Communication Systems	Awarded	2007	
Manisha, Lecturer EC, DAVET, Jalandhar	Investigations on Robustness of NRZ, RZ, CRZ & CSRZ Modulation on Higher Order Dispersion and Amplifier Noise at 10 Gb/s Transmission Link	Awarded	2007	
Rajesh Kumar, GNDEC, Ludhiana	Performance Analysis of Radio over Fiber Employing Optical Frequency Multiplication	Awarded	2006	
M P Singh, GNDEC, Ludhiana	Simulation and Performance Analysis of SCM Transmission Link for Fiber-to-the-Home	Awarded	2006	
Monika Mehra, Sr. Lecturer, RIMT Institute of Engineering and Technology, Mandi Gobindgarh	Investigations on Polarization Mode Dispersion (PMD) Vector including Higher Order Dispersion Effects	Awarded	2005	
R K Sunkaria, Lecturer, NIT Jalandhar	Simulative Study of PMD Induced Impairment on High Speed Optical Communication	Awarded	2004	
Sandhya Salwan, Dy Director CIT, Gill Road, Ludhiana	Analytical Investigation and Simulation of Rayleigh Fading	Awarded	2003	
Anu Sheetal, Lecturer Adesh Institute of Engineering and Technology, Faridkot	Analytical Investigations and Simulation for Channel Fading in Mobile Communication Systems	Awarded	2003	
Deep Kamal Randhawa, Sr Lecturer NIT, Jalandhar	Investigation on Non-linear Crosstalk for SCM-WDM Optical Communication Systems	Awarded	2003	
Manjeet Singh, Sr Lecturer IET, Bhaddal	Analysis for Optical Fiber Transmission using Raman Amplification and Crosstalk Evaluation for WDM Systems	Awarded	2003	

Manoj Kumar Asstt. Professor, DAVIET, Jalandhar	Large Signal Analysis for FM-AM conversion in higher-order Dispersive Optical Communication Systems	Awarded	2002	
Jyoteesh Malhohra, Lecturer Mehr Chand Polytechnic Jalandhar	Bit Skew Compensating Algorithm for Worldwide WDM Systems and Networks	Awarded	2001	
Jaswinder Singh, Lecturer Mehr Chand Polytechnic Jalandhar	Influence of Dispersion on Optical Communication Systems using Small Signal Analysis	Awarded	2000	

Admin. Responsibilities :

Position Held	Organization	From	To
Dean (Academics)	NIT Jalandhar	04-09-2013	09-10-2013
Dean (Administration)	NIT Jalandhar	26-04-2013	03-09-2013
Dean (Planning and Development)	NIT Jalandhar	06-09-2010	25-04-2013
Head Department of Information Technology	NIT Jalandhar	07-04-2011	09-10-2013
Head, Department of Computer Science and Engineering	NIT Jalandhar	21-11-2006	05-09-2010
Head Computer Centre	NIT Jalandhar	30-09-2002	05-09-2010
Director	National Institute of Technology, Delhi	10-10-2013	26-03-2018
Director (Additional Charge)	National Institute of Technology, Hamirpur, HP	03-05-2016	21-03-2018
Mentor Director	IIIT, Una	03-05-2016	21-03-2018
Vice Chancellor	IKG Punjab Technical University, Jalandhar	27-03-2018	

Award and Honours :

Title	Activity	Given by	Year
Prominent Alumnus	For recognition and contributions in Technical Education	Trust of Guru Nanak Dev Engineering College, Ludhiana	2019
Honorary Fellowship Award	For recognition of his outstanding research contributions and achievements in the field of Engineering Sciences	Punjab Academy of Sciences during 22nd Punjab Science Congress	2019
Sri Guru Nanak Dev Ji Achievers Award	In Recognition to my valuable contribution to education	The Government of Punjab on auspicious occasion of 550th Birthday of Sri Guru Nanak Dev Ji on 10th November 2019 at IKGPTU, Kapurthala, Punjab.	2019

Prestigious Award of Eminent Engineer	For recognition and contributions in the filed of Electronics and Telecommunication Engineering	ET division of the Electronics & Telecommunication Division Board of the Institution of Engineers	2018
Appreciation	For the constant support in delivering technology ecosystem	Presented by Intel on the occasion of Intel India's 20th celebration 2018	2018
Shane-e-Hind	For recognition and contributions in Technical Education	Sarv Kalaynkari Society, Chandigarh	2018