

Prof (Dr) JYOTEESH MALHOTRA

Academic Title : Professor
Administrative Title : Associate Dean
(Academic Affairs & Student Welfare)
Head (Engg. & Technology)
Guru Nanak Dev University
Regional Campus, Jalandhar



Email ID : Jyoteesh.ecej@gndu.ac.in
Research ID :  <https://orcid.org/0000-0002-7016-9982>

Education : PhD, MTech (Gold Medalist)
B.Engg (Distinction & Merit Certificate)

Bio Sketch : Dr. Malhotra has more than 27 years of experience in Teaching, Research & administration, joined Guru Nanak Dev University Regional Campus Jalandhar in the year 2007 where he is currently serving as Professor & Head, Department of Engg. & Technology and Associate Dean (Academic Affairs & Student Welfare). Earlier, he also served as Dean Faculty of Engineering & Technology at Guru Nanak Dev University, Amritsar. He had also worked with DAVCMC, New Delhi and Panjab University, Chandigarh at various Academic & Administrative positions.

He has research interests in the broad area of Internet of Things, Machine Learning application in Pervasive Optical / Wireless Communication & Networks. He has worked extensively on developing wireless channel models and fading mitigating solutions. He has guided **Seven** scholars for the research pertaining to their PhD and **thirty seven** scholars for the MTech dissertation work in developing energy efficient protocol designs for wireless networks that includes LTE, VANET, MANET, FANET, WSN, IoT and Optical Networks. Currently, he has been actively involved in developing smart data centric future wireless networks based on machine learning.

His research work has been published in more than **122** SCI/Scopus indexed International Journals of Repute with the highest **Impact Factor** (Web of Science) of **11.648** and **h-index** as **21**. He is a life member of Indian Society for Technical Education and Editorial Board of many International Journals of repute. He strongly believe in the continuing education for effective teaching- learning process and has participated & delivered lectures in more than **25** Faculty Development/Instruction enhancement programs.

Publication Statistics (310+ Publications)

- Highest Impact Factor : 11.648 (JCR 2022)
- SCI/Scopus : 122
- RG Score : 31.87*
- Impact Points : 200+
- Citations : 1939
- h-index : 21
- i-index : 44

*Source: www.ResearchGate.net

List of Significant SCI Publications

1. “Can Sensors Collect Big Data? An Energy Efficient Big Data Gathering Algorithm for WSN,” IEEE Transactions on Industrial Informatics (ISSN: 1941-0050) Vol.13 No. 04, pp.1961-1968, August 2017. **[SCIE - IF 11.648](Web of Science)**
<https://ieeexplore.ieee.org/document/7829299>
2. “A Novel Approach for Smart Cities in Convergence to Wireless Sensor Networks” Sustainable Cities and Society, Elsevier (ISSN: 2210-6707) Vol.35, pp.440-448 August 2017 **[SCIE - IF 10.696](Web of Science)**
<https://www.sciencedirect.com/science/article/abs/pii/S2210670717303992>
3. “IoMT: A Reliable Cross Layer Protocol for Internet of Multimedia Things,” IEEE Internet of Things Journal (ISSN: 1551-9899) Vol.4 No. 03 , pp.832-839, June 2017 **[SCI - IF 10.238] (Web of Science)**
<https://ieeexplore.ieee.org/document/7859340>
4. “Energy Efficient Chain based Cooperative Routing Protocol for WSN,” Applied Soft Computing, Elsevier (ISSN: 1568-4946) Vol.35, pp. 386–397, July 2015 **[SCIE - IF 8.263] (18136) (Web of Science)**
5. “Energy efficient chain based routing protocol for underwater wireless sensor networks,” Journal of Network and Computer Applications, Elsevier (ISSN: 1084-8045) Vol.92 No. 01, pp.42-50, August 2017. **[SCIE - IF 7.574](Web of Science)**
<https://www.sciencedirect.com/science/article/abs/pii/S1084804517300176>
6. “A cross layer protocol for traffic management in Social Internet of Vehicles” Future Generation Computer Systems, Elsevier (ISSN: 0167-739X) Vol. 82, pp. 707–714 May 2018 **[SCIE - IF 7.307](Web of Science)**
<https://www.sciencedirect.com/science/article/abs/pii/S0167739X17312694>
7. “Deep learning based smart health monitoring for automated prediction of epileptic seizures using spectral analysis of scalp EEG” Physical and Engineering Sciences in Medicine, Springer International Publishing, (ISSN: 2662-4737) Vol. 44, no 4, pp. 1161-1173 Dec. 2021 **[SCIE - IF 7.099](Web of Science)**
8. “IoT and cloud computing based automatic epileptic seizure detection using HOS features based random forest classification” Journal of Ambient Intelligence and Humanized Computing, Springer (ISSN: 1868-5145) [online first] Dec. 2019. **[SCIE IF 7.104] (Web of Science)**
<https://link.springer.com/article/10.1007/s12652-019-01613-7>
9. “Design of 3.84 Tbps hybrid WDM–PDM based inter-satellite optical wireless communication (IsOWC) system using spectral efficient orthogonal modulation scheme” Journal of Ambient Intelligence and Humanized Computing, Springer (ISSN: 1868-5145) Vol.11, no 10, PP 4167 – 4175, OCT 2020 **[SCIE IF 7.104] (Web of Science)**
10. “5GhNet: an intelligent QoE aware RAT selection framework for 5G-enabled healthcare network” Journal of Ambient Intelligence and Humanized Computing, Springer (ISSN: 1868-5145) [online first] Nov. 2021 **[SCIE IF 7.104] (Web of Science)**
11. “Two-layer LSTM network-based prediction of epileptic seizures using EEG spectral features” Complex & Intelligent Systems, Springer International Publishing, (ISSN: 2198-6053) Vol. 8, , pp. 2405–2418 Feb 2022. **[SCIE - IF 6.700] (Web of Science)**

12. "Performance evaluation of 6.4 Tbps dual polarization quadrature phase shift keying Nyquist-WDM superchannel FSO transmission link: Impact of different weather conditions" Alexandria Engineering Journal, Elsevier (ISSN: 1110-0168) Vol.59 No. 02, pp. 977-986, April 2020 [SCIE IF 6.626] (Web of Science)
<https://www.sciencedirect.com/science/article/pii/S1110016820301368>
13. "A long-haul 100 Gbps hybrid PDM/CO-OFDM FSO transmission system: Impact of climate conditions and atmospheric turbulence" Alexandria Engineering Journal, Elsevier (ISSN: 1110-0168) vol. 60, no. 1, pp 785-794 Feb 2021 [SCIE IF 6.626] (Web of Science)
14. "Millimeter-wave hybrid OFDM-MDM radio over free space optical transceiver for 5G services in desert environment" Alexandria Engineering Journal, Elsevier (ISSN: 1110-0168) Vol. 60, no. 5, pp. 4275-4285, Oct 2021 [SCIE IF 6.626] (Web of Science)
15. "On the Performance Analysis of Wireless Receiver using Generalized-Gamma Fading Model," annals of telecommunications-Annales des télécommunications, International journal, Springer (ISSN: 1958-9395), Vol. 64, No 1-2, pp. 147-153, Jan.-Feb. 2009 SCIE - IF 1.901 (17722) (Web of Science)
16. "A Novel Approach for Performance Analysis of Wireless Receiver with Selection Combining in Weibull Fading Channel," International Journal of Applied Engineering Research, India (ISSN: 0973-9769), Vol. 4, No 5, pp.819-831, June 2009.[Scopus 2008-2017] (21100217234)
17. "Investigating the Performance of Single and Multichannel Wireless Receivers in Generic-K Fading Channels," Maejo International Journal of Science and Technology, ISSN 1905-7873, Vol.5, No.1, pp. 96–107, Mar. 2011 [SCIE - IF 0.636] (19700170618) (Web of Science)
18. "Performance Analysis of Diversity Combining Multichannel Receivers in Generic-Gamma Fading Channels," Journal of Applied Science And Engineering, Tamkang University Press, Taiwan (ISSN: 1560-6686) Vol.14, No.4, pp. 333–340, Jan 2011 [Scopus 1998-] (14086)[ESCI]
19. "Delay Tolerant and Energy Efficient QoS Based Approach for Wireless Sensor Network," International Journal of Systems, Control and Communications, Inderscience Publisher, UK (ISSN: 1755-9340) Vol.06, No.02 pp. 121–135, Jan 2014 [Scopus 1998-] (21100202715)
20. "An energy balanced QoS based cluster head selection strategy for WSN," Egyptian Informatics Journal, Elsevier Publication (ISSN: 1110-8665) Vol.15, No.03, pp. 189–199, November 2014 [SCIE - IF 4.195] (Web of Science)
21. "Transmission Performance of Spectral Amplitude Code Optical Code Division Multiple Access with Using RZ Format" International Journal of Hybrid Information Technology, (ISSN: 1738-9968) Vol.8, No.08 pp. 185 - 190, August 2015. [Scopus 2014-2016](21100853982)
22. "Energy Efficient Chain method for data transmission for lifetime enhancement in Wireless Sensor Network," International Journal of Systems, Control & Communications, Inderscience Publisher, UK (ISSN: 1755-9359) Vol.6, No.04 pp. 332 - 350, Jan 2015[Scopus 2008-] (21100202715)
23. "Pre Deployment Non-Uniform Node Distribution Strategy for Enhancing Network Efficacy in Wireless Sensor Network," International Journal of Wireless and Mobile Computing, Inderscience Publisher, UK (ISSN: 1741-1092)Vol.9, No.01 pp. 49–57, Jan. 2015 [Scopus 2005-] (12100154817)
24. "Range Free Localization Techniques for Randomly Deployed WSN-A Survey" International Journal of Grid and Distributed Computing, (ISSN: 2005-4262) Vol.8 No. 06 , pp.57-66, Dec. 2015 [Scopus 2015-] [ESCI] (Web of Science)(21100806998)
25. "A Unified Approach to Performance Analysis of Multihop Relay Fading Channels Using Generalized Gamma Model" Frequenz, (ISSN: 0016-1136) Vol.69, No.07-08 pp. 341 - 347, June 2015 [SCIE - IF 0.737] (16718) (Web of Science)

26. "Simulation Analysis of Tree and Mesh Topologies in Zigbee Network" International Journal of Grid and Distributed Computing, (ISSN: 2005-4262) Vol.8, No.01 pp. 81 -92, Feb. 2015 [[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))(21100806998)
27. "Effect of Fading on Performance of VANET in Realistic Scenarios Using NCTUns6.0" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.01 pp. 171–178, Feb. 2015 [[Scopus](#)] [[ESCI](#)] ([Web of Science](#))(21100447121)
28. "Survey on Empirical Channel Models for WBAN" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.02 pp. 399 - 410, April 2015 [[Scopus 2015-16](#)][[ESCI](#)] ([Web of Science](#))(21100447121)
29. "A Review of Latest Techniques to Secure Wireless Networks against ARP Poisoning Attacks" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.02 pp. 225 - 232, April 2015[[Scopus 2015-16](#)][[ESCI](#)] ([Web of Science](#))(21100447121)
30. "Performance Evaluation of Channel Estimation Techniques in OFDM based Mobile Wireless System" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.03 pp. 53 - 60, June 2015[[Scopus 2015-16](#)][[ESCI](#)] ([Web of Science](#))(21100447121)
31. "A Survey on Rate Adaptation Algorithms for Effective Resource Utilization in LTE Advanced" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.03 pp. 71 - 78, June 2015[[Scopus 2015-16](#)][[ESCI](#)] ([Web of Science](#))(21100447121)
32. "Performance Analysis of Multihop Communication Using Generalized Gamma Fading Model" Optik, (ISSN: 0030-4026) Vol.126, No.15-16 pp. 1423–1428, August 2015 [[SCIE -IF 2.840 \(110152\)](#)] ([Web of Science](#))
33. "Simulative Investigations for Robust Frequency Estimation Technique in OFDM System" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.04 pp. 187 - 192, August 2015[[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))(21100447121)
34. "Review on Security Issues and Attacks in Wireless Sensor Networks" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.04, pp. 81 - 88, August 2015 [[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))(21100447121)
35. "Reliable Multicast using Opportunistic Feeding and Inter-batch Coding" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.04 pp. 99 - 110, August 2015[[Scopus 2015-16](#)][[ESCI](#)] ([Web of Science](#))(21100447121)
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38. "Performance Evaluation of MAC Aware QOS Provisioned Hybrid Routing over VANET" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.05, pp. 107 - 114 Oct 2015 [[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))(21100447121)
39. "On MIMO Channel Modeling for the Mobile Wireless Systems" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.05, pp. 23 - 38 Oct 2015 [[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))(21100447121)
40. "An Integrated Approach to ARP Poisoning and its mitigation using Empirical Paradigm" International Journal of Future Generation Communication and Networking, (ISSN: 2233-7857) Vol.8, No.05, pp. 51 - 60, Oct 2015 [[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))(21100447121)

41. "A Novel Scheme for an Energy Efficient Internet of Things Based on Wireless Sensor Networks," *Sensors*, (ISSN: 1424-8220) Vol.15, pp.28603-28626, Oct 2015. [[SCIE - IF 3.847](#)] ([130124](#)) ([Web of Science](#))
42. "Energy Balanced Optimum Path Determination Based on Graph Theory for Wireless Sensor Network," *IET Wireless Sensor Systems*, *IEEE Explore* (ISSN: 2043-6386) Vol.5, No.6 pp.290-298, Dec 2015[[Scopus 2011-](#)] ([19900192119](#))[[ESCI](#)] ([Web of Science](#))
43. "Upper Capacity Bounds Of MIMO Wireless Systems Through Fading Channels" *Advances In Electrical And Electronic Engineering*, VSB–Technical University of Ostrava, Czech Republic (ISSN: 1336-1376) Vol.13, No.05 pp. 491–501 Dec 2015.[[Scopus 2011-2017](#)] ([60241](#))[[ESCI](#)] ([Web of Science](#))
44. "Performance Measure Modeling of Routing Protocols In MANET" *International Journal of Future Generation Communication and Networking*, (ISSN: 2233-7857) Vol.8, No.06 pp. 215 - 228, Dec. 2015[[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))([21100447121](#))
45. "Performance Evaluation of AODV and GOD for QoS aware applications through realistic conditions in VANET" *International Journal of Computer Network and Information Security*, MECS Publisher, Hong Kong (ISSN: 2074-9104) Vol 11, pp 64 – 71 Oct 2015[[Scopus 2020-](#)] ([21100985663](#))
46. "Design and EM analysis of Dual Band Hilbert Curve based Wilkinson power divider" *Transactions on Electrical and Electronic Materials*, Springer (ISSN: 2092-7592) Vol. 17, No. 5, pp. 257-260, October 2016[[Scopus 2011-2017](#)] ([19900192567](#)) ([Web of Science](#)) [[ESCI](#)]
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47. "Comparative Investigation of ARP Poisoning Mitigation Techniques using Standard Testbed for Wireless Networks" *Journal of Cyber Security and mobility*, River Publishers, Denmark (ISSN 2245-1439) Vol.04, pp. 53–64, Jan 2016 [[Scopus 2012-](#)] ([21100781741](#)) ([Web of Science](#)) [[ESCI](#)]
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48. "On the Selection of Efficient Back-off with QoS Aware Routing in VANET" *International Journal of Future Generation Communication and Networking*, SERSC Publisher, (ISSN: 2233-7857) Vol.9, No.02 pp.163 - 176, Feb. 2016[[Scopus 2015-16](#)] [[ESCI](#)] ([Web of Science](#))([21100447121](#))
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49. "Efficient Localization in WSN Based on Structured Deployment of Anchor Nodes in DV-HOP" *International Journal of Future Generation Communication and Networking*, SERSC Publisher, (ISSN: 2233-7857) Vol.9, No.03 pp. 155 - 166, March 2016 [[Scopus 2015-16](#)][[ESCI](#)] ([Web of Science](#))([21100447121](#))
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50. "Performance Analysis of Long Term Evolution: Physical Channels" *International Journal of Future Generation Communication and Networking*, SERSC Publisher, (ISSN: 2233-7857) Vol.9, No.03 pp.269-278, March 2016 [[Scopus 2015-16](#)][[ESCI](#)] ([Web of Science](#))([21100447121](#))
http://article.nadiapub.com/IJFGCN/vol9_no3/24.pdf
51. "On the Selection of Optimum Routing Protocol in the Presence of Heterogeneous Application Traffic Situations for WSN" *International Journal of Grid and Distributed Computing*, (ISSN: 2005-4262) Vol.9 No. 07 , pp.177-188, July 2016 [[Scopus 2015-](#)][[ESCI](#)] ([Web of Science](#))([21100806998](#))
http://article.nadiapub.com/IJGDC/vol9_no7/19.pdf

52. “Recent Trends and Challenges in Microwave Power Dividers” International Journal of Grid and Distributed Computing, (ISSN: 2005-4262) Vol.9 No. 08, pp. 223-230, August 2016 [**Scopus 2015-16**][**ESCI**] (**Web of Science**)(**21100806998**)
http://article.nadiapub.com/IJGDC/vol9_no8/19.pdf
53. “Comparative Analysis of DV-HOP and APIT Localization Techniques in WSN” International Journal of Future Generation Communication and Networking, SERSC Publisher, (ISSN: 2233-7857) Vol.9, No.08 pp. 327 - 344, August 2016[**Scopus 2015-16**][**ESCI**] (**Web of Science**)(**21100447121**)
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54. “On the Selection of Optimum Performance Bounds for Co-OFDM Systems through Standard Fibers” International Journal of Future Generation Communication and Networking, SERSC Publisher, (ISSN: 2233-7857) Vol.9, No.09 pp. 203 - 214, Sept 2016[**Scopus 2015-16**][**ESCI**] (**Web of Science**)(**21100447121**)
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55. “On Statistical Behavioral Investigations of Body Movements of Human Body Area Channel” International Journal of Computer Network and Information Security, MECS Publisher, Hong Kong (ISSN: 2074-9104) Vol.8 , No.10, pp. 29-36, October 2016 [**Scopus 2020-21**] (**21100985663**)
56. “On the Selection of Queue Optimised Routing Protocol for VANET” International Journal of Advanced Science and Technology, SERSC Publisher, Korea (ISSN: 2005-4238) Vol.95 , No.10, pp. 01-14, November 2016 [**Scopus**](**21100829147**)
<http://article.nadiapub.com/IJAST/vol95/1.pdf>
57. “On the Selection of Optimum QoS Bounds for Mobile IP Enabled VANET through Realistic City Scenario,” Indian Journal of Science and Technology (ISSN: 0974-5645) Vol.09 No. 47, pp.01-07 Dec 2016. [**Scopus 2007-2016**] (**21100201522**)
58. “An Efficient Design of a DC-Block Band Pass Filter for the L-Band” Transactions on Electrical and Electronic Materials, Springer (ISSN: 2092-7592) Vol.18 No. 02 , pp.62-65, April 2017[**Scopus 2011-2017**][**ESCI**] (**19900192567**)
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59. “ICCBP: Inter Cluster Chain Based Protocol with Cross Layer Interaction for Randomly Deployed Wireless Sensor Networks,” Ad Hoc & Sensor Wireless Networks, Old City Publishing, USA (ISSN: 1551-9899) Vol.36 No.1-4, pp. 257-284, 2017. [**SCIE - IF 0.4**] (**19700186738**) (**Web of Science**)
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61. “A cost effective 100 Gbps hybrid MDM–OCDMA–FSO transmission system under atmospheric turbulences” Optical and Quantum Electronics, Springer-US (ISSN: 0306-8919) Vol. 49, No. 5, 184, Jun 2017 [**SCI - IF 2.794**] (**12313**) (**Web of Science**)
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62. “ Construction and Analysis of a Novel SAC-OCDMA System with EDW Coding using Direct Detection Technique” Journal of Optical Communications, Walter de Gruyter

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64. “CSPCR: Cloud Security, Privacy and Compliance Readiness - A Trustworthy Framework” International Journal of Electrical and Computer Engineering (IJECE), Institute of Advanced Engineering and Science (IAES) (ISSN: 2088-8708) Vol.08, no.5, pp.3756-3766 Oct. 2018. [Scopus 2014-] (21100373959)
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66. “Fuzzy Link Cost Estimation based Adaptive Tree Algorithm for Routing Optimization in Wireless Sensor Networks using Reinforcement Learning” International Journal of Sensors, Wireless Communications and Control, Bentham Science Publishers (USA), (ISSN: 2210-3279) 8(3), pp.1 – 14, 2018. [Scopus 2016-2017] (21100817136)
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67. “A Review of Smart Parking System based on Internet of Things” International Journal of Intelligent Systems and Applications in Engineering, ISSN (Online) 2147-6799, Vol.06, no.04, pp.248-250 Dec 2018 [Scopus 2020-] (21101021990)
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73. “ 2×10 Gbit/s–10 GHz Radio over Free Space Optics Transmission System Incorporating Mode Division Multiplexing of Hermite Gaussian Modes” Journal of Optical Communications, Walter de Gruyter GmbH, Berlin/Boston, ISSN (Online) 2191-6322 [in Press] August 2019 **[Scopus 1980-] (19573)**
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75. “ Performance comparison of M-QAM and DQPSK modulation schemes in a 2×20 Gbit/s–40 GHz hybrid MDM–OFDM-based radio over FSO transmission system” Photonic Network Communications, Springer (US) (ISSN: 1572-8188) Vol.38, no 3, pp. 378–389, Dec 2019. **[SCIE - IF 2.028](Web of Science)**
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76. “Cloud Security and forensic awareness survey : An empirical analysis” Journal of Engineering and applied sciences Medwell Journals (ISSN: 1816-949X) Vol.14, no.2, pp.539-544 2019. **[Scopus 2008-2019] (21100231100)**
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