CENTRAL UNIVERSITY OF JAMMU

FACULTY PROFILE PERFORMA

First Name	Yashwant	Middle Name		Last Name	Singh	Photograph		
Title & Designation		Associate Professor & HoD and Registrar (i/c)						
Address		Department of Computer Science and Information Technology, Central University of Jammu, PO Rahya Suchani (Bagla), District Samba, J&K (UT)-181143						
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Office		+918082465003						
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Web-Page		http://www.cujammu.ac.in//5084/5084_media /Yashwant.pdf			Traves III			
Educational Qualifications:								
Degree		Institution				Year		
PhD		Himachal Prad	esh University	Shimla		2011		
Master of Er	ngineering	Punjab Engine	ering College C	handigarh		2006		
Bachelor of	Engineering	Sant Longowal	Institute of En	gineering and Te	chnology, Pb.	2004		
Diploma In (Engineering	•	Government P	olytechnic Kan	gra (HP)		2000		

Career Profile:

Dr. Yashwant Singh is Head & Associate Professor in the Department of Computer Science & Information Technology at the Central University of Jammu where he has been a faculty member since 2017. Presently he is officiating Registrar since March 2022. Prior to this, he was at Jaypee University of Information Technology for 10 Years.

Yashwant completed his Ph.D. in Computer Science from Himachal Pradesh University Shimla, his Post Graduate study from Punjab Engineering College Chandigarh (PEC), and his undergraduate studies from SLIET Longowal. His research interests lie in the area of Internet of Things, ICS/SCADA Cyber Security, Wireless Sensor Networks, Vulnerability Assessment, ranging from theory, design to implementation. He has collaborated actively with researchers in several other disciplines of computer science, particularly Machine Learning, Electrical Engineering and Control Systems.

Yashwant has served on Thirty International Conference and Workshop Program Committees and served as the General Chair for PDGC-2014, ICRIC-2018, ICRIC-2019, ICRIC-2020, and ICRIC-2021. He currently serves as coordinator of DRDO sponsored Kalam Centre for Science and Technology (KCST), Computational System Security vertical at Central University of Jammu.

Yashwant has published more than 90 Research Papers in International Journals, International Conferences, and Book Chapters of repute publishers that are indexed in SCI and SCOPUS. He has three Research Projects worth Rs.10.5 Crores in his credit from DRDO and Rs. 12.19 Lakhs from NCW. He has guided 4 Ph.D., 25 M.Tech. students and guiding 4 Ph.Ds and 5 M.Tech. students.

Dr. Yashwant Has visited 8 countries for his academic visits e.g. U.K., Germany, Poland, Chez Republic, Hungary, Slovakia, Austria, Romania. He is Visiting Professor at Jan Wyzykowski University, Polkowice, Poland.

Administrative Assignments:

- Coordinator, Department of Computer Science and Information Technology, Central University of Jammu (November 27, 2017 to September 23, 2018)
- 2. Coordinator, Digital Centre, Central University of Jammu (October 20, 2017 to October 28, 2018)
- 3. Convener, ICT Cell, Central University of Jammu (October 29, 2018 to till date)
- 4. Member, BoS, Department of Public Policy and Public Administration, Central University of Jammu (04-01-2021 to 04-01-2024)
- 5. Member of Academic Council Central University of Jammu, 23 May, 2019.
- 6. **Director** Physical Education (i/c), Central University of Jammu (21-01-2021 t0 till date)

- 7. **HoD**, Department of Computer Science and Information Technology, Central University of Jammu (September 24, 2018 to till date)
- 8. **Coordinator**, Computational System Security vertical of Kalam Centre for Science and Technology sponsored by DRDO, Govt. of India.
- 9. Nodal Officer, AICTE, Central University of Jammu
- 10. Nodal Officer, National Apprenticeship Training Scheme (NATS)
- 11. Member IQAC, Central University of Jammu
- 12. Convener Data Centre, Central University of Jammu, 24-09-2021.
- 13. HoD, Department of Tourism and Travel Management, Central University of Jammu, (28-09-2021 to till Date)
- 14. Member of Directorate of Internal Quality Assurance, 06 January, 2022.
- 15. BoS Member, University of Ladakh, for the Session 2022-23
- 16. Registrar(i/c) since March, 2022.

Areas of Interest / Specialization:

- 1. Internet of Things (IoT): Vulnerability Assessment in IoT and Embedded Devices, Energy Efficiency and Interoperability
- 2. Wireless Sensor Networks (WSN): Opportunistic Routing and node and Network Security
- 3. Cyber Physical System: ICS/SCADA, Cyber Security

Subjects Taught:

- 1. Internet of Things
- 2. Data Communication Computer Networks
- 3. Wireless Sensor Networks
- 4. Advanced Data Structures
- Advanced Database Management Systems
- 6. Advances in Computer Networks
- 7. Advanced Software Engineering, Etc.

Research Guidance:

1. Guided 4 PhD Candidates and 6 are pursuing.

SN	Name	Topic	Detail
1	Ms. Urvashi Chugh (116205)	Clustering and Change Point Detection in Wireless Sensor Networks for Fire Detection Application	Completed (12/02/2017)
2	Mr. Nagesh Kumar (136214)	On Security and Opportunistic Routing in Wireless Sensor Networks	Completed (09/06/ 2018)
3	Ms.Vandana Mohindru (136210)	Prevention of Node Clone Attack: Secure and Energy Efficient Algorithms in WSN	Completed (13/07/ 2019)
4	Mr.Deep Kumar Bangotra (0150518)	Intelligent and Secure Opportunistic Routing in Wireless Sensor Networks	Completed (12/10/2021)
5	Ms. Pooja Anand (0250518) 2018- Present	Intelligent and Secure Vulnerability Assessment Framework for Internet of Things and Embedded Devices	Pursuing
6	Ms. Bharti Rana (0450519) 2019- Present	Efficient Data Routing in Distributed Heterogeneous Internet of Things (IoT) Networks	Pursuing
7	Mr. Zakir Ahmad Sheikh(0950520) 2020-Present	ICS/SCADA Security	Pursuing
8	Mr. Ajay Kumar (0150520) 2020-Present	Secure and trust based data Sharing and management for UAV	Pursuing
9	Ms Sheerin Zadoo (21PCST04)	Energy trading in IoT	Pursuing

	2021-present		
10	Ms. Sheikh Imroja Manzoor (21PCST03) 2021- present	Federated Learning in IoT	Pursuing

2. Guided 25 Master of Technology (M.Tech.) Candidates and 5 are pursuing.

Publications Profile:

a. Research Paper

- Umaira Ahad, Yashwant Singh, Pooja Anand, Zakir Ahmad Sheikh and Pradeep Kumar Singhy, "Intrusion Detection System Model for IoT Networks Using Ensemble Learning", Journal of Interconnection Networks, Vol. 22, No. 3 (2022) 2145008 (25 pages). World Scientific Publishing Company, DOI: 10.1142/S0219265921450080.
- 2. Rayeesa Malik, Yashwant Singh, Zakir Ahmad Sheikh, Pooja Anand, Pradeep Kumar Singh, Tewabe Chekole Workneh, "An Improved Deep Belief Network IDS on IoT-Based Network for Traffic Systems", **Hindawi**, Journal of Advanced Transportation, Volume 2022, Article ID 7892130, 17 pages, https://doi.org/10.1155/2022/7892130 (IF 2.41)
- Deep Kumar Bangotra ,Yashwant Singh , Nagesh Kumar ,Pradeep Kumar Singh ,Adegoke Ojeniyi, "Energy-Efficient and Secure Opportunistic Routing Protocol for WSN: Performance Analysis with Nature-Inspired Algorithms and Its Application in Biomedical Applications", Hindawi, BioMed Research International, Volume 2022, Article ID 1976694, 13 pages, https://doi.org/10.1155/2022/1976694 (IF 2.58)
- 4. Bharti Rana, Yashwant Singh and Harvinder Singh, "Metaheuristic Routing: A Taxonomy and Energy-Efficient Framework for Internet of Things," in *IEEE Access*, vol. 9, pp. 155673-155698, 2021, doi: 10.1109/ACCESS.2021.3128814 (IF 3.367)...
- 5. Pooja Anand, Yashwant Singh, Arvind Selwal, Pradeep Kumar Singh, Kayhan Zrar Ghafoor, "IVQFIoT: Intelligent vulnerability quantification framework for scoring internet of things vulnerabilities", Expert Systems **Wiley**, 1–19. https://doi.org/10.1111/exsy.12829. **(IF 2.587)**
- 6. Deep Kumar Bangotra, Yashwant Singh, Arvind Selwal, Nagesh Kumar, Pradeep Kumar Singh, "A Trust Based Secure Intelligent Opportunistic Routing Protocol for Wireless Sensor Networks", Wireless Personal Communication, **Springer**, 2021, 116(202), 3887. (IF 1.2)
- Parushi Malhotra, Yashwant Singh, Pooja Anand, Deep Kumar Bangotra, Pradeep Kumar Singh and Wei-Chiang Hong, "Internet of Things: Evolution, Concerns and Security Challenges", Sensors, MDPI 2021, 21, 1809. https://doi.org/10.3390/s21051809 (IF 3.275)
- 8. Bharti Rana, Yashwant Singh, Pradeep Kumar Singh, "A systematic survey on internet of things: Energy efficiency and interoperability perspective", Transaction on Emerging Telecommunication Technologies, **Wiley**, 2020;e4166. https://doi.org/10.1002/ett.4166 (**IF 1.590**)
- Pooja Anand, Yashwant Singh, Arvind Selwal, Mamoun Alazab, Sudeep Tanwar, Neeraj Kumar, "IoT Vulnerability Assessment for Sustainable Computing: Threats, Current Solutions, and Open Challenges", IEEE Access, Vol 08, 2020. Pp 168825-168853, DOI: 10.1109/ACCESS.2020.3022842 (IF 4.64).
- 10. Pooja Anand, Yashwant Singh, Arvind Selwal, Pradeep Kumar Singh, Raluca Andreea Felseghi, Maria Simona Raboaca, "IoVT: Internet of Vulnerable Things? Threat Architecture, Attack Surfaces, and Vulnerabilities in Internet of Things and Its Applications towards Smart Grids", Energies MDPI, Vol. 13(18), 2020, pp 1-23, doi:10.3390/en13184813 (IF 3.06).
- Deep Kumar Bangotra, Yashwant Singh, Arvind Selwal, Nagesh Kumar, Pradeep Kumar Singh, Wei-Chiang Hong, "An Intelligent Opportunistic Routing Algorithm for Wireless Sensor Networks and Its Application Towards e-Healthcare", Sensors, MDPI 2020, 20(14), 3887. https://doi.org/10.3390/s20143887 (IF 3.275)
- 12. Nagesh Kumar*, Yashwant Singh, "An Energy Efficient and Reliable Opportunistic Routing for Wireless Sensor Networks", Journal Name: International Journal of Sensors, Wireless Communications and Control, **Bentham Science**, Volume 10, Issue 1, 2020. DOI: 10.2174/2210327910999200503033802.
- 13. Deep Kumar Bangotra, Yashwant Singh, Arvind K Selwal, "An Intelligent Opportunistic Routing Protocol for Big Data in WSNs", International Journal of Multimedia Data Engineering and Management (IJMDEM), **IGI Global**, 11(1), 2020 DOI: 10.4018/IJMDEM.2020010102.
- 14. Vandana Mohindru, Yashwant Singh, Ravindara Bhatt,,"Reauthentication Scheme for Mobile Wireless Sensor Networks" Sustainable Computing, Informatics and Systems, Elsevier, Vol 23, 2019, pp 158-166.
- 15. Vandana Mohindru, Yashwant Singh, Ravindara Bhatt, "Hybrid Cryptographic Algorithm for Securing Wireless Sensor Networks from Node Clone Attack", Recent Advances in Electrical and Electronic Engineering, **Bentham Science**, Vol 13, 2020, pp251-259, DOI: 10.2174/2352096512666190215125026.
- 16. Vandana Mohindru, Yashwant Singh, Ravindara Bhatt, "Securing Wireless Sensor Networks From Node Clone Attack: A

- Lightweight Message Authentication algorithm", International Journal of Information and Computer Security(IJICS), InderScience Publishers Vol 12 No 2/3. 2020, DOI: 10.1504/IJICS.2019.10017217.
- 17. Vandana Mohindru and Yashwant Singh (2018), "Node authentication algorithm for securing static wireless sensor networks from node clone attack", International Journal of Information and Computer Security (IJICS), InderScience Publishers Vol. 10, Nos. 2/3,pp 129-148, 2018. DOI: 10.1504/IJICS.2018.10012571.
- 18. Nagesh Kumar, Yashwant Singh and Pradeep Kumar Singh (2017), "An Energy Efficient Trust-Aware Opportunistic Routing Protocol for Wireless Sensor Network," *International Journal of Information System Modeling and Design (IJISMD) IGI Global*, Vol. 8, No. 2, pp. 30-44, 2017. DOI:10.4018/IJISMD.2017040102.
- 19. Nagesh Kumar, Yashwant Singh and Pradeep Kumar Singh (2017), "Reputation-based Energy Efficient Opportunistic Routing for Wireless Sensor Network," *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, Vol. 9, No. 3-6, pp. 29-33, 2017.
- 20. Urvashi Chugh, Yashwant Singh, M.V. Ramana Murthy (2015). Information Fusion and Change Point Detection in Mutual Exclusive Distributive Clustering, Procedia Computer Science, Vol. 65, pp. 592-600, 2015.
- 21. Urvashi Chugh, Yashwant Singh, M.V. Ramana Murthy (2015). Change Point Detection in the midst of Mutual Exclusive Distributive Clustering Protocol. Wulfenia Journal, Klagenfurt, Austria, Vol 22 No.10, pp.311-319, 2015.
- 22. Yashwant Singh, Urvashi Chugh (2014). Mutual Exclusive Distributive Clustering (MEDC) Protocol for Wireless Sensor Networks. International Journal of Sensors, Wireless Communications and Control, Bentham Science Publishers Vol.3, No. 2, pp., 101-107, 2014. DOI: 10.2174/221032790302140505100253.
- 23. Sheikh Shahid Ali, Yashwant Singh, "On Opportunistic Routing in Wireless Sensor Networks", International Journal of Computer Sciences and Engineering Vol.6(3), Apr 2018, pp 21-25, 2018.
- 24. Shahid Ul Haq, Yashwant Singh, "On IoT Security Models: Traditional and Blockchain", International Journal of Computer Sciences and Engineering Vol.6(3), Apr 2018, pp 26-31, 2018.
- 25. Towseef Ahmad Wani, Yashwant Singh, "On Message Dissemiaton And Event Detection In Vanet", International Journal of Computer Sciences and Engineering Vol.6(3), Apr 2018, pp 42-45, 2018.
- 26. Shamshul Haq, Yashwant Singh (2018), "On Botnet Detection in Networks, based on Traffic Monitoring", An International Journal of Engineering Science, Special Issue March 2018, Vol. 27, pp 61-68, 2018. UGC Approved Journal (S.No.63019).
- 27. Farooq Ayoub Dar, Yashwant Singh (2018), "Comparative Analysis of Medical Diagnostic Techniques Using ANN", An International Journal of Engineering Science, Special Issue March 2018, Vol. 27, pp 104-114, 2018. UGC Approved Journal (S.No.63019).
- 28. Imtiaz Ahmed, Yashwant Singh, (2018), "A fairness framework for resource allocation in cloud computing", An International Journal of Engineering Science, Special Issue March 2018, Vol. 27, pp 115-121, 2018. UGC Approved Journal (S.No.63019).
- 29. Pooja Rani, Archna Gupta, Yashwant Singh, "Multiple Event Detection In Wireless Sensor Networks Using Compressed Sensing: Health Monitoring Perspective", International Journal of Computer Sciences and Engineering, Vol.6, Issue.1, pp.39-45, Jan-2018.
- 30. Archna Gupta, Pooja Rani, Yashwant Singh, "Real Time Remote Wireless Sensor Network for Water Quality Monitoring", International Journal of Computer Sciences and Engineering, Vol.5, Issue.11, pp.94-99, Nov-2017.
- 31. Puneet Bhushan, Pradeep Kumar Singh, Yashwant Singh (2016). Energy Consumption Pattern at Household Level: a micro level study of Himachal Pradesh. Indian Journal of Science and Technology, Vol 9 No 32, 1-5, 2016. **DOI:** 10.17485/ijst/2016/v9i32/100216.
- 32. Mohinder Kaur Sidhu, Yashwant Singh, Pradeep Kumar Singh (2016). Localization and Classification of Species in a Habitat in WSN: A Species Perspective. International Journal of Computer Applications, Proceedings, RICSIT 2016 (1), pp 8-12.
- 33. Aditi Zear, Pradeep Kumar Singh , Yashwant Singh (2016). Intelligent Transport System: a progressive review. Indian Journal of Science and Technology, Vol 9, No.32, pp 1-8. DOI: 10.17485/ijst/2016/*v9i32*/100713
- 34. Abhishek Jaswal, Pradeep Kumar Singh, Yashwant Singh (2016). 5G: Survey of Technologies and Challenges. International Journal of Latest Trends in Engineering and Technology (IJLTET), special issue, pp 1-5, 2016.
- 35. Kshitiza Vasudeva, Pradeep Kumar Singh, Yashwant Singh (2016). A Methodical Review on Issues of Medical Image Management System with Watermarking Approach. Indian Journal of Science and Technology, Vol. 9, No.32, pp1-6, 2016. **DOI:** 10.17485/ijst/2016/v9i32/100188.
- 36. Nagesh Kumar, Yashwant Singh (2016), An Energy Efficient Opportunistic Routing Metric for Wireless Sensor Networks. Indian Journal of Science and Technology, Vol. 9, No.32, 2016. **DOI**: 10.17485/ijst/2016/v9i32/100197.
- 37. Vandana Mohindru, Yashwant Singh (2016), Efficient Approach for Securing Message Communication in Wireless Sensor Networks from Node Clone Attack. Indian Journal of Science and Technology, Vol. 9, No. 32, 2016. **DOI**: 10.17485/ijst/2016/v9i32/100725.
- 38. Abhishek Jaswal, Yashwant Singh (2016). Event Detection and Pattern Recognition using Support Vector Machine in Meteorology. International Journal of Computer Applications, RICSIT Special Issue (2), pp 20-23, 2016.
- 39. Mohinder Kaur Sidhu, Yashwant Singh, Pradeep Kumar Singh (2016). Localization and Classification of Species in a Habitat in WSN: A Species Perspective. International Journal of Computer Applications, Special Issue (1) pp 8-12, 2016.

- 40. Aditi Kansal, Yashwant Singh (2014). Survey on Machine Learning Techniques for Event Detection in Wireless Sensor Networks. International Journal of Modern Computer Science (IJMCS), Vol.2, No.1, pp.1-7, 2014.
- 41. Balmukund Mishra, Vandana Mohindru, Yashwant Singh (2014). Comparative Analysis WSN MAC protocol. Journal of Basic and Applied Engineering Research (JBAER), Vol. 1, No.6, pp.13-18, 2014.
- 42. Mayank Sharma, Yashwant Singh, Nagesh Kumar (2014). Opportunistic Routing in Wireless Sensor Network: A Comparative Analysis. Journal of Basic and Applied Engineering Research (JBAER), Vol.1, No.6,pp. 94-98, 2014.
- 43. Yashwant Singh, Ankur Nadda, Sahil Gupta (2013). Data Fusion in Wireless Sensor Networks: A Perspective. International Journal of Information and Communication Technology, Vol. 6, No. (1-2), pp.54-77, 2013.
- 44. Chhavi Gupta, Rashmi Sharma, Neha Agarwal, Yashwant Singh (2013). Fault Tolerant Event Detection in Distributed WSN via Pivotal Messaging. International Journal of Computer and Technology, Vol.7, No. 1, pp. 463-472, 2013.
- 45. Yashwant Singh, Vandana Mohindru, Pawan Kumar Gangwar (2013). Remote System Monitor for Linux: A Perspective. International Journal of Modern Computer Science and Applications, Vol. 1, No. 4, pp.8-13, 2013.
- 46. Yashwant Singh, Manu Sood, Tarun Gupta, Atish Thakur (2011). Incorporating AOSD to Enhance Model Driven Architecture. Journal of Software Engineering and Applications, Vol. 4, No.1, pp.18-22, 2011.
- 47. Yashwant Singh, Manu Sood, Tarun Gupta, Atish Thakur (2010). Combining AOSD into MDA: A Perspective. International Journal of Computer Engineering and Computer Applications, Vol. 5, No.1, pp.38-46, 2010.
- 48. Yashwant Singh, Manu Sood (2010). The Impact of the Computational Independent Model for Enterprise Information System Development. International Journal of Computer Applications, Vol. 11, No.8, pp.21-26, 2010.

b. Books

- Yashwant Singh, Pradeep Kumar Singh, Mahesh Kumar H. Kolekar, Arpan Kumar Kar, Paulo J.S. Goncalves, "Recent Innovation in Computing- Proceedings of ICRIC-2021, Vol-1", LNEE, Springer Nature Switzerland, ISBN: 978-981-16-8247-6.
- Yashwant Singh, Pradeep Kumar Singh, Jitendra Kumar Chhabra, Chaman Verma, "Recent Innovation in Computing-Proceedings of ICRIC-2021, Vol-2", LNEE, Springer Nature Switzerland, ISBN: 978--981-16-8891-1.
- Vandana Mohindru, Yashwant Singh, Ravindara Bhatt, Anuj Kumar Gupta, "Unmanned Aerial Vehicles for Internet of Things: Concepts, Techniques and Applications", Scrivener Publishing LLC. Wiley, 2021, ISBN: 978-1-119-76882-1
- Guarav Gupta, Yashwant Singh, Nagesh Kumar, Varun Jaiswal, "Mobile Health: Advances in Research and Apllications", NOVA Science Publishers Inc., 2021,ISBN: 978-1-53619-468-5
- 5. **Yashwant Singh**, Arpan Kumar Kar, Pradeep Kumar Singh, Mahesh Kumar H. Kolekar, J. K Chhabra, A.Sen, "Proceedings of ICRIC 2020-Recent Innovation in Computing", **LNEE, Springer Nature** Switzerland, ISBN: 978-981-15-8297-4.
- Yashwant Singh, Arpan Kumar Kar, Pradeep Kumar Singh, Mahesh Kumar H. Kolekar, Sudeep Kumar Tanwar, "Proceedings of ICRIC 2019-Recent Innovation in Computing", LNEE, Springer Nature Switzerland, ISBN: 978-3-030-29406-9.
- 7. **Yashwant Singh**, Vivek Kumar Sehgal, Nitin, Satya Prakash Ghrera (2014). *Proceedings of 3rd International Conference on Parallel Distributed and Grid Computing*. USA: **IEEE Press**. ISBN: 978-1-4799-7683-6.
- 8. Pradeep Kumar Singh, Yashwant Singh, Futuristic Trends in Computing Technologies, vol 9, Malaysia, JTEC, ISSN: 2180-1843, eISSN: 2289-8131, 2017.
- 9. Yashwant Singh, Vandana Mohindru (2017). Wireless Sensor Networks Security Attacks-A Node Clone Attack (1st). Germany: Lambert Academic Publishing, ISBN: 978-3-65980-624-7

c. Chapter in books

- Yashwant Singh and Manu Sood (2014), "Transformation of Platform-Independent Model into Platform-Specific Model in Model-Driven Architecture," Uncovering Essential Software Artifacts through Business Process Archeology. IGI Global, 2014. 88-113. Web. 7 Feb. 2014. Doi:10.4018/978-1-4666-4667-4.ch004
- 2. Nagesh Kumar, and **Yashwant Singh** (2016), "Routing Protocols in Wireless Sensor Networks." *Handbook of Research on Advanced Wireless Sensor Network Applications, Protocols, and Architectures*. **IGI Global**, 2016. 86-128. Web. 3 Aug. 2016. Doi:10.4018/978-1-5225-0486-3.ch004Journal(s)

d. Articles/Research Paper in Books

- 1. Archana Sharma, **Yashwant Singh**, "On Security of Opportunistic Routing Protocol in Wireless Sensor Networks", Proceedings of ICRIC-2019, LNEE Springer Nature Switzerland, ISBN: 978-3-030-29406-9.
- Deep Kumar Bangotra, Yashwant Singh, Arvind Selwal "Intelligent Opportunistic Routing Protocol in Wireless Sensor Networks: A Security Perspective" Proceedings of ICRIC-2020, LNEE Springer Nature Switzerland, ISBN: 978-981-15-8297-4, pp 221-233.
- 3. Pooja Anand, **Yashwant Singh**, Arvind Selwal "Internet of Things (IoT): Vulnerabilities and Remediation Strategies" Proceedings of ICRIC-2020, LNEE Springer Nature Switzerland, ISBN: 978-981-15-8297-4, pp 265-273.
- Zakir Ahmad Sheikh, Yashwant Singh, "Lightweight De-authentication DoS Attack Detection Methodology for 802.11 Networks Using Sniffe" Proceedings of IC4S-2020, LNEE Springer Nature Switzerland, ISBN: 978-981-16-0733-2, pp 67-80.

- 5. Mahak Mahapara, **Yashwant Singh**, "Threat Modelling and Risk Assessment in Internet of Things: A Review" Proceedings of IC4S-2020, LNEE Springer Nature Switzerland, ISBN: 978-981-16-0733-2, pp 293-305.
- 6. Parushi Malhotra, Yashwant Singh, "Deep Learning-Based Attack Detection in the Internet of Things" Proceedings of IC4S-2020, LNEE Springer Nature Switzerland, ISBN: 978-981-16-0733-2, pp 307-319.
- 7. Bharti Rana, **Yashwant Singh**, "Duty Cycling Techniques in IoT-Energy Efficiency Perspective", Recent Innovations in Computing-Proceedings of ICRIC-2021, LNEE Springer Nature Switzerland, ISBN: 978-981-16-8247-6, pp-505-512.
- Pooja Anand, Yashwant Singh, "Learning based Techniques for accessing zero day attacks and vulnerabilities in IoT", Recent Innovations in Computing-Proceedings of ICRIC-2021, LNEE Springer Nature Switzerland, ISBN: 978-981-16-8247-6. pp-497-504
- Ajay Kumar, Yashwant Singh, "Secure Unmanned Aerial Vehicle (UAV) Communication using Blockchain Technology", Recent Innovations in Computing-Proceedings of ICRIC-2021, LNEE Springer Nature Switzerland, ISBN: 978-981-16-8247-6, pp-201-211
- 10. Gawhar Hameed, **Yashwant Singh**, Shahid Ul Haq, Bharti Rana, "BlockChain Based Model for Secure IoT Communication in Smart Health Care", Emerging Technologies for Computing Communication and Smart Cities (ETCCS-2021) LNEE Springer Nature Switzerland, , ISBN: 978-981-16-8247-6, pp-201-21.
- 11. Pallavi Sangra, **Yashwant Singh**, Bharti Rana, "Energy Efficiency in IoT based Smart Health care", Computing Communication and Cyber security (IC4S-2021), LNEE Springer Nature Switzerland, , ISBN: 978-981-16-8247-6, pp-201-21
- 12. Choudhary, V., **Singh, Yashwant**., Anand, P. (2022). Smart Traffic Monitoring with Fog and Cloud Computing. In: Singh, P.K., Kolekar, M.H., Tanwar, S., Wierzchoń, S.T., Bhatnagar, R.K. (eds) Emerging Technologies for Computing, Communication and Smart Cities. Lecture Notes in Electrical Engineering, vol 875. Springer, Singapore. https://doi.org/10.1007/978-981-19-0284-0_24
- 13. Ahad, U., **Singh, Yashwant**., Anand, P. (2022). Emerging Security Issues in IoT. In: Singh, P.K., Kolekar, M.H., Tanwar, S., Wierzchoń, S.T., Bhatnagar, R.K. (eds) Emerging Technologies for Computing, Communication and Smart Cities. Lecture Notes in Electrical Engineering, vol 875. Springer, Singapore. https://doi.org/10.1007/978-981-19-0284-0_55
- 14. Muzafar, R., **Singh, Yashwant.**, Anand, P., Sheikh, Z.A. (2022). Review on Security of Internet of Things: Security Requirements, Threats, and Proposed Solutions. In: Singh, P.K., Kolekar, M.H., Tanwar, S., Wierzchoń, S.T., Bhatnagar, R.K. (eds) Emerging Technologies for Computing, Communication and Smart Cities. Lecture Notes in Electrical Engineering, vol 875. Springer, Singapore. https://doi.org/10.1007/978-981-19-0284-0_54

e. Conference Proceedings

- Bhat Snober Ali, Yashwant Singh, Pradeep Kumar Singh, Maria Simona Raboaca, "DYNAMIC ACCESS CONTROL IN IOT: MONITORING USER BEHAVIOR USING SMART CONTRACTS" ECAI 2020 - International Conference – 12th Edition Electronics, Computers and Artificial Intelligence 25 June -27 June, 2020, Pitesti, ROMANIA, pp 1-6, 2019.
- Yashwant Singh, Jahangir Ahmad Lone, Zdzislaw Polkowski, Jayneel Vora, Sudeep Tanwar, Sudhanshu Tyagi, Pradeep Kumar Singh, "Deployment and Coverage in Wireless Sensor Networks: A Perspective", ECAI 2019 International Conference 11th Edition Electronics, Computers and Artificial Intelligence 27 June -29 June, 2019, Pitesti, ROMANIA, pp 1-6, 2019.
- 3. Zdzislaw Polkowski, Jayneel Vora, Sudeep Tanwar, Sudhanshu Tyagi, Pradeep Kumar Singh, Yashwant Singh, "Machine Learning-based Software Effort Estimation: An Analysis", ECAI 2019 International Conference 11th Edition Electronics, Computers and Artificial Intelligence 27 June -29 June, 2019, Pitesti, ROMANIA, pp 1-6, 2019.
- 4. Vandana Mohindru, Utkarsh Chitranshi, Ravindara Bhatt, **Yashwant Singh**, "Possibilities of Block Chain in Indian Market and Notably In Advertising Industry", 5th IEEE International Conference on Signal Processing, Computing and Control (ISPCC 2k19), Oct 10-12, 2019, JUIT, Solan, India. Pp 84-89
- 5. Deep Kumar Bangotra; **Yashwant Singh**; Arvind Selwal, "Machine Learning in Wireless Sensor Networks: Challenges and Opportunities", Proceedings of the 5th International Conference on Parallel Distributed and Grid Computing (PDGC-2018), Waknaghat, India, 20-22 December, 2018, pp.534-539, **DOI:** 10.1109/PDGC.2018.8745845
- Vandana Mohindru; Yashwant Singh; Ravindara Bhatt, "A Review on Lightweight Node Authentication Algorithms in Wireless Sensor Networks" Proceedings of the 5th International Conference on Parallel Distributed and Grid Computing (PDGC-2018), Waknaghat, India, 20-22 December, 2018, pp.517-521, DOI: 10.1109/PDGC.2018.8745800.
- Shamsul Haq and Yashwant Singh, "Botnet Detectio using Machine Learning", Proceedings of the 5th International Conference on Parallel Distributed and Grid Computing (PDGC-2018), Waknaghat, India, 20-22 December, 2018, pp.240-245, DOI: 10.1109/PDGC.2018.8745912
- Vandana Mohindru and Y. Singh, "Performance analysis of Message Authentication Algorithms in WSN," In Proc. 4th IEEE International Conference on Signal Processing, Computing and Control (ISPCC- 2017), Waknaghat, India, 2017, pp. 468-472, DOI: 10.1109/ISPCC.2017.8269724.
- 9. N. Kumar and **Y. Singh**, "Trust and packet load balancing based Secure Opportunistic Routing Protocol for WSN," In Proc. 4th IEEE International Conference on Signal Processing, Computing and Control (ISPCC- 2017), Waknaghat, India, 2017, pp. 463-467, DOI:10.1109/ISPCC.2017. 8269723.

- 10. Nagesh Kumar, **Yashwant Singh** (2016). An Energy Efficient and Trust Management based Opportunistic Routing metric for Wireless Sensor Networks. Proceedings of the International Conference on Parallel Distributed and Grid Computing (PDGC-2016) [4th: Waknaghat, India: 22-24 December, 2016], pp.611-616.
- 11. Urvashi Chugh, **Yashwant Singh** (2015). Clustering, Information Fusion and Event Detection in Wireless Sensor Networks: A Review. Proceedings of the IEEE Conference INDIACom [9th.::11-13 March, 2015], pp.-.
- 12. Mayank Sharma, **Yashwant Singh** (2015). Middle Position Dynamic Energy Opportunistic Routing For Wireless Sensor Networks. Proceedings of the International Conference on Advances in Computing, Communications and Informatics (ICACCI) [4th: Kerala, Kochi, India: August 10-13, 2015], pp.-.
- 13. Urvashi Chugh, **Yashwant Singh**, M.V. Ramana Murthy (2015). Comparative Analysis of HEED, MEDC, MEHEED. Proceedings of the Proceedings of the World Congress on Engineering and Computer Science [San Francisco, USA: October 21-23, 2015], pp.-.
- 14. Aditi Kansal , Yashwant Singh, Vandana Mohindru, Nagesh Sharma (2015). Detection of Forest Fires using Machine Learning Techniques: A perspective. Proceedings of the International Conference on Image , Information Processing (ICIIP) [3rd.:: Dec 21-24, 2015], pp.241-245.
- 15. Bamukund , Yashwant Singh (2015). An Approach Toward the Optimization of Witness Based Node Clone Attack. Proceedings of the International Conference on Image , Information Processing (ICIIP) [3rd. : : Dec 21-24, 2015], pp.506-510.
- 16. P.K. Gangwar, Yashwant Singh, V. Mohindru (2014). An Energy Efficient Zone-based Clustering Approach for Target Detection in Wireless Sensor Networks. Proceedings of the Recent Advances and Innovations in Engineering [Jaipur, India: 9-11 May 2014], pp.1-7.
- 17. **Yashwant Singh**, Urvashi Chugh (2014). MEHEED: Mutual Exclusive Hybrid Energy Efficient Distributed Clustering in Wireless Sensor Networks. Proceedings of the ELSEVIER ERCICA [Bangalore, India: August 1-2, 2014], pp.-.
- 18. **Yashwant Singh**, Pawan Kumar Gangwar, Vandana Mohindru (2014). Heterogeneous Sensor Networks for Target Detection: A WMSN Perspective. Proceedings of the ELSEVIER ERCICA [Bangalore, India: August 1-2, 2014], pp.-.
- 19. **Yashwant Singh**, Suman Saha, Urvashi Chugh, Chhavi Gupta (2013). Distributed Event Detection in Wireless Sensor Networks for Forest Fires. Proceedings of the International Conference on Modelling and Simulation [15th: Cambridge, UK: April 10-12, 2013], pp.634-640.
- 20. **Yashwant Singh,** Mayank Popli (2012). Energy reduction in weakly hard real time systems. Proceedings of the IEEE International Conference on Recent Advances in Information Technology [Ist: Dhanbad, India: 15-17 March 2012], pp.909-915.
- 21. **Yashwant Singh**, Shivam Garg, Anshul Dhingra, Rajat Kumar Jain (2012). Software Engineering and Wireless Sensor Networks: A Perspective. Proceedings of the International Conference on Advance Computing and Communication Technologies [6th::November 3-4], pp.3-6.
- 22. **Yashwant Singh**, Amit Chugh, Urvashi Chugh (2012). Self Healing Routing in Autonomic Wireless Sensor Networks. Proceedings of the International Conference on Advance Computing and Communication Technologies [6th:: November 3-4], pp.308-312.
- 23. Brahm Deo Sah, **Yashwant Singh**, Nitin (2011). Accumulation based Congestion Control Using Active Queue Management. Proceedings of the IEEE World Congress on Information and Communication Technologies [Mumbai, INDIA: December 11-14, 2011], pp.1159-1163.
- 24. **Yashwant Singh,** Sood M. (2009). Models and transformations in MDA. Proceedings of the International Conference on Computational Intelligence, Communication Systems and Networks [1: Indore: 23-25 July 2009], pp.253-258.
- 25. **Yashwant Singh**, Sood M. (2009). Model driven architecture: A perspective. Proceedings of the IEEE International Advance Computing Conference [Patiala, Punjab: 6-7 March 2009], pp.1644-1652.

Conference / Workshops/Training Organized:

- General Chair, 2022 International Conference on Recent Innovations in Computing (ICRIC-2022), Central University of Jammu, May 13-14, 2022.
- General Chair, 2021 International Conference on Recent Innovations in Computing (ICRIC-2021), Central University of Jammu, May 08-09, 2021.
- General Chair, 2020 International Conference on Recent Innovations in Computing (ICRIC-2020), Central University of Jammu, March 20-21, 2020.
- General Chair, 2019 International Conference on Recent Innovations in Computing (ICRIC-2019), Central University of Jammu, March 08-09, 2019.
- General Chair, 2018 International Conference on Recent Innovations in Computing (ICRIC-2018), Central University of Jammu, March 05-06, 2018.
- General Chair, 2014 3rd IEEE International Conference on Parallel, Distributed and Grid Computing (PDGC), Jaypee University of Information Technology, Waknaghat, December, 11-13, 2014, INDIA.
- Chief Coordinator Workshop, Wireless Networks and Network Simulator (WNNS), at Jaypee University of Information Technology, Waknaghat, July 9-10, 2012, INDIA.

- Coordinator, Workshop, Data Mining and Parallel Computing, Conducted by Dr. Sanjay Ranka, University of Florida-USA at Jaypee University of Information Technology, Waknaghat, August 2-5, 2011, INDIA.
- Coordinator, Faculty Development Programme/Workshop on "Internet of Things", AICTE Training and Learning Academy
 (ATAL), Jaipur, Organized by, Department of Computer Science & IT, Central University of Jammu, Jammu, October 14-18,
 2019.
- Coordinator, One week workshop/Training on "e-Suraksha" A practical Approach on Network and Web application Security, Central University of Jammu, December 10-14, 2018

Creation of ICT Mediated Teaching Learning Pedagogy and Content:

- Developed Scheme and Full Course with ppts on Introduction to Agroinformatics (IM401) for Leaders Institute, Queensland Australia.
- Developed Course Structure for the School of Engineering and Technology, Kings's International University, Kingdom of Tonga.

Conference/Workshops/Training attended as Faculty Member:

- Session Chair, 2022 International Conference on Recent Innovations in Computing (ICRIC-2022), Central University of Jammu, May 13-14, 2022.
- Session Chair, 2021 International Conference on Recent Innovations in Computing (ICRIC-2021), Central University of Jammu, May 08-09, 2021.
- 3. Participated in the Workshop cum Orientation Programme on Leadership in Educational Administration for Academic Administrators in Universities and Colleges organized by the Department of Educational Administration January 19-21, 2022, NIEPA, New Delhi.
- 4. Session Chair, 2021 international Conference on Furistic trends in Network and Communication Technologies (FTNCT-2021), Nirma University, Ahmdabad, February, 10-11, 2021, INDIA.
- 5. Coordinator, A webinar on lot Protocols: How Data Exchange Happens", Resource person "Shrikrishna from CDAC Bangalore, organized in collaboration with IEEE on 12-05-2021.
- 6. Session Chair, 2020 International Conference on Recent Innovations in Computing (ICRIC-2020), Central University of Jammu, March 20-21, 2020.
- 7. Participated in one day Workshop on MOOC organized by JUIT and IIT Roorkee at JUIT Waknaghat, 2019
- 8. Session Chair, International Conference on Computing, Communication and Cyber Security (IC4S-2019), 12-13 October 2019.
- 9. Session Chair, ICIIP 2019-The Fourth IEEE International Conference on Image Information Processing, Jaypee University of Information Technology, Waknaghat, November 15-17, 2019, INDIA
- 10. Session Chair, 2019 international Conference on Furistic trends in Network and Communication Technologies (FTNCT-2019), Jaypee University of Information Technology, Waknaghat, November, 22-23, 2019, C-DAC Mohali, INDIA.
- 11. Session Chair, International Conference on Innovations on Computing (ICIC-2019), 12-13 December 2019.
- 12. Session Chair, 2019 International Conference on Recent Innovations in Computing (ICRIC-2019), Central University of Jammu, March 08-09, 2019.
- 13. Workshop on University Enterprise Architecture Framework (UEAF), Indian Council of Social Science Research (ICSSR) North West Regional Centre, Punjab university Chandigarh, 12th Jan 2018.
- 14. Participated in Training programme on Management of Digital Hygiene: Staying Secure in Cyber Space, Sponsored by DST India under the "NATIONAL PROGRAMME FOR TRAINING OF SCIENTIST AND TECHNOLOGISTS WORKING IN GOVERNEMENT SECTOR", 08/10/2018 to 12/10/2018, C-DAC, Mohali.
- 15. Participated in National Conference on Directors of Computer Centres in Central Universities, IITs, IIMs, IISERs and NITs on "Digital Transformation in Higher Education Institution" November 15-17, 2018 at Banaras Hindu University Varanasi, India.
- 16. Session Chair, 2018 5th IEEE International Conference on Parallel, Distributed and Grid Computing (PDGC), Jaypee University of Information Technology, Waknaghat, December, 20-22, 2018, INDIA.
- 17. Session Chair, 2018 International Conference on Recent Innovations in Computing (ICRIC-2018), Central University of Jammu, March 05-06, 2018.
- 18. Session Chair, 2018 international Conference on Furistic trends in Network and Communication Technologies (FTNCT-2018), Jaypee University of Information Technology, Waknaghat, February, 09-10, 2018, INDIA.
- 19. Session Chair, ICIIP 2017-The Third IEEE International Conference on Image Information Processing, Jaypee University of Information Technology, Waknaghat, December 21-23, 2017, INDIA
- Session Chair, 2017 2nd International Conference on Recent Innovation in Computer Science and Information Technology (RICSIT-2017), Himachal Pradesh University Shimla, May, 19, 2017, INDIA.
- 21. Session Chair, 2016 4th IEEE International Conference on Parallel, Distributed and Grid Computing (PDGC), Jaypee University of Information Technology, Waknaghat, December, 22-24, 2016, INDIA.

- 22. Session Chair, 2016 1st International Conference on Recent Innovation in Computer Science and Information Technology (RICSIT-2016), Himachal Pradesh University Shimla, May, 23, 2017, INDIA
- 23. Organizing Committee Member,, 2016 4th IEEE International Conference on Parallel, Distributed and Grid Computing (PDGC), Jaypee University of Information Technology, Waknaghat, December, 22-24, 2016, INDIA.
- 24. Session Chair, 2015 3rd IEEE International Conference on Image Information Processing (ICIIP), Jaypee University of Information Technology, Waknaghat, December, 21-24, 2015, INDIA.
- 25. Organizing Committee Chair, 2015 3rd IEEE International Conference on Image Information Processing (ICIIP), Jaypee University of Information Technology, Waknaghat, December, 21-24, 2015, INDIA.
- 26. Session Chair, IEEE 4th International Conference on Advances in Computing, Communications & Informatics, SCMS School of Engineering and Technology, Kochi, Kerela, 10-13, 2015.
- 27. Session Chair, 2014 3rd IEEE International Conference on Parallel, Distributed and Grid Computing (PDGC), Jaypee University of Information Technology, Waknaghat, December, 11-13, 2014, INDIA.
- 28. Chief Coordinator Workshop, Wireless Networks and Network Simulator (WNNS), at Jaypee University of Information Technology, Waknaghat, July 9-10, 2012, INDIA.
- 29. Coordinator Workshop, Data Mining and Parallel Computing, Conducted by Dr. Sanjay Ranka, University of Florida-USA at Jaypee University of Information Technology, Waknaghat, August 2-5, 2011, INDIA.
- 30. Organizing Committee Chair, PDGC 2012-The First IEEE International Conference on Parallel, Distributed and Grid Computing, Jaypee University of Information Technology, Waknaghat, December 06-08, 2012, INDIA.
- 31. Organizing Committee Member, ICIIP 2013-The First IEEE International Conference on Image Information Processing, Jaypee University of Information Technology, Waknaghat, December 09-11, 2013, INDIA.
- 32. IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE-2014), May 9-11, 2014, Jaipur, India
- 33. UKSim-AMSS 15th International Coference on Computer Modelling and Simulation, Cambridge University, Emmanuel College, United Kingdom, April 10-12, 2013
- 34. UGC Sponcered, "2nd International Conference on innovative Developments in ICT-Today & Tomorrow", DAV College Amritsar, March 2-3, 2012.
- 35. 6th International Conference on Advanced Computing and Communication Technologies, Asia Pacific Institute of Information technology SD India, November, 3, 2012.
- 36. IUCEE "Artificial Neural Network, Pattern Recognition, Computer Vision and Multimedia Information Retrieval" Indo US Engineering Faculty Leadership Institute 2011, Jaypee University of Information Technology Waknaghat, Solan, July 04 to July 08, 2011
- 37. IUCEE "Teaching Engineering using MATLAB and Simulink" Indo US Engineering Faculty Leadership Institute 2010, Jaypee University of Information Technology Waknaghat, Solan, July 12 to July 14, 2010
- 38. IUCEE "Enterprise Software Engineering" Indo US Engineering Faculty Leadership Institute 2010, Thiagarajar College of Engineering, Maduri, Tamilnadu June 28 to July 2, 2010.
- 39. 1st International Conference on Computational Intelligence, Communication Systems and Networks (CICSyN2009), 23-25 July 2009, Indore, India
- 40. IEEE International Advance Computing Conference, IACC 2009, 6-7 March 2009, TIET Patiala, India.

Invited Lectures/Resource Persons:

- 1. Invited Lecture in online interdisciplinary refresher course on E resources and ICT in Quality Teaching and Research at UGC-HRDC Jai Narain Vyas University Jodhpur, Rajasthan on 8 Feb 2022
- 2. Guest Lecture/Invited lecture on Digital Hygiene: Staying Secure in Cyber Space at Central University of HP, on 24th January, 2022.
- Resource person in 6-day AICTE-ISTE Sponsored Online Induction/Refresher Program on "IoT and Smart Technologies"
 MIET Jammu, from 13th to 18th of December, 2021.
- 4. Resource Person in FDP on AICTE raining and Learning Academy On "Artificial Intelligence/Artificial Wisdom- A drive for improving Behavirol and Mental Health Care", organized at CUJ, from 06-09-2021 to 10-09-2021
- 5. Keynote Speaker, title "IoT: Past, Present and Future", International Conference on Advances in Multi-Disciplinary Sciences and Engineering Research, ICAMSER-2021, Chitkara University Himachal Pradesh July 02-03, 2021
- 6. Keynote Speaker, title "IoT: Vulnerability Analysis Framework", 4th International Conference on Recent Innovations in Computing, Indo-Hungarian Conference, June 09, 2021.
- 7. Resource Person in 7 Days faculty Development Programme on ICT Tools in Education, Organized by department of Educational Studies, Central University of Jammu under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching title "Cyber Crime: Alarming Issue for Digital World" on Cyber Data Security, February 02, 2021.

- 8. Resource Person in 7 Days faculty Development Programme on ICT Tools in Education, Organized by department of Educational Studies, Central University of Jammu under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching title "The Technological Challenge Facing Higher Education Professors: Perceptions of ICT Tools for Developing 21st Century Skills", Technological Challenges in Higher Education, February 05, 2021.
- 9. Invited Talk, IoT, MIET Jammu, through Google Meet on title "Future of IOT, Threats and Vulnerabilities" 06-06-2020.
- 10. Resource Person, Role of ICT in Assessment and Evaluation, PMMMNMTT CU Jammu, 5-6 Feb 2020
- 11. Resource Person, Design Develop & deliver MOOC, PMMMNMTT CU Jammu, 09 Jan 2020
- 12. Keynote Speaker, International Conference on Computing Communication and Cyber Security 12-13Oct 2019
- 13. Keynote Speaker, 3rd International Conference on Innovations in Computing 12-13 Dec 2019
- 14. Invited Talk on "Data Structures and Its Applications", Bhaderwah Campus, University of Jammu, 27-28 March 2019.
- 15. Resource Person in Orientation Course of Human Resource Development Centre, University of Jammu, January 8, 2019.
- 16. Delivered expert lecture in three days' workshop on ICT based learning and Professional Development, Organized by department of Educational Studies, Central University of Jammu under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching held at Ramisht College of Education, BASHOLI, Distt. Kathua, Jammu on "Information Communication Technologies" November 14-16, 2017
- 17. Delivered expert lecture in 5 days ICT based training programme Organized by department of Educational Studies, Central University of Jammu under the aegis of Pandit Madan Mohan Malviya National Mission on Teachers and Teaching held at GGHSS, Kishtwar, J&K on "ICT and its tools" and "Cyber Security and Threats of Internet and Security" October 24-28, 2017
- 18. Delivered an expert lecture in University Institute of Information Technology (UIIT), Himachal Pradesh University, Shimla on "Preparation for Accreditation Total Quality Assurance of Engineering Programs" on July 13, 2015
- 19. Delivered an expert lecture in University Institute of Information Technology (UIIT), Himachal Pradesh University, Shimla on "National Accreditations and Implications" on July 13, 2015
- 20. Delivered an Expert Lecture in Punjab Technical University sponsored Faculty Development Programme on Software Engineering Practices in Object Oriented Programming on June 20, 2012 organized by Department of Computer Science and Engineering, Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib from June 18-22, 2012.

Research Projects (Major Grants/Research Collaboration):

- 1. DRDO Sponsored Research Project on "Design and Development of Testbed and Vulnerability Analysis Framework for Cyber Physical Systems", Rs. 994.6193 Lakhs, 2021-23.
- 2. DRDO Sponsored Research Project on "Development of Vulnerability Analysis Framework and Test Bed for IoT and Embedded Devices", Rs. 46.322 Lakhs, 2019-21.
- 3. National Commission for Women Sponsored Research Project on "Cyber Security-Challenges under Cyber Space Specially for Women users", Rs. 12.19 Lakhs, 2020-21.

Awards and Distinctions:

- Visiting Professor, Jan Wyzykowski University, Polkowice Poland (24-06-2019 to 08-07-2019)
- Developed Scheme and Full Course with ppts on Introduction to Agroinformatics (IM401) for Leaders Institute, Queensland Australia

Association with Professional Bodies:

- Member IEEE,
- Member ACM,
- Member Computer Society India
- Life Member of ISTE

Other Activities:

Scopus: https://www.scopus.com/authid/detail.uri?authorld=57210010055
Google Scholar: https://scholar.google.dk/citations?user=8JcvSK0AAAAJ&hl=da
https://orcid.org/0000-0003-2833-2093