

CURRICULUM VITAE

DEMOGRAPHIC AND PERSONAL INFORMATION

Vivek Kumar Sehgal



Contact Information:

Prof. Dr. Vivek Kumar Sehgal
Fellow - The Institution of Engineers
Senior Member IEEE
Senior Member ACM
Member SIAM
Professor and Head of Dept., Dept. of CSE & IT,
Jaypee University of Information Technology,
Waknaghat, Solan, H.P., INDIA, 173234
Associate editor, IEEE Access
Member, IEEE Exe. Com, Delhi Section, India (2016-2018)

Voice: +91-9418800200 (Mob)
Voice: +91-7018275034 (Mob)
Voice: +91-1792-239283 (off)
E-mail: vivekseh@ieee.org,
vivekseh@acm.org

EMPLOYMENT HISTORY:

Title/Position	University/Institution	Period
Professor & Head	Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, INDIA.	August 2021- Present
Professor	Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, INDIA.	July 2021- Present
Associate Professor	Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, INDIA.	August 2013-June 2021
Assistant Professor	Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, INDIA.	June 2010- July 2013
Senior Lecturer	Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, INDIA.	July 2005-May 2010
Lecturer	Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, INDIA.	July 2003-June 2005

EDUCATION:

Ph.D. (Computer Science and Engineering)

Uttarakhand Technical University, Dehradun, India in (2007 - 2010).

Title: Stochastic Communication and Packets Flow Control in Networks-on-Chip.

M. Tech. (Process Control)

Netaji Subhas Institute of Technology (NSIT), (Formerly Delhi Institute of Technology - a division of Instrumentation & Control Engineering, University of Delhi) in 2002.

B. Tech. (Instrumentation Engineering)

Sant Longowal Institute of Engineering & Technology Longowal
(Deemed University Est. by Govt. of India) in 2000.

RESEARCH INTERESTS:

- **Embedded Systems**
- **Advanced Computer Architecture**
- **Deep Learning**
- **Networks on Chip (NoC)**
- **Cyber Physical Systems Industry 4.0**
- **Social Networks Analysis**
- **Internet of Things**

Ph.D. STUDENTS SUPERVISED:

Pardeep Kumar November 2012	Merit Selection of Classification Algorithms for Decision Support Systems.
Ruchi Verma 2017	Modeling to Handle the Crisis Occurred During Computer Mediated Communications
Dinesh July 2019 Astha Modgil 2019	On performance of x-torus multistage interconnection network. Understanding and Analysing the Impact of Memory Controller's Scheduling Policies on DRAM's Energy and Performance
Amit Chaurasia 2020	Application Traffic Modelling & Optimization for NoC Communication
Abhilasha Rangra 2021	Social Internet of Things: Their Trustworthiness, Node Rank, and Embeddings Management.
Kapil Sharma July 2021	Improved and efficient Optical Networks-on-Chip Architectures and Design

Ph.D. STUDENTS SUPERVISING:

Ms. Nidhi Syal July 2012-Prsent	On Design of Centrifugal Clocked Router in 3D Networks-on-Chip
Harshumender Kaur July 2018-Prsent Payal Thakur 2019-Prsent	Context Aware Recommendation Generation in IoT Neuromorphic Cyber Physical Systems Industry 5.0

M.TECH. STUDENTS SUPERVISED:

Mr. Anubhav Patric	Power Optimization in Manycore Processors
Suchi Johari	Comparative Study of Topologies in 3D NoC
Arvind Kumar	3D NoC Mapping Algorithms
Ravi Jha	Data Synchronization in M2M Communication through Cloud
Mukesh Kumar Tripathi	Establishing trust in cloud computing security with the help of inter-clouds
Keshav Kaundle	Network Architecture and System Designing in IoT
Mukesh Kumar	Security and Privacy Mechanism in IoT
Shristi Kak	Heartbeat Monitoring Using Zigbee Network
Kapil Sharma	Energy Efficiency in Wireless Sensor Networks
Piyush Chauhan	Energy Conservation Using Dynamic Voltage Frequency Scalling

UNDERGRADUATE PROJECTS SUPERVISED:

2020	Stock Market Analysis using Machine Learning
2020	Book Recommendation Engine
2020	Heart Disease Detection using Machine learning algorithm
2020	Automation- A Web Automation Project
2020	Real Time Drowsy- Driver Detection using Haar Cascade

2020 Facial Key point Detection Using Deep Learning

2020 Web Application For Ebooks

2020 Voice mail based system

2020 Deep convolutional computation model for feature learning of big data in IoT

2020 Voice mail for blind people

2020 Essay tone detector

2020 Deep Reinforcement Learning in Traffic Signal Control

2019 Self Diagnostic Systems using IoT

2019 Automatic Text Summarization using Natural Language Processing

2019 On Performance of Modified Torus Interconnection Networks

2019 YELO: the marketplace provider

2018 Flexible router design for Networks on Chip

2018 Intelligent Stick Navigator for blind persons

2017 Green House Monitoring using IoT

2017 SCADA implementation using IoT

2016 Waste management in smart city using IoT.

2016 Car security using IoT protocol.

2015 IoT based remote sensing.

2015 Electromagnetic lock interface through LTE network.

2014 NoC simulator for different topologies

2014 GALS communication in NoC

2012 Bio Metric Password Protected Mail Server Design.

2012 RF ID Based Toll Tax Charging System.

2012 Mobile Gyroscope Controlled Surveillance Robot.

2012 [Modern Control System Mapping on Networks-on-Chip](#)

2012 Job portal with mobile alert.

2011 Piezoelectric generator for street light.

2011 GPS based controlled railway crossing.

2010 [An embedded platform for intelligent traffic control.](#)

2010 [Electronic Energy Meter with Instant Billing.](#)

2009 [DELSIC: A Delay Simulator for Interconnect Circuits.](#)

2009 [An Embedded Application for Driverless Metro Train.](#)

2009 [D-Torus Topology in Networks-on-Chip: A Perspective Study.](#)

2009 [An Intelligent Water Management and Distribution System.](#)

2009 [Emergency Shutdown Procedure for Applications in Mass Rapid Transit System](#)

2009 [Peltier Effect Based Solar Powered Air Conditioning System.](#)

2008 [Closed-form expressions for extraction of capacitances in multilayer VLSI interconnects](#)

2008 [Optimal Dynamic Routing and Flow Control in Interconnection Networks-on-Chip.](#)

2008 [Time-Domain Analysis of VLSI Interconnects Considering Oscillatory Inputs.](#)

2008 [Smart Wireless Temperature Data Logger.](#)

2008 [An Embedded Platform for GSM/CDMA Controlled Surveillance Robot.](#)

2007 [RJ-11 Interfaced Embedded Platform for DTMF Based Remote Control System.](#)

2007 Compiler design for 64 bit RISC architecture.

2007 Six Channel Data Acquisition System.

2007 JUIT-Image Based Authentication System.

2006 Voice Coded Stepper Motor Control.

2006 D25 LPT Port based Network Controlled System.

2006 Four Channel Embedded SCADA System.

RESEARCH PROFILE:

- 1) **Google Scholar:**
<https://scholar.google.co.in/citations?user=Wf6KJgAAAAJ&hl=en>
- 2) **DBLP:**
http://dblp.uni-trier.de/pers/hd/s/Sehgal:Vivek_Kumar
- 3) **ACM:**
http://dl.acm.org/author_page.cfm?id=81339526886&coll=DL&dl=ACM&trk=0&cfid=256845427&cf_token=97093137

- 4) **IEEE:** http://ieeexplore.ieee.org/search/searchresult.jsp?matchBoolean=true&newsearch=true&searchWithin=p_First_Names%3Avivek&searchWithin=p_Last_Names%3Aseghal
- 5) **Publons:**
<https://publons.com/researcher/2026260/vivek-kumar-seghal/>
- 6) **Arnetminer:**
<http://arnetminer.org/person/vivek-kumar-seghal-1119281.html>
- 7) **Microsoft academic:**
<http://65.54.113.26/Author/3563854/vivek-kumar-seghal>
- 8) **SCOPUS**
<https://www.scopus.com/authid/detail.uri?authorId=7103336192>
- 9) **ORCID ID**
<http://orcid.org/0000-0002-0026-2284>
- 10) **Researcher ID**
<http://www.researcherid.com/ProfilePreview.action>

CURRENT PROJECTS:

- 1) **Nano-composite based flexible interconnects for systems on polymer.... [DST/NM/NT/2018/41] – Under Processing**

RESEARCH PUBLICATIONS:

Journals:

1. **Vivek Kumar Sehgal**, "Markovian Models Based Stochastic Communication in Networks-in-Package," in *IEEE Transactions on Parallel and Distributed Systems*, vol. 26, no. 10, pp. 2806-2821, 1 Oct. 2015.
<https://doi.org/10.1109/TPDS.2014.2358218>
<https://ieeexplore.ieee.org/document/6898833>
2. P. Sharma, A. Dahshan, **Vivek Kumar Sehgal** and K. A. Aly, "High Thermoelectric Action in Vacuum Deposited Indium Alloyed Chalcogenide Thin Films: In_xSe_{100-x}," in *IEEE Transactions on Electron Devices*, vol. 65, no. 8, pp. 3408-3413, Aug. 2018. <https://doi.org/10.1109/TED.2018.2845413>
<https://ieeexplore.ieee.org/document/8395280>
3. Amit Chaurasia, **Vivek Kumar Sehgal**, "The MPEG-4 based energy efficient application traffic modelling and synthesis for network-on-chip architecture", *Sustainable Computing: Informatics and Systems*, Volume 23, 2019, Pages 67-79, ISSN 2210-5379, <https://doi.org/10.1016/j.suscom.2019.06.005>.
<https://www.sciencedirect.com/science/article/abs/pii/S2210537918304475?via%3Dihub>
4. Kapil Sharma, and **Vivek Kumar Sehgal**, " Modern architecture for photonic networks-on-chip." *The Journal of Supercomputing* (2020). <https://doi.org/10.1007/s11227-020-03220-2>
<https://link.springer.com/article/10.1007%2Fs11227-020-03220-2>
5. Kapil Sharma, and **Vivek Kumar Sehgal**, " Energy-efficient and Sustainable Communication in Optical Networks on Chip." *Sustainable Computing: Informatics and Systems* (2020). <https://doi.org/10.1016/j.suscom.2020.100426>
<https://www.sciencedirect.com/science/article/abs/pii/S2210537920301530>
6. Payal Thakur, and **Vivek Kumar Sehgal**, " Emerging architecture for heterogeneous smart cyber-physical systems for industry 5.0" *Computers & Industrial Engineering* (2021) <https://doi.org/10.1016/j.cie.2021.107750>
<https://www.sciencedirect.com/science/article/abs/pii/S0360835221006549>

7. Arvind Kumar, Vivek Kumar Sehgal, Gaurav Dhiman, S Vimal, Ashutosh Sharma, Sangoh Park, "Mobile Networks-on-Chip Mapping Algorithms for Optimization of Latency and Energy Consumption" *Mobile Networks and Applications* (2021) <https://doi.org/10.1007/s11036-021-01827-0>
<https://link.springer.com/article/10.1007/s11036-021-01827-0>
8. Harsuminder Kaur Gill, Vivek Kumar Sehgal, Anil Kumar Verma, "CASE-CF: Context Aware Smart Epidemic Control Framework" *New Generation Computing* (2021) <https://doi.org/10.1007/s00354-021-00135-1>
<https://link.springer.com/article/10.1007/s00354-021-00135-1>
9. Harsuminder Kaur Gill, Vivek Kumar Sehgal, Anil Kumar Verma, "A deep neural network based context-aware smart epidemic surveillance in smart cities" *Library Hi Tech* (2021) <https://doi.org/10.1108/LHT-02-2021-0063>
<https://www.emerald.com/insight/content/doi/10.1108/LHT-02-2021-0063/full/html>
10. Suchi Johari, and **Vivek Kumar Sehgal**, "Master-based routing algorithm and communication-based cluster topology for 2D NoC." *The Journal of Supercomputing* 71, no. 11 (2015): 4260-4286. <https://doi.org/10.1007/s11227-015-1521-x>
<https://link.springer.com/article/10.1007/s11227-015-1521-x>
11. **Vivek Kumar Sehgal**, and Durg Singh Chauhan, "State observer controller design for packets flow control in networks-on-chip." *The Journal of Supercomputing* 54, no. 3 (2010): 298-329. <https://doi.org/10.1007/s11227-009-0322-5>
<https://link.springer.com/article/10.1007/s11227-009-0322-5>
12. Harsuminder Kaur Gill, **Vivek Kumar Sehgal**, and Anil Kumar Verma, " A context sensitive security framework for Enterprise multimedia placement in fog computing environment." *Multimedia Tools and Applications* (2020). 79, 10733–10749. <https://doi.org/10.1007/s11042-020-08649-4>
<https://link.springer.com/article/10.1007/s11042-020-08649-4>
13. Ruchi Verma, **Vivek Kumar Sehgal**, and Nitin, "Computational Stochastic Modelling to Handle the Crisis Occurred During Community Epidemic." *Annals of Data Science* 3, no. 2 (2016): 119-133. <https://doi.org/10.1007/s40745-016-0075-y>
<https://link.springer.com/article/10.1007/s40745-016-0075-y>
14. Amit Chaurasia, and **Vivek Kumar Sehgal**. "Optimal buffer-size by Synthetic Self-similar traces for different traffics for NoC." *ACM SIGBED Review* 12, no. 3 (2015): 6-12. <https://doi.org/10.1145/2815482.2815483>
<https://dl.acm.org/doi/10.1145/2815482.2815483>
15. Rangra, Abhilasha, **Vivek Kumar Sehgal**, and Shailendra Shukla. "A Novel Approach of Cloud Based Scheduling Using Deep-Learning Approach in E-Commerce Domain." *International Journal of Information System Modeling and Design (IJISMD)* 10, no. 3 (2019): 59-75. <https://doi.org/10.4018/IJISMD.2019070104>
<https://www.igi-global.com/gateway/article/234771>

16. Chaurasia, Amit, and **Vivek Kumar Sehgal**. "Performance of Gaussian and Non-Gaussian Synthetic Traffic on Networks-on-Chip." *International Journal of Multimedia Data Engineering and Management (IJMDEM)* 8, no. 2 (2017): 33-42. <https://doi.org/10.4018/IJMDEM.2017040104>
<https://www.igi-global.com/gateway/article/178932>
17. Ruchi Verma, **Vivek Kumar Sehgal**, and Nitin. "Crisis Management Using Centrality Measurement in Social Networks." *International Journal of Mobile Computing and Multimedia Communications (IJMCMC)* 8, no. 1 (2017): 19-33. <https://doi.org/10.4018/IJMCMC.2017010102>
<https://www.igi-global.com/gateway/article/179562>
18. Nidhi Syal, **Vivek Kumar Sehgal**, "Qualitative Analysis of 3D Routing Algorithms in 3×3×3 Mesh NoC Topology Under Varying Load in Bio-SoC" *international Journal of E-Health and Medical Communications (IJEHMC)* 10, no. 3 (2020): 86-102 <https://doi.org/10.4018/IJEHMC.2020070106>
<https://www.igi-global.com/gateway/article/251858>
19. A. Modgil, **Vivek Kumar Sehgal**, and N. Chanderwal, "Energy-Efficient Fairness-Aware Memory Access Scheduling" , *International Journal of Services Technology and Management (IJSTM)*.
<https://doi.org/10.1504/IJSTM.2020.110367>
<https://www.inderscienceonline.com/doi/abs/10.1504/IJSTM.2020.110367>
20. Ruchi Verma, **Vivek Kumar Sehgal**, and Nitin. "Implementation of Information System in Crisis Management Using Modeling and Simulation." *International Journal of Simulation--Systems, Science & Technology* 17, no. 32 (2016). <https://doi.org/10.5013/IJSSST.a.17.32.12>
<https://ijssst.info/Vol-17/No-32/paper12.pdf>
21. Ruchi Verma, **Vivek Kumar Sehgal**, and Nitin. "Implementation of Control Measure in the Crisis Using Social Networks." *International Journal of Simulation--Systems, Science & Technology* 17, no. 26 (2016). <https://doi.org/10.5013/IJSSST.a.17.32.11>
<https://ijssst.info/Vol-17/No-32/paper11.pdf>
22. Modgil, Aastha, Nitin, and **Vivek Kumar Sehgal**. "Understanding and Analyzing the Impact of Memory Controller's Scheduling Policies on DRAM's Energy and Performance." *Procedia Computer Science* 70 (2015): 399-406. <https://doi.org/10.1016/j.procs.2015.10.051>
<https://www.sciencedirect.com/science/article/pii/S1877050915032159>
23. A. C. Vivek Kumar Sehgal, "Synthetic Traffic Generation for Wavelet based Rosenblatt Process using LSTM for Multicore Architecture", *IJCA*, vol. 12, no. 5, pp. 607 - 617, Dec. 2019.
<http://sersc.org/journals/index.php/IJCA/article/view/2799>
24. Kumar, Pardeep, Vivek Kumar Sehgal, Durg Singh Chauhan, P. K. Gupta, and Manoj Diwakar. "Effective ways of secure, private and trusted cloud computing." *arXiv preprint arXiv:1111.3165* (2011).
<https://arxiv.org/abs/1111.3165>
25. Kumar, Pardeep, Vivek Kumar Sehgal, and Durg Singh Chauhan. "A benchmark to select data mining based

classification algorithms for business intelligence and decision support systems." arXiv preprint arXiv:1210.3139 (2012).

<https://arxiv.org/abs/1210.313>

26. Dinesh Kumar, Vivek Kumar Sehgal, Nitin. "A Modified X-Torus Topology for Interconnection Network" Journal of Telecommunication, Electronic and Computer Engineering (JTEC), Vol. 9 No. 3-6, 49-54.
27. Dinesh Kumar, Vivek Kumar Sehgal, Nitin. "Center Concentrated X-Torus Topology" Journal of Telecommunication, Electronic and Computer Engineering (JTEC), Vol. 9 No. 3-6, 55-60.
28. Aastha Modgil, Vivek Kumar Sehgal. "Energy-Efficient Performance-Aware Fair Memory Access Scheduling on Multicore Platform (EPAF)" Journal of Telecommunication, Electronic and Computer Engineering (JTEC), Vol. 9 No. 3-6, 61-66.
29. Nidhi Syal, Vivek Kumar Sehgal. "Performance Analysis of Routing Algorithms in 2D Mesh Based NoC Under Varying Load Using Support Vector Machine" Journal of Telecommunication, Electronic and Computer Engineering (JTEC), Vol. 9 No. 3-6, 67-71.
30. Abhilasha Rangra, Vivek Kumar Sehgal, "On Performance of Big Data Storage on Cloud Mechanics in Mobile Digital Healthcare" International Journal of E-Health and Medical Communications (IJEHMC) 12, no. 3 (2021)

Conference Edited Books:

1. Proceedings of Fifth International Conference on Image Information Processing (ICIIP -2019)
November 15 - 17, 2019
<https://ieeexplore.ieee.org/xpl/conhome/8966550/proceeding>
2. Proceedings of Third International Conference on Image Information Processing (ICIIP -2015)
December 21 - 24, 2015
<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?reload=true&punumber=7403799>
<https://www.computer.org/csdl/proceedings/iciip/2015/0148/00/index.html>
3. Proceedings of 3rd International Conference on Parallel Distributed and Grid Computing (PDGC 2014)
<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=7011429>

Published Book Chapters:

1. Rangra, Abhilasha, Vivek Kumar Sehgal, and Shailendra Shukla. "Analysis and Impact of Trust and Recommendation in Social Network Based Algorithm for Delay Tolerant Network." In International Conference on Advances in Computing and Data Sciences, pp. 123-133. Springer, Singapore, 2019.
https://link.springer.com/chapter/10.1007/978-981-13-9942-8_12
2. Rangra, Abhilasha, Vivek Kumar Sehgal, and Shailendra Shukla., 2018, July. Sentiment Analysis of Tweets by Convolution Neural Network with L1 and L2 Regularization. In International Conference on Advanced Informatics for Computing Research (pp. 355-365). Springer, Singapore.
https://link.springer.com/chapter/10.1007/978-981-13-3140-4_32
3. Sehgal, Vivek Kumar, Anubhav Patrick, Ashutosh Soni, and Lucky Rajput. "Smart human security framework using internet of things, cloud and fog computing." In Intelligent distributed computing, pp. 251-263. Springer, Cham, 2015.
https://link.springer.com/chapter/10.1007/978-3-319-11227-5_22

4. Kumar, Pardeep, Vivek Kumar Sehgal, and Durg Singh Chauhan. "Performance Evaluation of Evolutionary and Artificial Neural Network Based Classifiers in Diversity of Datasets." In *Advances in Computer Science, Engineering & Applications*, pp. 673-682. Springer, Berlin, Heidelberg, 2012.

https://link.springer.com/chapter/10.1007/978-3-642-30157-5_67

5. Kumar, Pardeep, Vivek Kumar Sehgal, and Durg Singh Chauhan. "Performance Evaluation of Evolutionary and Decision Tree Based Classifiers in Diversity of Datasets." In *International Conference on Advances in Communication, Network, and Computing*, pp. 309-312. Springer, Berlin, Heidelberg, 2012.

https://link.springer.com/chapter/10.1007/978-3-642-35615-5_47

6. Sehgal, Vivek Kumar. "An Embedded Application for Driverless Metro Train." In *Proceedings of the European Computing Conference*, pp. 545-551. Springer US, 2009.

https://link.springer.com/chapter/10.1007/978-0-387-85437-3_54

7. Singh, Chauhan Durg, and Sehgal Vivek Kumar. "Two O (n²) Time Fault-Tolerant Parallel Algorithm for Inter NoC Communication in NiP." In *Computer and Information Science*, pp. 267-282. Springer, Berlin, Heidelberg, 2008.

https://link.springer.com/chapter/10.1007/978-3-540-79187-4_23

8. Sehgal, Vivek Kumar. "Stochastic Communication in Application Specific Networks—on—Chip." In *Innovative Algorithms and Techniques in Automation, Industrial Electronics and Telecommunications*, pp. 11-16. Springer, Dordrecht, 2007.

https://link.springer.com/chapter/10.1007/978-1-4020-6266-7_3

9. Sehgal, Vivek Kumar. "Reduced-Order Controller Design in Discrete Time Domain." *Innovative Algorithms and Techniques in Automation, Industrial Electronics and Telecommunications* (2007): 481-486.

https://link.springer.com/chapter/10.1007/978-1-4020-6266-7_87

Conference Papers:

1. H. K. Gill, V. K. Sehgal and A. K. Verma, "Sleep Quality and Best Posture Prediction using Contextual Body Sensors using LSTM," 2021 Asian Conference on Innovation in Technology (ASIANCON), 2021, pp. 1-4, doi: 10.1109/ASIANCON51346.2021.9544784.
2. H. K. Gill, V. K. Sehgal and A. K. Verma, "A Context Aware Recommender System for Predicting Crop Factors using LSTM," 2021 Asian Conference on Innovation in Technology (ASIANCON), 2021, pp. 1-4, doi: 10.1109/ASIANCON51346.2021.9544692.
3. Kapil Sharma and Vivek Kumar Sehgal, "Improved and Efficient Optical-NoC Architecture," 2021 6th International Conference for Convergence in Technology (I2CT), 2021, pp. 1-5, doi: 10.1109/I2CT51068.2021.9417946.
4. Kapil Sharma and Vivek Kumar Sehgal. "Optical-NoC: Future of New Computational Systems," 2020 IEEE 17th India Council International Conference (INDICON), 2020, pp. 1-6, doi: 10.1109/INDICON49873.2020.9342176.
5. A. Modgil and V. K. Sehgal, "Improving the Performance of Chip Multiprocessor by Delayed Write Drain and Prefetcher based Memory Scheduler," 2018 Second International Conference on Electronics, Communication and

Aerospace Technology (ICECA), Coimbatore, 2018, pp. 1864-1869. doi: 10.1109/ICECA.2018.8474846

6. Sehgal, Vivek Kumar, Soumitra Mehrotra, and Harshit Marwah. "Car security using Internet of Things." In Power Electronics, Intelligent Control and Energy Systems (ICPEICES), IEEE International Conference on, pp. 1-5. IEEE, 2016.
7. Kumar, Arvind, Suchi Johari, and Vivek Kumar Sehgal. "Arbitrated IP Core Based Dynamic Task Mapping Algorithm for Networks-on-Chip." In Computational Intelligence, Communication Systems and Networks (CICSyN), 2015 7th International Conference on, pp. 188-193. IEEE, 2015.
8. Johari, Suchi, Arvind Kumar, and Vivek Kumar Sehgal. "Heterogeneous and Hybrid Clustered Topology for Networks-on-Chip." In Computational Intelligence, Communication Systems and Networks (CICSyN), 2015 7th International Conference on, pp. 183-187. IEEE, 2015.
9. Sehgal, Vivek Kumar, Anubhav Patrick, and Lucky Rajpoot. "A comparative study of cyber physical cloud, cloud of sensors and internet of things: Their ideology, similarities and differences." In Advance Computing Conference (IACC), 2014 IEEE International, pp. 708-716. IEEE, 2014.
10. Tripathi, Mukesh Kant, and Vivek Kumar Sehgal. "Establishing trust in cloud computing security with the help of inter-clouds." In Advanced Communication Control and Computing Technologies (ICACCCT), 2014 International Conference on, pp. 1749-1752. IEEE, 2014.
11. Vivek Kumar Sehgal, Nitin "War of Tiny Brains in the World of Smarter Gadgets" in 26th International Conference on Computer Applications in Industry and Engineering (CAINE) 2013, Los Angeles, California, USA, 117-122
12. Vivek Kumar Sehgal "Networks-on-Chip for Energy Efficient Real Time Biomedical Signals Data Acquisition" International Conference on Eco-friendly Computing and Communication Systems (ICECCS)- Himachal, 40-49.
13. Sehgal, Vivek Kumar, Akshay Jagtiani, Meha Shah, Anupriya Sharma, Arpit Jaiswal, and Dhananjay Mehta. "Job Portal-A Web Application for Geographically Distributed Multiple Clients." In Artificial Intelligence, Modelling and Simulation (AIMS), 2013 1st International Conference on, pp. 199-204. IEEE, 2013.
14. Sehgal, Vivek Kumar, Rachit Khanna, Gaurav Garg, Nitika Singhal, Neeraj Sahu, and Sarthak Gupta. "Modern Control System Mapping on Networks-on-Chip." In Intelligent Systems, Modelling and Simulation (ISMS), 2012 Third International Conference on, pp. 31-36. IEEE, 2012.
15. Sehgal, Vivek Kumar, Mudit Singhal, Bhart Mangla, Sudeep Singh, and Shivangi Kulshrestha. "An embedded interface for GSM based car security system." In Computational Intelligence, Communication Systems and Networks (CICSyN), 2012 Fourth International Conference on, pp. 9-13. IEEE, 2012.
16. Kumar, Pardeep, Durg Singh Chauhan, and Vivek Kumar Sehgal. "Selection of evolutionary approach based hybrid data mining algorithms for decision support systems and business intelligence." In Proceedings of the International Conference on Advances in Computing, Communications and Informatics, pp. 1041-1046. ACM, 2012.
17. Sehgal, Vivek Kumar, Shubhrangshu Naval Nitin, Abhinav Gulhar, Sayed Jeeshan Ali, and Mudit Singhal. "An Embedded Platform for Patient Monitoring and Care System." Embedded Systems and Applications 2011, Las Vegas, USA, 236-240.
18. Kumar, Pardeep, Vivek Sehgal, Durg Singh Chauhan, and Manoj Diwakar. "Clouds: Concept to optimize the Quality of Service (QOS) for clusters." In Information and Communication Technologies (WICT), 2011 World Congress on, pp. 816-821. IEEE, 2011.
19. Kumar, Pardeep, Vivek Sehgal, and Durg Singh Chauhan. "Performance evaluation of decision tree versus artificial

- neural network based classifiers in diversity of datasets." In Information and Communication Technologies (WICT), 2011 World Congress on, pp. 798-803. IEEE, 2011.
20. Kumar, Pardeep, Vivek Sehgal, Kinjal Shah, Shiv Shankar Prasad Shukla, and Durg Singh Chauhan. "A novel approach for security in cloud computing using hidden markov model and clustering." In Information and Communication Technologies (WICT), 2011 World Congress on, pp. 810-815. IEEE, 2011.
 21. Sehgal, Vivek Kumar, Samruddh Dhope, Prince Goel, Japinder Singh Chaudhry, and Prince Sood. "An embedded platform for intelligent traffic control." In Computer Modeling and Simulation (EMS), 2010 Fourth UKSim European Symposium on, pp. 541-545. IEEE, 2010.
 22. Sehgal, Vivek Kumar, Nitesh Panda, Nipun Rai Handa, Shubhrangshu Naval, and Vipul Goel. "Electronic Energy Meter with instant billing." In Computer Modeling and Simulation (EMS), 2010 Fourth UKSim European Symposium on, pp. 27-31. IEEE, 2010.
 23. Sehgal, Vivek Kumar, Rohit Sharma, Nitin Nitin, Durg Singh Chauhan, Ankit Srivastava, Avinash Kumar, Yarash Agerwal, and Adnaan Munir Khan. "Obstacle sensing and anti-falling sensor robot using embedded processor." In Computer Modelling and Simulation, 2009. UKSIM'09. 11th International Conference on, pp. 579-584. IEEE, 2009.
 24. Nitin, Nitin, Rahul Mehta, Palak Sethi, Esha Gupta, Rohit Sharma, and Vivek Kumar Sehgal. "Asymptotic analysis of dynamic algorithms designed to provide parallel communication among NoC in NiP using MIN." In Computer Modelling and Simulation, 2009. UKSIM'09. 11th International Conference on, pp. 443-448. IEEE, 2009.
 25. Sehgal, Vivek Kumar, Shilpy Arora, Sahil Jain, Shantanu Agarwal, Ujjawal Khandelwal, and Karan Jain. "Parameteric coding of speech signals." In Ultra Modern Telecommunications & Workshops, 2009. ICUMT'09. International Conference on, pp. 1-5. IEEE, 2009.
 26. Sharma, Rohit, Vivek Kumar Sehgal, Nitin Nitin, Pranav Bhasker, and Ishita Verma. "Design and Implementation of a 64-bit RISC Processor Using VHDL." In Computer Modelling and Simulation, 2009. UKSIM'09. 11th International Conference on, pp. 568-573. IEEE, 2009.
 27. Sharma, Rohit, Vivek Kumar Sehgal, Abhinav Thakur, Adnan Munir Khan, Ashish Sharma, and Pankaj Sharma. "Peltier Effect Based Solar Powered Air Conditioning System." In Computational Intelligence, Modelling and Simulation, 2009. CSSim'09. International Conference on, pp. 288-292. IEEE, 2009.
 28. Rohit Sharma, Vivek Kumar Sehgal, Nitin, Chandan Bhardwaj, Kanchak Negi, Tarun Kumar Thakur: "An Intelligent Water Management and Distribution System." IKE 2009: 66-70.
 29. Vivek Kumar Sehgal, Rohit Sharma, Nitin, Deepankar Bhardwaj, Yaras Agarwal, Mehboob Shrivastava, Prashant Srivastava, Avinash Kumar."D-Torus Topology in Networks-on-Chip: A Perspective Study." ESA 2009: 163-168
 30. Nitin, Gitanjali Chauhan, Rohit Sharma, Vivek Kumar Sehgal, Rohit Verma, Gaurav Kumar, Utkarsh Shrivastava, Rajan Vaish. "Single Tape Deterministic Turing Machine of Routing Algorithms Designed for Torus Network." FCS 2009: 47-52
 31. Nitin, Gitanjali Chauhan, Vivek Kumar Sehgal, Rohit Sharma, Abhishek Gupta, Aditya Patel, Amanpreet Singh Arora, Aprajita Gupta, Utkarsh Shrivastava, Rajan Vaish. "A Single Tape Deterministic Turing Machine of Adaptive Deterministic Routing Algorithm Designed for Torus Network". FCS 2009: 37-40
 32. Vivek Kumar Sehgal, Rohit Sharma, Nitin, Abhishek Srivastava, Anshul Bora."Emergency Shutdown Procedure for Applications in Mass Rapid Transit System" ESA 2009: 92-97

33. Rohit Sharma, Nitin, Vivek Kumar Sehgal, Amit Kumar, Preity Gupta, Ashish Nandan Lal. "DELSIC: A Delay Simulator for Interconnect Circuits" CDES 2009: 52-56
34. Sehgal, Vivek Kumar, Durg Singh Chauhan, and Rohit Sharma. "Smart wireless temperature data logger using IEEE 802.15. 4/ZigBee protocol." In TENCON 2008-2008 IEEE Region 10 Conference, pp. 1-6. IEEE, 2008.
35. Sehgal, Vivek Kumar, Rohit Sharma, Durg Singh Chauhan, Neha Srivastava, and Shruti Garhwal. "Modified fault tolerant Combining Switches Multistage Interconnection Networks with chaining: Algorithm, design and cost issues." In TENCON 2008-2008 IEEE Region 10 Conference, pp. 1-5. IEEE, 2008.
36. Sharma, Rohit, Vivek Kumar Sehgal, and D. S. Chauhan. "Closed-form expressions for extraction of capacitances in multilayer vlsi interconnects." In TENCON 2008-2008 IEEE Region 10 Conference, pp. 1-4. IEEE, 2008.
37. Nitin, Durg Singh Chauhan, Vivek Kumar Sehgal, and Ankit Mahanot. "Security Analysis and Implementation of* JUIT-Image Based Authentication System using Kerberos Protocol." In Seventh IEEE/ACIS International Conference on Computer and Information Science, pp. 575-580. 2008.
38. Chauhan, Durg Singh, Vivek Kumar Sehgal, Ankit Mahanot, Pallavi Singh, Sohith Ahuja, Utkarsh Shrivastava, Manisha Rana, Vineet Punjabi, Shivam Vinay, and Nakul Sharma. "Finite-State Modeling and Testing of Image Based Authentication System." In Computer and Information Science, 2008. ICIS 08. Seventh IEEE/ACIS International Conference on, pp. 427-432. IEEE, 2008.
39. Nitin, Durg Singh Chauhan, and Vivek Kumar Sehgal. "On a Software Architecture of JUIT-Image Based Authentication System, Advances in Electrical and Electronics Engineering." IAENG Transactions on Electrical and Electronics Engineering 1: 35-46.
40. Rohit Sharma, Vivek Kumar Sehgal, Nitin, Saumya Rawat, Vinodini Kapoor, Sonia Chadha "Time-Domain Analysis of VLSI Interconnects Considering Oscillatory Inputs" CDES 2008: 57-60
41. Vivek Kumar Sehgal, Nitin, Durg Singh Chauhan "A New Approach for Inter Networks-on-Chip Communication in Networks-in-Package" ESA 2008: 16-23
42. Vivek Kumar Sehgal, Nitin, Rohit Sharma, Vikas Hastir, Yogeshwar Singh Dadwhal, Mitesh Bansal, Rohit Puri, Shrey Abhi Pathania, Abhay Thakur. "Smart Wireless Temperature Data Logger." ESA 2008: 140-144
43. Rohit Sharma, Vivek Kumar Sehgal, Nitin, Munish Sood, Puneet Dhawan, Anupam Prasad, Manas Srivastava, Ayushi Agarwal. "An Embedded Platform For GSM/CDMA Controlled Surveillance Robot." ESA 2008: 145-150
44. Vivek Kumar Sehgal, Durg Singh Chauhan, Nitin, Abhishek Shreevats, Ankit Khare, Sunny Kapoor, Avishek Gupta, Abhishek Misra. "Optimal Dynamic Routing and Flow Control in Interconnection Networks-on-Chip." ESA 2008: 193-199
45. Nitin, Rohit Sharma, Vivek Kumar Sehgal, Shruti Garhwal, Neha Srivastava, Kumar Vaibhav. "CSMIN Revisited: Accurate Algorithms and Strategic Design Issues." PDPTA 2008: 218-223
46. Sehgal, Vivek Kumar, and Durg Singh Chauhan. "Embedded Controller Based Smart Card Access." In Proc. of the World Congress on Engineering and Computer Science, WCECS 2008, October 22-24, San Francisco, USA.
47. Sehgal, Vivek Kumar, Nakul Sharma, Kunal Krishna, and Abhishek Bhatia. "On Path-length and Routing-tag Algorithm for Hybrid Irregular Multi-stage Interconnection Networks." In Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing, 2007. SNPD 2007. Eighth ACIS International Conference on, vol. 1, pp. 652-657. IEEE, 2007.

48. Sehgal, Vivek Kumar, Nitin , Sachin Garg, Amit Jain, Neeraj Shah, and Sumit Gupta. "RJ-11 Interfaced Embedded Platform for DTMF Based Remote Control System." In ESA, p. 239. 2007.
49. Sehgal, Vivek Kumar. "Stochastic Modeling of Worm Propagation in Trusted Networks." In Security and Management, pp. 482-488. 2006.

Chair, Conference Organizing Committees:

- Publicity Committee Chair 2020 Sixth International Conference on Parallel, Distributed and Grid Computing (PDGC- 2020).
- Publicity Committee Chair 2019 Fifth International Conference on Image Information Processing (ICIIP-2019)
- Organizing Secretary- ETCCS-2020: Springer Conference at CDAC Noida
- Technical Program Committee Chair 2019 Futuristic Trends in Network and Communication Technologies FTNCT
- Technical Program Committee Chair 2018 Fifth International Conference on Parallel, Distributed and Grid Computing (PDGC) 20-22 December, 2018.
- Technical Program Committee Co-Ordinator Futuristic Trends in Networks and Communication Technology – 2018 09-10 Feb 2018.
- Member Advisory Committee ICSCCC 2018 First International Conference on Secure Cyber Computing and Communications, 2018 OCTOBER 11-13, 2018.
- Member Advisory Committee 2nd International Conference on Recent Innovations in Computer Science and Information Technology (RICSIT-2017). on 19th May, 2017 at University Institute of Information Technology (UIIT), Himachal Pradesh University, Shimla.
- Publicity Chair 2017 Fourth International Conference on Image Information Processing (ICIIP-2017) , December 21 - 23, 2017.
- Technical Program Committee Chair 2018 Fifth International Conference on Parallel, Distributed and Grid Computing (PDGC)
- Technical Program Committee Chair 2016 Fourth International Conference on Parallel, Distributed and Grid Computing (PDGC) 22-24 December, 2016.
- Oversight Committee & Local organizing Committee Chair 2015 Third International Conference on Image Information Processing (ICIIP -2015) December 21 - 24, 2015.
- Executive General Chair 2014, Third International Conference on Parallel, Distributed and Grid Computing December 11-13, 2014.
- organizing Committee Chair 2013 IEEE Second International Conference on Image Information Processing (ICIIP -2013) December 9 - 11, 2013.
- Program Co-Chair 2012, Second International Conference on Parallel, Distributed and Grid Computing December 06-08, 2012.

Session Chaired:

- SESSION CHAIR during INNOVATIONS IN INFORMATION AND COMMUNICATION TECHNOLOGIES (IICT-2020) from 7-8th November, 2020
- Sixth International Conference on Parallel, Distributed and Grid Computing (PDGC- 2020).
- 1st International Conference on ETCCS-2020: Springer Conference at CDAC Noida
- 2nd International Conference on Futuristic Trends in Network and Communication Technologies FTNCT
- 5th International Conference on Signal Processing, Computing and Control (ISPCC 2k19) 10-12 October 2019.
- Fifth International Conference on Image Information Processing (ICIIP -2019) November 15 - 17 , 2019.
- Fifth International Conference on Parallel, Distributed and Grid Computing (PDGC) 20-22 December, 2018.
- first International Conference on Secure Cyber Computing & Communication (ICSCCC-2018) NIT Jalandhar
- Second International Conference on Advanced Informatics for Computing Research (ICAICR-2018) 14 – 15 July, 2018.
- First International Conference on Futuristic Trends in Networks and Communication Technology – 2018 09-10 Feb 2018.
- 4th International Conference on Signal Processing, Computing and Control (ISPCC 2017). September 21 - 23, 2017

- Fourth International Conference on Image Information Processing (ICIIP-2017) , December 21 - 23, 2017
- 11th INDIACom; 2017 4th International Conference on computing for sustainable global development 1st – 3rd March, 2017
- International Conference on Advanced Informatics for Computing Research (ICAICR-2017) 17 – 18 March, 2017.
- Fourth International Conference on Parallel, Distributed and Grid Computing (PDGC) 22-24 December, 2016
- Third International Conference on Image Information Processing (ICIIP -2015) December 21 - 24, 2015.
- Third International Conference on Parallel, Distributed and Grid Computing (PDGC) December 11-13, 2014
- Second International Conference on Image Information Processing (ICIIP -2013) December 9 - 11, 2013.
- Second International Conference on Parallel, Distributed and Grid Computing (PDGC) December 06-08, 2012.

Organization/Participation of Seminars/Workshops/Schools:

- Emerging Trends in VLSI and Communication (ETVC) Jaypee University of Information Technology, June 09th – 18th, 2018
- Massive Open Online Courses Jaypee University of Information Technology and NPTEL ,15-Sep-2017.
- 4th International Workshop on Design and Performance of Networks on Chip 2016, Montreal, Quebec, Canada, 15-Aug-2016 to 19-Aug-2016.
- Workshop on Internet of Things, INTEL, Jaypee University of Information Technology, 26-Apr-2015 to 27-Apr-2015.
- Virtualization & Cloud Computing Fundamentals & Practical Approach, Jaypee University of Information Technology, 24 Dec. 2015 to 30 Dec. 2015.
- Summer School PDC, IUCEE, Jaypee University of Information Technology, 23-May-2011 to 27-May-2011.
- Teaching Engineering using Matlab and simulink, IUCEE, 12-Jul-2010 to 14-Jul-2010.
- The International Workshop on Advances in Computer Networks, VLSI and Innovative Technologies ANVIT 2009, IEEE ICUMT, 12-Oct-2009 to 14-Oct-2009.
- Computer Aided VHDL, AICTE, Jaypee University of Information Technology, 03-Mar-2008 to 13-Mar-2008.
- Winter School on Current Trends in Design and Automation Joint with International Joint Conferences on Computer, Information and Systems Sciences and Engineering IEEE USA , University of Bridgeport USA , 04-Dec-2006 to 14-Dec-2006.
- Virtual Labs IIT Roorkee, Jaypee University of information Technology, 28-Apr-2017 to 29-Apr-2017.
- Virtual Labs IIT Delhi, Jaypee University of information Technology, 28-Feb-2017 to 28-Feb-2017.
- A Foundation Program on Data Science using Statistica, Jaypee University of information Technology, Grid Analytics India, 21-Apr-2017.
- Short Term Course on Cyber Crime and Forensic Tools Through ICT, AICTE, NITTTR, 06-Feb-2017 to 10-Feb-2017.
- FDP on Signal Processing and its Applications, Jaypee University of information Technology, 13-Jan-2016 to 18-Jan-2016.
- National program on Differential Equations: Theory Computation and Application, Jaypee University of information Technology, 19-Oct-2015 to 25-Oct-2015.
- International Symposium on Communication and Distributed Systems, JNGEC Sundernagar, 15-Dec-2014 to 16-Dec-2014.
- FDP, Jaypee University of information Technology, 14-Jul-2014 to 19-Jul-2014.
- Workshop on Wireless Network and Network Simulator, Jaypee University of information Technology, 09-Jul-2012 to 10-Jul-2012.
- Summer school on Parallel and Distributed Computing, Jaypee University of information Technology, IUCEE 23-May-2011 to 27-May-2011.
- Workshop on Labview, Jaypee University of information Technology, 17-Feb-2011 to 18-Feb-2011.
- FDP on Self - Realization, Commitment and Excellence, Jaypee Institute of information Technology, 11-Jul-2006 to 15-Jul-2006.

Technical Program Committees:

2019	TPC member, 11th International Conference on Computational Intelligence and Communication Networks
2019	TPC member, 13 TH European Modelling Symposium
2019	TPC member, AIECon 2019 IEEE Conference on Industrial Electronics
2018	TPC member, International Symposium in Business, Management and Social Sciences

2018 TPC member, 4th International Conference on Science in Information Technology (ICSITech)

2018 TPC member, 10th International Conference on Computational Intelligence and Communication Networks

2018 TPC member, IEEE Industrial Electronics and Applications Conference

2018 TPC member, IEEE MELECON 2018

2018 TPC member, WSCAR' 2018: World Symposium on Computer Applications & Research

2018 TPC member, International Workshop on Design and Performance of Networks on Chip (DPNoC 2018)

2017 TPC member, 17 th Asia Simulation Conference

2017 TPC member, 9th IEEE-GCC conference is organized by the IEEE Saudi Arabia

2017 TPC member, symposium on Computer Applications & Research WSCAR' 2017

2017 TPC member, The 3rd International Workshop on Mobile Applications (MobiApps'2016)

2017 TPC member, 2017 International Workshop on Cyber-Security in IoT-based Healthcare Systems & Cloud Computing (CS-HSC 2017)

2017 TPC member, ICCMREA' 2017 is an International Conference on Composite Materials & Renewable Energy

2017 TPC member, 2nd Applied Mathematics in Science and Engineering International Conference (APPEMSE)

2017 TPC member, Fifth International Symposium on Intelligent Informatics (ISI'17)

2016 TPC member, 3rd International Conference on Communication and Computer Engineering ICOCOE'2016

2016 TPC member, 7th International Congress on Ultra-Modern Telecommunications and Control Systems ICUMT 2016

2016 TPC member, Advanced Research in Engineering and Information Technology International Conference AREITIC'2016

2016 TPC member, 2nd Advanced Research in Material Sciences, Manufacturing, Mechanical and Mechatronic Engineering Technology International Conference AR4MET'2016

2016 TPC member, Advanced Research on Business, Management and Humanities ARBUHUM'2016

2016 TPC member, Advances of Information and Business Management ADIBUM'2016

2016 TPC member, Advancement Research on Circuit and Systems International Conference ARONCAS'2016

2016 TPC member, 2016 International Conference on Advances in Computing, Communications and Informatics ICTLE 2016

2016 TPC member, 2016 International Conference on Advances in Computing, Communications and Informatics ICACCI-2016

2016 TPC member, 2016 International conference on Architectural Research & Computer-Aided Design ICARCAD 2016

2016 TPC member, 2016 International Conference on Composite Materials & Renewable Energy Applications ICCMREA 2016

2016 TPC member, 2016 International Conference on Computer, Communication, and Control Technology I4CT'2016

2016 TPC member, 2016 International Conference on Education ICOED'16

2016 TPC member, International Conference on Social Sciences and Humanities SOSHUM'2016

2106 TPC member, Recent Research in Social Sciences International Conference SOCSIC'2016

2106 TPC member, 9th EUROSIM Congress on Modelling and Simulation EUROSIM2016

2016 TPC member, IEEE UKSim-AMSS 18th International Conference on Computer Modelling and Simulation, UKSim2016

2016 TPC member, IJCDS-4

2016 TPC member, IJSSST V17

2016 TPC member, Micro and Nano Technologies, Modelling and Simulation 2016 MNTMSim2016

- 2015 Program Committee 1st International Conference on Intelligent Systems in the Middle East, ISME 2015
- 2015 TPC member 3rd International Conference on Communication and Computer Engineering ICOCOE'2015
- 2015 TPC member Advanced Research in Material Sciences, Manufacturing, Mechanical and Mechatronic Engineering Technology International Conference AR4MET'2015
- 2015 TPC member 7th International Congress on Ultra-Modern Telecommunications and Control Systems ICUMT 2015
- 2015 TPC member 1st International Conference on Telematics and Future Generation Networks TAFGEN2015
- 2015 TPC member International Conference on Engineering & Computational Innovation Sciences ENCINS' 2015
- 2015 TPC member 2nd International Workshop on Design and Performance of Networks on Chip DPNoC 2015
- 2014 Program Committee MELECON2014 (Nano & Micro-Electronics Systems)
- 2014 Program Committee SIMS2014 1st International Conference on Systems Informatics: Modelling and Simulation.
- 2014 Program Committee ICUMT 2014 the 6th International Congress on Ultra-Modern Telecommunications and Control Systems
- 2014 Program Committee 1st International Conference on System Informatics, Modeling and Simulation, SIMS 2014
- 2014 Program Committee International Colloquium on Humanities, Science & Engineering Research, CHUSER 2014
- 2014 Program Committee 2014 IEEE Innovative Smart Grid Technologies Conference - Asia, ISGT 2014
- 2014 IEEE Symposium on Computer Applications and Industrial Electronics, ISCAIE 2014
- 2014 International Conference on Composite Materials & Renewable Energy Applications, ICCMREA' 2014
- 2014 International Conference on Computer and Communication Engineering , ICOCOE'2014
- 2014 International Colloquium of Art and Design Education Research, i-CADER2014
- 2014 International Conference on Advances in Computing, Communications and Informatics, ICACCI-2014
- 2014 International Journal of Simulation Systems, Science & Technology, IJSSST V14
- 2014 Committee International Conference on Advanced Micro and Nanocomposite for Engineering, ICNC 2014
- 2014 Program Committee Third International Symposium on Intelligent Informatics , ISI 2014
- 2013 Program Committee European Modelling Symposium, EMS 2013
- 2013 Program Committee International Journal of Computing and Digital Systems, IJCDS' V3
- 2013 Program Committee, The 8th EUROSIM Congress on Modelling and Simulation (EUROSIM), Cardiff, Wales, UK.
- 2013 Program Committee, The 2nd International Conference on Advances in Computing, Communications and Informatics, Mysore, INDIA.
- 2013 Program Committee, The 2nd International Conference on Eco-friendly Computing and Communication Systems (ICECCS), Solan, **INDIA**.
- 2013 Program Committee, The 5th International Conference on Internet Technologies and Applications (IET and IEEE ITA), Glyndwr University, North Wales, UK.
- 2013 Program Committee, The 15th IEEE International Conference on Computer Modelling and Simulation (IEEE UKSIM), Cambridge, UK.
- 2013 2013 Program Committee, The 13th IEEE International Conference on Next Generation Wired/Wireless Networking (NEW2AN), St. Petersburg, RUSSIA.
- 2013 Program Committee, 6th International Conference on Contemporary Computing (IC3), INDIA.
- 2012 2012 Program Committee, The 2012 IEEE Student Conference on Research and Development (IEEE SCORED), MALAYSIA.
- 2012 2012 Program Committee, 2012 IEEE Symposium on Computer Applications & Industrial Electronics (IEEE ISCAIE), MALAYSIA.

- 2012 Program Committee, The 3rd Annual International Conference on Computer Science Education: Innovation and Technology, SINGAPORE.
- 2012 Program Committee, The 52nd IACIS International Conference on Computer Information Systems (IACIS), South Carolina, USA.
- 2012 Program Committee, The 4th IEEE International Conference on Computational Intelligence, Communication Systems and Networks (IEEE CICSyN), Phuket, THAILAND.
- 2012 Program Committee, The 2012 IEEE Symposium on Business, Engineering and Industrial Applications (IEEE ISIEA), Bandung, INDONESIA
- 2012 Program Committee, 2012 IEEE Symposium on Industrial Electronics & Applications (IEEE ISBEIA), Bandung, INDONESIA.
- 2012 Program Committee, The 12th IEEE International Conference on Next Generation Wired/Wireless Networking (IEEE NEW2AN), St. Petersburg, RUSSIA.
- 2012 Program Committee, The 14th IEEE International Conference on Computer Modelling and Simulation (IEEE UKSIM), Cambridge, UK.
- 2012 Program Committee, The 3rd IEEE International Conference on Intelligent Systems, Modelling and Simulation (IEEE ISMS), Kota Kinabalu, MALAYSIA.
- 2011 Program Committee, The 2nd Annual International Conference on Computer Science Education: Innovation and Technology, SINGAPORE
- 2011 Program Committee, The 1st IEEE First International Conference on Informatics and Computational Intelligence (IEEE ICI), Bandung, INDONESIA.
- 2011 Program Committee, The 3rd IEEE International Conference on Computational Intelligence, Communication Systems and Networks (IEEE CICSyN), Bali, INDONESIA
- 2011 Program Committee, The 11th IEEE International Conference on Next Generation Wired/Wireless Networking (IEEE NEW2AN), St. Petersburg, RUSSIA
- 2011 Program Committee, The 17th Americas Conference on Information Systems 2011, Michigan, USA.
- 2011 Program Committee, The 5th Asia International Conference on Mathematical Modelling & Computer Simulation (AMS), Manila, PHILIPPINES
- 2011 Program Committee (All Tracks), The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing, Las Vegas, Nevada, USA
- 2011 Program Committee, The 1st IEEE International Workshop on Multi Constraints Algorithms for Wireless Networks collocated with 2nd IEEE International Conference on Information Science and Applications, Jeju Island, KOREA.
- 2011 Program Committee, The 2nd International Conference on Intelligent Systems, Modelling and Simulation (IEEE ISMS), Phnom Penh, CAMBODIA.
- 2011 Program Committee, The 13th IEEE International Conference on Computer Modelling and Simulation (IEEE UKSIM), Cambridge, UK.
- 2010 Program Committee, The IEEE International Congress on Ultra-Modern Telecommunications and Control Systems (IEEE ICUMT), Moscow, RUSSIA.
- 2010 Program Committee, The 2nd International Conference on Computational Intelligence, Communication Systems and Networks (CICSyN), Liverpool, UK.
- 2010 Program Committee, The 9th IEEE/ACIS International Conference on Computer and Information Science (IEEE/ACIS ICIS), JAPAN
- 2010 Program Committee, The 4th Asia International Conference on Mathematical Modelling & Computer Simulation (AMS), MALAYSIA.
- 2010 Program Committee, The 12th IEEE International Conference on Computer Modelling and Simulation (IEEE UKSIM), Cambridge, UK.

2010	Program Committee, The 10th IEEE International Conference on Next Generation Wired/Wireless Networking (IEEE NEW2AN), St. Petersburg, RUSSIA.
2010	Program Committee, The 14th IBIMA conference on Global Business Transformation through Innovation and Knowledge Management (IBIMA), Istanbul, TURKEY.
2010	Program Committee, The 2nd International Symposium on Emerging Trends and Technologies in Libraries and Information Services (ETTLIS), INDIA.
2010	Program Committee, The International Conference on Parallel, Distributed and Grid Computing (PDGC), INDIA.
2009	Program Committee, The IEEE International Conference on Ultra-Modern Telecommunications (IEEE ICUMT), St. Petersburg, RUSSIA.
2009	Program Committee, Third UKSIM European Symposium on Computer Modelling and Simulation (EMS), GREECE.
2007	Program Committee, European Computing Conference (ECC), GREECE.

EDITORIAL AND REVIEWER WORK FOR TECHNICAL JOURNALS AND PUBLISHERS:

Associate Editor and Lead Guest Editor:

- IEEE Access
- special issue on: Design and Automation for Integrated Circuits and Systems in Journal of Electrical and Computer Engineering Hindawi. 2012.
- International Journal of Computing and Digital Systems

Reviewer Work:

- External Reviewer for IEEE Transactions on Systems, Man and Cybernetics: Systems.
- External Reviewer for IEEE Transactions on Industrial Informatics.
- External Reviewer for IEEE Transactions on Industrial Electronics
- External Reviewer for IEEE Access
- External Reviewer for ACM Computing Survey
- External Reviewer for ACM Embedded Computing
- External Reviewer for IET Engineering & Technology Reference
- External Reviewer for Mathematical and Computer Modelling, Elsevier Sciences.
- External Reviewer for Computer Communications, Elsevier Sciences.
- External Reviewer for International Journal of Systems Science, Taylor & Francis.
- External Reviewer for The Journal of Supercomputing, Springer.
- External Reviewer for Springer plus.
- External Reviewer for The Journal of Computers & Electrical Engineering, Elsevier Sciences.

CONTRIBUTION TO ACADEMICS ACTIVITIES:

- Chairman **JUIT YOUTH CLUB 2018-19**
- Chairman **JUIT YOUTH CLUB 2017-18**
- Chairperson to assess the feedbacks of the stakeholders and carryout assessment of PEO's.
- NAAC and NBA Documentation 2014, 2015, 2016, 2017, 2018, 2019
- Ph.D Coordinator. 2014, 2015, 2016, 2017, 2018, 2019
- Member BOS 2014, 2015, 2016, 2017, 2018, 2019
- Coordinator, Summer Semester 2017.
- Coordinator, Condensed Semester 2016.
- Faculty in charge technical club ENKINDLE and Reboot – JUIT.
- B.Tech Subject coordinator.
- PDGC 2014, 2016 and ICIP 2013,2015 local arrangements Coordinator.
- Student Performance Coordinator.
- Ph.D. Research Lab Coordinator 2014, 2015, 2016, 2017, 2018
- Coordinator, Ubiquitous Computing Research Group 2014, 2015, 2016, 2017, 2018, 2019
- PDGC 2014 General Chair

- PDGC 2018 Organizing Secretary
- Anti-Ragging Squad. 2016-2019
- Admission Counselling. 2014, 2015, 2016, 2017, 2018, 2019
- Faculty in charge during interstate tournaments. 2016, 2017
- Academically Weak Students Mentoring. 2014, 2015, 2016, 2017, 2018, 2019
- MOOC courses coordinator. 2017, 2018, 2019
- Judge during Mauritius 2017.
- Judge during Le fiestas 2017.
- Faculty Coordinator, Hospitality Committee JUIT YOUTH CLUB 2017-18.
- Member, Himachal Pradesh and Technology Incubation and Entrepreneurship Development Cell. 2017, 2018
- Resource Generation Avenues: Consultancy: 2017, 2018, 2019
- Intel, Circuit sutra, Medhaavi Center for Automotive Research
- Hostel Warden -2006-2013

CONSULTING, ADVISORY, AND OTHER EXTERNAL APPOINTMENTS:

- Ph.D. (CSE) Examiner and Thesis Evaluator, Uttarakhand Technical University, Dehradun, INDIA.
- Ph.D. (CSE) Examiner and Thesis Evaluator, Banasthali Vidyapith, INDIA
- M.Tech. (CSE and ISM) Examiner and Thesis Evaluator, Dehradun Institute of Technology, Dehradun, INDIA.
- Member of University Examination Committee, Uttarakhand Technical University, Dehradun, INDIA.
- Member of University Examination Committee, Himachal Pradesh University, Summer Hill, Himachal Pradesh, INDIA.

INVITED SPEAKER/TALKS/LECTURES:

Oct. 2020	Keynote in International Conference on Futuristic Trends in Network and Communication Technologies FTNCT 2020 http://www.ftnct.com/FTNCT-2020/keynote.php
July 2018	Expert Lecture on “3D Networks-on-Chip” UGC- Human Resource Development Centre Himachal Pradesh University Shimla
April 2018	“Gimps of IoT”, DST Sponsored Two Days National Level Workshop on "Real Time Application Using Next Generation IoT Technology" at Akal College of Engineering and Technology, Eternal University, Baru Sahib (HP) during April 20-21, 2018.
March 2017	Keynote in International Conference on Advanced Informatics for Computing Research (ICAICR-2017) will be held at Lyallpur Khalsa College of Engineering, Jalandhar, Punjab, India on March 17-18, 2017. http://informaticsindia.co.in/
June 2016	Expert lecture on Networks on Chip design at IIIT Noida
July 2013	Expert lecture on Networks on Chip design at Chandigarh University
June 2012	Taught a Full course on Advanced Computer Networks to the 1st year M.Tech. (CSE) Sequential Students of Uttarakhand Technical University at Center: Dehradun Institute of Technology, Dehradun, INDIA.

March 2009	AICTE sponsored Faculty Development Programme on Computer Aided VHDL Workshop Jaypee University of Information Technology, Wagnaghat, Himachal Pradesh, INDIA.
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HONORS AND AWARDS:

- Young Scientist Scholarship Award 2009 from Department of Science and Technology (DST), SERC Division, Government of India, New Delhi.
- Appointed as Vice President for INTERNATIONAL ACCREDITATION ORGANIZATION www.iao.org/.
- Recognized with Fellow Grade in Institution of Engineer INDIA
- Recognized with Senior Member Grade in IEEE
- Recognized with Senior Member Grade in ACM
- Invited to Conduct and Chair two day Workshop, IEEE SDR-GCC 2010: International Workshop on Scalable Distributed Research for Grids, Clusters and Clouds, Moscow, Russia, 2010.
- Identified as a Leader in Engineering Education and selected to participate in the IUCEE 2010 Indo-US Faculty Leadership Institute, JUIT, July 12-16, 2010.
- Ministry of Human Resource Development (MHRD) Scholarship during M.Tech.
- Qualified Graduate Aptitude Test of Engineering (GATE - Instrumentation Engineering) in 2000.
- National Cadets Core - A, B, & C certificate holder.
- Invited to conduct 1st WORKSHOP DANoC 2015 for ESWEEK 2016
- Appointed as DEAN I/C JUIT Samirpur Campus
- First Doctoral Graduate of Uttarakhand Technical University, in the field of Computer Science and Engineering.
- Travelling Grant Award 2009 from Department of Science and Technology (DST), SERC Division, Government of India, New Delhi
- B.Tech. (Instrumentation Engineering) with Honors.
- Visiting Professor at Uttarakhand Technical University, 2010-Present.

PROFESSIONAL MEMBERSHIP:

- **Fellow- Institution of Engineer INDIA - F-1236888**
- **Senior Member IEEE - Institute of Electrical and Electronics Engineers - 90299603**
- **Senior Member ACM- Association for Computing Machinery- 9390077**
- **Member IEEE P2145 - Standard for Framework and Definitions for Blockchain Governance**
- **Member SIAM - Society for Industrial and Applied Mathematics - 001061532**
- **Member IEEE Computer Society**
- **Executive member IEEE Delhi Section (2017-2019)**
- **Member IAENG- International Association of Engineers - 100936**
- **Member CSI - Computer Society of India**

TEACHING:

- Advanced Computer Architecture (UG)
- Deep Learning (UG, PG)
- Internet of Things design and architecture
- Signals and Systems (UG)
- Digital Electronics Design (UG)
- Control System (PG)
- Digital Hardware Design using SystemC (UG,PG)
- Embedded Systems (UG, PG)
- System on Chips using ARM Processors (UG,PG)

- Microprocessor and Interfacing (UG)
- Object Oriented Programming
- Computer Organization
- ARM based Embedded System Design

INTERNATIONAL VISITS:

- **Innovative algorithms and techniques in automation, industrial electronics and telecommunication** Bridgeport University USA 2006.
- **International Conference on Computer Science and Applications (ICCSA), Clark Kerr Center, University of California, Berkeley, USA 2008.**
- **International Conference on Modelling & Simulation Cambridge University (Emmanuel College), UK 2009.**
- **Ultra-Modern Telecommunications and Control Systems, RUSSIA 2009.**
- **Computer Applications in Industry and Engineering (CAINE) 2013, Los Angeles, California, USA 2013.**