Prof. Dr. Ehsan Ullah Munir

- Senior Member IEEE
- Professor
  Department of Computer Science
  COMSATS University Islamabad
  Pakistan.
  Cell: +92-333-5428189, Email: ehsan@ciitwah.edu.pk
  ehsanmunnir@gmail.com

Research Interests

- Parallel and Distributed Computing Systems (Cluster, Grid, Cloud, and Peer-to-Peer systems)
- Computer Networks
- Operating Systems
- Information Retrieval

Qualifications

Degree	Year of Award	Field/ Subject	University/ Institute	
			Name	Country
PhD	2008	Computer Science	Harbin Institute of Technology	China
MCS	2001	Computer Science	University of Arid Agriculture Rawalpindi	Pakistan
BSc	1998	Math A, Math B, Physics	University of Punjab	Pakistan

PhD Thesis

"Heuristic Methods for Task Scheduling in Heterogeneous Computing Environments" Supervised by Prof. Dr. Jianzhong Li, Chairman, Department of Computer Science and Engineering, Director, Data and Knowledge Engineering Research Center, Harbin Institute of Technology, Harbin China.

Research Funding/Research Projects

S#	Title of Research Project	Funding Agency	Funding Amount (PKR)	Designation in Project (PI/Co-PI)	
				PI	**Co-PI**
1	Sensing, ArtiFicial intelligence, and Edge networking towardsRural Health monitoring (SAFERural-Health)	Erasmus+	2,64,93,843	√	
2	Buffer Management Policies for DTN Routing Protocol under resource scarce Environment	HEC	463,500		√
3	A framework for optimizing energy in the execution of data-intensive applications in heterogeneous computing systems.	HEC	362,800		√
4	Stopping the data theft: Tracing the Guilty Agent	HEC	468,000		√

Publications

Impact Factor =   110.48
Citations [Google scholar] =   1459
H-Index [Google scholar] =   21
I-10 Index [Google scholar] =   37

Journal Publications

1. Samia Ijaz, Saima Gulzar Ahmad, Kashif Ayyub, **Ehsan Ullah Munir**, Naeem Ramzan. Energy-efficient time and cost constraint scheduling algorithm using improved multi-objective differential evolution in fog computing, The Journal of Supercomputing (JSC), 2024, p 81-116 (Journal indexed by **SCI, Impact Factor 2.5,** ISSN 0920-8542)

2. Ahmad Hassan, Saima Gulzar Ahmad, **Ehsan Ullah Munir**, Imtiaz Ali Khan, Naeem Ramzan, Predictive modelling and identification of key risk factors for stroke using machine learning, Scientific Reports, 14:11498, 2024. (Journal indexed by **SCI, Impact Factor 3.8** ISSN 2045-2322)

3. Muzamil Ahmed, Hikmat Ullah Khan, **Ehsan Ullah Munir**. Conversational AI: An Explication of Few-Shot Learning Problem in Transformers-Based Chatbot Systems.

IEEE TRANSACTIONS ON COMPUTATIONAL SOCIAL SYSTEMS, 2023, (Journal indexed by **SCI, Impact Factor 4.747**, ISSN 2329-924X))

4. Muhammad Bilal, **Ehsan Ullah Munir**, Ata Ullah, BEMD: Beacon-oriented Emergency Message Dissemination scheme for highways, Ad Hoc Networks 2023, 142 (Journal indexed by **SCI, Impact Factor 4.816**, ISSN 1570-8705)

5. Saima Gulzar Ahmad, Tassawar Iqbal, **Ehsan Ullah Munir**, Naeem Ramzan, Cost optimization in cloud environment based on task deadline, Journal of Cloud Computing 2023, 12:9 (Journal indexed by **SCI, Impact Factor 3.895**, ISSN 2192-113X)

6. Muhammad Bilal, **Ehsan Ullah Munir**, Fawaz Khaled Alfaraj, Hybrid Clustering and Routing Algorithm with Threshold-based Data Collection for Heterogeneous Wireless Sensor Networks, Sensors 2022, 22, 5471 (Journal indexed by **SCI, Impact Factor 3.847**, ISSN 1424-8220)

7. Saima Gulzar Ahmad, Tassawar Iqbal, Anam Javaid, **Ehsan Ullah Munir**, Nasira Kirn, Sana Ullah Jan, Naeem Ramzan, Sensing and Artificial Intelligent Maternal-Infant Health Care Systems: A Review, Sensors 2022, 22, 4362 (Journal indexed by **SCI, Impact Factor 3.847**, ISSN 1424-8220)

8. Kashif Ayyub, Saqib Iqbal, Muhammad Wasif Nisar, **Ehsan Ullah Munir**, Fawaz Khaled Alarfaj, and Naif Almusalla, A Feature-Based Approach for Sentiment Quantification Using Machine Learning, Electronics, 2022, 11, 846, (Journal indexed by **SCI, Impact Factor 2.690**, ISSN 2079-9292)

9. Samia Ijaz, **Ehsan Ullah Munir**, Saima Gulzar Ahmad, M. Mustafa Rafique, and Omer F. Rana, Energy-makespan optimization of workflow scheduling in fog–cloud computing, Computing, 2021, (Journal indexed by **SCI, Impact Factor 2.044**, ISSN 0010-485X)

10. Anam Javaid, Asma Rafiq, Maaz Rehan, M. Mustafa Rafique, M. Kamran, and **Ehsan Ullah Munir**, Clustering-cum-Handover Management Scheme for improved Internet access in high-density mobile wireless environments, Sustainable Computing: Informatics and Systems (SUSCOM), 2021, 30 (Journal indexed by **SCI, Impact Factor 2.798**, ISSN 2210-5379)

11. Kashif Ayyub, Saqib Iqbal, Muhammad Wasif Nisar, Saima Gulzar Ahmad, **Ehsan Ullah Munir**, Stance Detection using Diverse Feature Sets based on Machine Learning Techniques, Journal of Intelligent & Fuzzy Systems, 2021 (Journal indexed by **SCI, Impact Factor 1.851**, ISSN 1875-8967)

12. Anum Masood, Saima Gulzar Ahmad, Hikmat Ullah Khan, **Ehsan Ullah Munir**. Network Reconfiguration Algorithm (NRA) for scheduling communication-intensive graphs in heterogeneous computing environment. Cluster Computing, 2020, 23(2), p 1419-1438 (Journal indexed by **SCI, Impact Factor 3.548,** ISSN 1386-7857)

13. Saima Gulzar Ahmad, Hikmat Ullah Khan, Samia Ijaz, **Ehsan Ullah Munir**. Use case‑based evaluation of workflow optimization strategy in real‑time computation system. The Journal of Supercomputing (JSC), 2020, p 708-725 (Journal indexed by **SCI, Impact Factor 2.469,** ISSN 0920-8542)

14. Kashif Ayyub, Saqib Iqbal, **Ehsan Ullah Munir**, Muhammad Wasif Nisar, Momna Abbasi: Exploring Diverse Features for Sentiment Quantification Using Machine Learning Algorithms. IEEE Access, 2020, p 142819-142831 19596 (Journal indexed by **SCI, Impact Factor 3.745**, ISSN 0929-6212).

15. Israr Haneef, Rao Muhammad Adeel Nawab, **Ehsan Ullah Munir**, Imran Sarwar Bajwa. Design and Development of a Large Cross-Lingual Plagiarism Corpus for Urdu-English Language Pair. Scientific Programming, 2019, p 1-11 (Journal indexed by **SCI, Impact Factor 0.963,** ISSN 1058-9244)

16. Samia Ijaz, **Ehsan Ullah Munir**. MOPT: list-based heuristic for scheduling workflows in cloud environment. The Journal of Supercomputing (JSC), 2019, p 3740-3768 (Journal indexed by **SCI, Impact Factor 2.469,** ISSN 0920-8542)

17. Muhammad Sharif, Uroosha Tanvir, **Ehsan Ullah Munir**, Muhammad Attique Khan, Mussarat Yasmin. Brain tumor segmentation and classification by improved binomial thresholding and multi-features selection. Journal of Ambient Intelligence and Humanized Computing, 2019, p 1-20 (Journal indexed by **SCI, Impact Factor 4.594,** ISSN 1868-5137)

18. Shehroz Riaz, Maaz Rehan, Tariq Umer, Muhammad Khalil Afzal, Waqas Rehan, **Ehsan Ullah Munir**, Tassawar Iqbal. FRP: A novel fast rerouting protocol with multi-link-

failure recovery for mission-critical WSN. Future Generation Computer Systems, 2018, 89, p 148-165 (Journal indexed by **SCI, Impact Factor 6.1,** ISSN 0167-739X)

19. Muhammad Asad, Muhammad Aslam, Naeem Ayoub, Khalid Ibrahim Qureshi, **Ehsan Ullah Munir**, Yao Nianmin. IOT Enabled Adaptive Clustering Based Energy Efficient Routing Protocol For Wireless Sensor Networks. International Journal of Ad Hoc and Ubiquitous Computing, 2019, (Journal indexed by **SCI, Impact Factor 0.714,** ISSN 1743-8225)

20. Abubakker Usman Akram, Hikmat Ullah Khan, Saqib Iqbal, Tassawar Iqbal, **Ehsan Ullah Munir,** Muhammad Shafi. Finding Rotten Eggs: A Review Spam Detection Model using Diverse Feature Sets. KSII Transactions on Internet and Information Systems, 2018, 12(10), p 5120-5142 (Journal indexed by **SCI, Impact Factor 0.648,** ISSN 1976-7277**)**

21. Muhammad Farooq, Hikmat Ullah Khan, Saqib Iqbal, **Ehsan Ullah Munir**, Ajmal Shahzad. DS-Index: Ranking Authors Distinctively in an Academic Network, IEEE Access, 2017, 5 (1), p 19588-19596 (Journal indexed by **SCI, Impact Factor 3.745**, ISSN 0929-6212).

22. Tariq Umer, Muhammad Khalil Afzal, **Ehsan Ullah Munir**, and Muhammad Alam. A Dual Ring Connectivity Model for VANET Under Heterogeneous Traffic Flow, Wireless Personal Communications (WPC), 2018, 98 (1)p 105-118 (Journal indexed by **SCI, Impact Factor 1.061**, ISSN 0929-6212)

23. Saima Gulzar Ahmad, Chee Sun Liew, M. Mustafa Rafique, and **Ehsan Ullah Munir**. Optimization of data-intensive workflows in stream-based data processing models, The Journal of Supercomputing (JSC), 2017, 87, p 1–23 (Journal indexed by **SCI, Impact Factor 2.469**, ISSN 0920-8542)

24. Saman Iftikhar, Muhammad Kamran, **Ehsan Ullah Munir**, and Samee U. Khan. A Reversible Watermarking Technique for Social Networks Datasets for Enabling Data Trust in Cyber, Physical and Social Computing. IEEE Systems Journal (ISJ), 2017, 11 (1), p 197-206 (Journal indexed by **SCI, Impact Factor 3.987**, ISSN 1932-8184)

25. Muhammad Aslam, Fan Wang, Xiaopeng Hu, Muhammad Asad and **Ehsan Ullah Munir**. MHMLC: Multi-Hoping Multi Level Clustering Heterogeneity-sensitive

Optimized Routing Protocol for Wireless Sensor Networks, Journal of Sensors, 2017, p 1-14 (Journal indexed by **SCI, Impact Factor 1.595**, ISSN 2210-5379)

26. Muhammad Kamran, and **Ehsan Ullah Munir**. On the Role of Optimization Algorithms in Ownership-Preserving Data Mining. Frontiers of Information Technology & Electronic Engineering, 2018, 19 (2), p. 151-164 (Journal indexed by **SCI, Impact Factor 1.604**, ISSN 2095-9184)

27. Saima Gulzar Ahmad, Chee Sun Liew, **Ehsan Ullah Munir**, Tan Fong Ang, and Samee U. Khan, A Hybrid Genetic Algorithm for Optimization of Scheduling Workflow Applications in Heterogeneous Computing Systems, Journal of Parallel and Distributed Computing (JPDC), 2016, 87, p 80–90 (Journal indexed by **SCI, Impact Factor 2.296**, ISSN 0743-7315)

28. Muhammad Aslam, **Ehsan Ullah Munir**, M. Mustafa Rafique, and Xiaopeng Hu, Adaptive Energy-Efficient Clustering Path Planning Routing Protocols for Heterogeneous Wireless Sensor Networks, Sustainable Computing : Informatics and Systems (SUSCOM), 2016, 12, p 57–71 (Journal indexed by **SCI, Impact Factor 2.798**, ISSN 2210-5379)

29. Asma Rafiq, **Ehsan Ullah Munir**, and M. Mustafa Rafique. Eliminating the State of Ping-Pong for Mobile IP Optimization. Wireless Personal Communications (WPC), 84 (4), 2015, p 2975-2988 (Journal indexed by **SCI, Impact Factor 1.061**, ISSN 0929-6212)

30. **Ehsan Ullah Munir**, Samia Ijaz, Sheraz Anjum, Ali Khan, Waqas Anwar and Wasif Nisar. Novel Approaches for Scheduling Task Graphs in Heterogeneous Distributed Computing Environment. The International Arab Journal of Information Technology (IAJIT), 2015, 13 (2), p 270-277 (Journal indexed by **SCI, Impact Factor 0.724,** ISSN 1683-3198)

31. Waqar Mehmood, Nadir Shah, Zahoo-ud-din, and **Ehsan Ullah Munir**. Fine-Granular Model Diff Solution For Model-Based Software Configuration Management. Malaysian Journal of Computer Science (MJCS), 2015, 28 (2), p 152-165 (Journal indexed by **SCI, Impact Factor 0.72**, ISSN 0127-9084)

32. **Ehsan Ullah Munir**, Jianzhong Li, Shengfei Shi, Zhaonian Zou and Qaisar Rasool. A New Heuristic for Task Scheduling in Heterogeneous Computing Environment.

Journal of Zhejiang University SCIENCE A, 2008, 9 (12), p 1715-1723. (Journal indexed by **SCI, Impact Factor 1.49,** ISSN 1673-565X).

33. Samia Ijaz, **Ehsan Ullah Munir**, Muhammad Wasif Nisar and Muhammd Waqas Anwar. Efficient Scheduling Strategy for Task Graphs in Heterogeneous Computing Environment. The International Arab Journal of Information Technology (IAJIT), 2013, 10 (5), p 486-492 (Journal indexed by **SCI, Impact Factor 0. 724,** ISSN 1683-3198)

34. Israr Haneef, **Ehsan Ullah Munir**, Ghazia Qaiser, Hafiz Gulfam Ahmad Umar. Big Data Retrieval: Taxonomy, Techniques and Feature Analysis. International Journal of Computer Science and Network Security (IJCSNS), 2018, 18 (11) (Journal indexed by **ISI** ISSN 1738-7906)

35. **Ehsan Ullah Munir**, Sheraz Anjum, Muhammad Wasif Nisar, Muhammd Waqas Anwar and Kashif Ayyub. Comparative Study on Performance of Scheduling Heuristics in Heterogeneous Computing Environment. Pakistan Journal of Life and Social Sciences 2011, 9 (1), p 70-79. (Journal indexed by **ISI** ISSN 1727-4915)

36. **Ehsan Ullah Munir**, Jianzhong Li and Shengfei Shi. QoS Sufferage Heuristic for Independent Task Scheduling in Grid. Information Technology Journal 2007, 6 (8), p 1166-1170. (Journal indexed by **EI**).

37. **Ehsan Ullah Munir**, Jianzhong Li, Shengfei Shi, Zhaonian Zou and Donghua Yang. MaxStd: A Task Scheduling Heuristic for Heterogeneous Computing Environment. Information Technology Journal 2008, 7 (4), p 679-683. (Journal indexed by **EI**)

38. Qaisar Rasool, Jianzhong Li, Shuo Zhang, **Ehsan Ullah Munir** and George S. Oreku. On P2P and Hybrid Approaches for Replica Placement in Grid Environment. Information Technology Journal, 2008, 7(4):590-598. (Journal indexed by **EI**)

39. Qaisar Rasool, Jianzhong Li, George S. Oreku and **Ehsan Ullah Munir**. Fair-share Replication in Data Grid, Information Technology Journal 2008, 7 (5), p 776-782. (Journal indexed by **EI**)

40. Altaf Hussain, **Ehsan Ullah Munir**, Muhammad Wasif Nisar and Muhammd Waqas Anwar. Performance Analysis of Competing Tasks and Processors in Heterogeneous Earliest Finish Time Algorithm. World Applied Sciences Journal, 2011, 13 (8), p 1781-1786. (ISSN 1818-4952, Journal indexed by **ISI**)

41. Fareena Naz, Waqas Anwar, **Ehsan Ullah Munir**, Usama Ijaz Bajwa. Urdu Part of Speech Tagging using Transformation Based Error Driven Learning. World Applied Sciences Journal, 2012, 16 (3), p 437-448. (ISSN 1818-4952, Journal indexed by **ISI**)

42. Ali Nawaz Khan, Waqas Anwer, **Ehsan Ullah Munir**, Uzair Farooqi, Ayesha Khaliq "Handover Techniques in Mobile WiMAX Networks: Analysis and Comparison" Middle-East Journal of Scientific Research 15 (11): 1599-1605, 2013 (**Indexed by: ISI**)

43. Sheraz Anjum, **Ehsan Ullah Munir**, Waqas Anwar, Nadeem Javaid "Oriented Model for Evaluation of On-Chip Networks" Research Journal of Applied Sciences, Engineering and Technology, Vol. 5 , Issue: 02, PP:353-356, 2013 (**Indexed by: ISI, EI**)

44. Afsar Khan, Ali Nawaz Khan, Waqas Anwar, **Ehsan Ullah Munir** and Munal Akhtar "Weighted Energy Efficient Clustering Hierarchy for Multi-hop Communication in Wireless Sensor Networks", Journal of Basic and Applied Scientific Research. 2013 3(11): 71-79. (**Indexed by: ISI**)

45. Musawwer Khan, Wasif Nisar, **Ehsan Ullah Munir**, Waqas Anwar, Islam Ali "Development Strategies for a Reengineered Information System in Context of Legacy System" Research Journal of Applied Sciences, Engineering and Technology, Vol. 4 , Issue: 3, PP:178-185, 2012. (**Indexed by: ISI**)

46. Sheraz Anjum, Imran Ali Khan, Waqas Anwar, **Ehsan Ullah Munir**, Babar Nazir "A Scalable and Minimized Butterfly Fat Tree (SMBFT) Switching Network for On-Chip Communication" Research Journal of Applied Sciences, Engineering and Technology, Vol. 4 , Issue: 13, PP:1997-2002, 2012. **(Indexed by: ISI, EI)**

47. Waqas Ahmad, Wasif Nisar, **Ehsan Ullah Munir**, Waqas Anwar "Low profile MIMO Diversity Antenna with Multiple Feed" Journal of Basic and Applied Scientific Research, Vol.1, No.9, PP: 1084-1088, 2011 (**Indexed by: ISI**)

Conference Publications

1. Muhammad Qasim, Touseef Iqbal Bhatti, **Ehsan Ullah Munir**, Nikos Tziritas, Samee U. Khan, and Laurence T.Yang. Dynamic Mapping of Application Workflow in Heterogeneous Computing Environment. 31st IEEE International Parallel &

Distributed Processing Symposium (IPDPS 2017), Orlando, USA on May 29 – June 02, 2017.

2. Muhammad Fasih Akbar, **Ehsan Ullah Munir**, M. Mustafa Rafique, Zaki Malik, Samee U. Khan, and Laurence T. Yang. List-Based Task Scheduling for Cloud Computing. 12th IEEE International Conference on Green Computing and Communications (GreenCom), Chengdu, China, on December 16-19 2016.

3. Asma Rafiq, **Ehsan Ullah Munir**, M. Mustafa Rafique, and Samee U. Khan. A Consistent Approach Towards Clustering in Low Energy Adaptive Clustering Hierarchy Protocol. 12th IEEE International Symposium on High Capacity Optical Networks and Enabling Technologies (HONET), Islamabad, Pakistan, on 21-23 December 2015.

4. Israr Hanif, Adeel Nawab, Affifa Arbab, Huma Jamshed, Sara Riaz, and **Ehsan Ullah Munir**. Cross-Language Urdu-English (CLUE) Text Alignment Corpus. Notebook for PAN at CLEF 2015. CLEF (Working Notes) 2015, Toulouse, France, on 8-11 September 2015.

5. Anum Masood, **Ehsan Ullah Munir**, M. Mustafa Rafique, and Samee U. Khan. HETS: Heterogeneous Edge and Task Scheduling Algorithm for Heterogeneous Computing Systems. 17th IEEE International Conference on High Performance Computing and Communications (HPCC), New York, NY, USA, on 24-26 August 2015.

6. **Ehsan Ullah Munir**, Muhammad Aslam, Tauseef Shah, M. Mustafa Rafique. An Advanced Heterogeneity-aware Centralized Energy Efficient Clustering Routing Protocol for Wireless Sensor Networks. 5th IEEE International Green Computing Conference (IGCC 2014), Dallas, USA on 3-5 November, 2014.

7. Saima Gulzar Ahmad, Chee Sun Liew, M. Mustafa Rafique, **Ehsan Ullah Munir**, Samee U. Khan. Data-Intensive Workflow Optimization based on Application Task Graph Partitioning in Heterogeneous Computing Systems. 4th IEEE International Conference on Big Data and Cloud Computing (BDCloud), Sydney, Australia, on 3-5 December 2014.

8. Muhammad Aslam, **Ehsan Ullah Munir**, Muhammad Bilal, Muhammad Asad, Asad Ali, Tauseef Shah, and Syed Bilal. HADCC: Hybrid Advanced Distributed and Centralized Clustering Path Planning Algorithm for WSNs. IEEE 28th International

Conference on Advanced Information Networking and Applications (AINA 2014), British Columbia, Canada on May 13-16, 2014.

9. **Ehsan Ullah Munir**, Sajjad Mohsin, Altaf Hussain, Muhammad Wasif Nisar and Shoukat Ali. SDBATS: A Novel Algorithm for Task Scheduling in Heterogeneous Computing Systems. 27th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2013), Boston, USA on May 20-24, 2013. p. 43-53, 2013.

10. **Ehsan Ullah Munir**, Jianzhong Li, Shengfei Shi and Qaisar Rasool. Performance Analysis of Task Scheduling Heuristics in Grid. Proceedings of the Sixth International Conference on Machine Learning and Cybernetics (ICMLC 2007), Hong Kong, China. p. 3093-3098. (Indexed by **EI**)

11. **Ehsan Ullah Munir**, Jianzhong Li, Shengfei Shi, Zhaonian Zou, Qaisar Rasool. A Performance Study of Task Scheduling Heuristics in Heterogeneous Computing Environment. Modelling, Computation and Optimization in Information Systems and Management Sciences (MCO'08). Metz, France - Luxembourg. p. 220-229 (Published by **LNCS** and indexed by **EI**)

12. Qaisar Rasool, Jianzhong Li, George S. Oreku, **Ehsan Ullah Munir**, Donghua Yang. A Comparative Study of Replica Placement Strategies in Data Grids, APWeb/WAIM'07 Conference, DBMAN'07 Workshop, Huangshan, China LNCS, p.135-143, 2007. (Indexed by **EI**)

13. Qaisar Rasool, Jianzhong Li, **Ehsan Ullah Munir**, George S. Oreku. A Two Way Strategy for Replica Placement in Data Grid, WorldComp'08, International Conference on Grid Computing and Applications (GCA'08), Las Vegas, USA, 2008.

14. Saima Gulzar, **Ehsan Ullah Munir**, Muhammad Wasif Nisar. A Segmented Approach for DAG Scheduling in Heterogeneous Environment. International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT-11), Gwangju, Korea on 20-22 October 2011. p. 362-367, 2011.

15. Saima Gulzar, **Ehsan Ullah Munir**, Muhammad Wasif Nisar. PEGA: A Performance Effective Genetic Algorithm for Task Scheduling in Heterogeneous Systems. 14th IEEE International Conference on High Performance Computing and Communications (HPCC-2012), Liverpool, UK on June 25-27, 2012. p. 1083-1087, 2012.

Grants and Awards

- Travel grant from HEC to attend the 17th IEEE International Conference on High Performance Computing and Communications (HPCC), New York, NY, USA, on 24-26 August 2015, for oral presentation.
- Travel grant from HEC to attend the 5th IEEE International Green Computing Conference (IGCC 2014), Dallas, USA on 3-5 November 2014, for oral presentation.
- Travel grant from HEC to attend the 27th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2013), Boston, USA on May 20-24, 2013, for oral presentation.
- Travel grant from HEC to attend the 14th IEEE International Conference on High Performance Computing and Communications (HPCC-2012), Liverpool, UK, 2012
- Travel grant from HEC to attend International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT-11), Gwangju, Korea, 2011.

Experience

- **Professor**, Department of Computer Science at COMSATS University Islamabad. (**April 2024 to date**)
- **Professor / Chairman**, Department of Computer Science at COMSATS University Islamabad. (**April 2022 to March 2024**)
- **Associate Professor / Chairman**, Department of Computer Science at COMSATS University Islamabad. (**March 2021 to March 2022**)
- **Associate Professor**, Department of Computer Science at COMSATS University Islamabad, Wah Campus. (**December 2011 to March 2021**)
- **Research Focal Person (ORIC)**, Department of Computer Science at COMSATS University Islamabad, Wah Campus. (**February 2019 to August 2020**)
- **Graduate (PhD / MS) Program Coordinator**, Department of Computer Science at COMSATS University Islamabad, Wah Campus. (**February 2019 to date**)
- **Head**, Department of Computer Science at COMSATS Institute of Information Technology, Wah Cantt. (**January 2011 to January 2019**)
- **Assistant Professor** in Department of Computer Science at COMSATS Institute of Information Technology, Wah Cantt. (**October 2008 to December 2011**)

- o Teaching different Computer Science and Telecommunication Courses to BS (CS & TN) and MS (computer Science).
- o Member of Research & Development Group of the Department of Computer Science.
- o Chairman student project committee.
- **Lecturer** in Department of Computer Science at COMSATS Institute of Information Technology, Wah Cantt (**March 2002 to September 2004**).
  - o Taught different Computer Science Courses to undergraduate and graduate classes.
  - o Member of Research & Development Group of the Department of Computer Science.
  - o Member of Association of computing Machinery (ACM) USA.
  - o Counselor for Master Program Students of Computer Science.
  - o Managing the affairs of student Admissions.
- **Lecturer** in Computer Science Department at Scholars College Rawalpindi for one year. (**March 2001 to Feb 2002**).
  - o Taught different Computer Science Courses to undergraduate classes.
  - o Established and managed Network Lab of 50 computers.
  - o Imparted training to the Nominees of Government of the Punjab, Pakistan.

Graduate Students

PHD SUPERVISED

- Muhammad Bilal, "Emergency Message Dissemination and Delivery in Beacon-Oriented Vehicle-to-Vehicle Networks", COMSATS University Islamabad, Wah, Campus, Islamabad, Pakistan, 2023.
- Samia Ejaz, "Energy Efficient Workflow Scheduling in Fog-Enabled Cloud Environment", COMSATS University Islamabad, Wah, Campus, Islamabad, Pakistan, 2022.

- Israr Haneef, "Cross Language Information Retrieval (CLIR): An Ontology Oriented Approach", COMSATS University Islamabad, Wah, Campus, Islamabad, Pakistan, 2021.
- Kashif Ayyub, "Sentiment Quantification and Classification Based on Diverse Feature Sets Using Machine Learning", COMSATS University Islamabad, Wah, Campus, Islamabad, Pakistan, 2021, Co-Supervisor.
- Saima Gulzar, "Workflow Optimization in Distributed Computing Environment for Stream-Based Data Processing Model", University of Malaya – Malaysia, 2017, Co-Supervisor.

CURRENT STUDENTS
- Muhammad Hanif, PhD
- Muhammad Qasim, PhD
- Muhammad Kamran, PhD
- Muhammad Bilal, Ph.D
- Ghulam Yasin, Ph.D
- Nauman Naeem, MS
- Sehrish Javed, MS

MS THESIS
- Muhammad Hanif, "Self-Resilient Adaptive Machine Learning Model Using Blockchain for Active Malware Detection".
- Tashjia Anfal, "Prevention, Detection, and Cleaning of Poisoned Content in NDNBased Internet of Vehicles".
- Ashar Malik, "Performance Analysis of Listen Before Talk in Licensed Assisted Access".
- Touseef Iqbal Bhatti, "Dynamic Workflow Scheduling Algorithm in Cloud and Stream Based Computing Environment"
- Anam Javaid, Performance Optimization of Handover Decision for Dense Mobile Wireless Environment
- Muhammad Qasim, "Application Workflow Mapping Strategy in Heterogeneous and Stream Computing Environment"

- Muhammad Ibrahim, "Testbed for Detection and Prevention of Denial of Service (DoS) Attack in VoIP"
- Midhat Fatima, "Energy Aware Task Scheduling in Heterogeneous Computing Systems".
- Faisal Yousuf, "Envision Based Synthesized Workflow Scheduling Algorithm".
- Sumya Bibi, "Improving Network Performance using Mobile Data Offloading in Device-to-Device Communication Networks"
- Samia Zafar, "Optimizing Latency and Throughput of Data-intensive Application Workflows".
- Anum Masood, "Comprehensive Performance Analysis of Network Reconfiguration Techniques for Stream Computing Applications".
- Muhammad Bilal, "Threshold Based Hybrid Advanced Distributed and Centralized Clustering Path Planning Algorithm Protocol for Wireless Sensor Networks".
- Rehan Tariq, "Multiple QoS Based Scheduling In Heterogeneous and Parallel Computing Environment".
- Saima Gulzar Ahmad, "Evolution based Algorithms for DAGs Scheduling in Heterogeneous systems".
- Muhammad Asif Javaid, "Robust and Efficient Task Scheduling Strategies in Grid Computing Environment".
- Hameed Danish, "QoS aware resource allocation for heterogeneous distributed systems".
- Asma Rafiq, "Performance Optimization of Wi-Fi (802.11) in a Course of Handover".
- Altaf Hussain, "Scheduling Tasks with Precedence Constraints in Heterogeneous Computing Systems".
- Samia Ijaz, "Comparative Study of Resource Allocation Heuristics for Heterogeneous Computing Systems".

Supervised Undergraduate FYPs

BS PROJECTS (SELECTED)
- Areeba Naqvi, Ayesha Khatoon, "Smart Stick for Visually Impaired Person".

- Zubair Iqbal, Sanaullah, "Health Remote Monitoring Using Body Sensors".
- Shahmeer, Yahya Awan, "Data Stream Processing on Raspberry Pi Cluster using Hadoop".
- Ammar Afzal, Waqas Ali, "Data Intensive Task Scheduling using MapReduce".
- Salma Riaz, "FYP Evaluation System".
- Misbah Liaqat, Abdul Haseeb, "Divide and Rule Low Energy Adaptive Hierarchical Clustering Protocol for Wireless Sensor Networks".
- Sheikh Kamran Ahmad, Sheryar Kiani, "Social Multimedia Network in Campus: A Voice, Video Over Internet Protocol (VOIP) Application for LAN".
- Zeeshan Farooqi, Imran Younus, "Short Range Secured Communication System".
- Zeeshan Liaquat, Nabila Abid, "Traffic Engineering in MPBN".
- Muhammad Jamil, "Performance Modeling of LEACH protocol for Mobile Wireless Sensor Networks".
- Muhammad Umar Farooq, Muhammad Farooq Alam, "Improving end-to-end QoS in 802.11s based Mesh Networks".
- Shamsa Gilani, Anam Nazir, "Simulation of Hierarchical Model of Media Independent Information Service (MIIS)".

Professional Services

- HEC approved PhD supervisor
- Member National Computing Education Accreditation Council (NCEAC), HEC
- Member Organizing Committee, 3rd Vice Chancellors' Forum on Universities in the Islamic World
- Member Board of Studies and Auditor, Quality Enhancement Cell (QEC) Pakistan Institute of Engineering and Applied Sciences, Islamabad, Pakistan
- Member Postgraduate Studies Board, University of Engineering & Technology, Taxila, Pakistan
- Member Board of Studies Capital University of Science and Technology, Islamabad, Pakistan
- Member Board of Studies Bahauddin Zakariya University, Multan, Pakistan

- Auditor, Quality Enhancement Cell (QEC), University of Haripur

- Member National Curriculum Review Committee (NCRC), HEC

- Member Department Tenure Review Committee (DTRC), COMSATS University Islamabad

- External Examiner for PhD and MS Thesis

- Technical Program Committee Chair, Frontiers of Information Technology (FIT16-FIT24)

- Computer Science Track Co-chair, Frontiers of Information Technology (FIT15)

- Reviewer of Journal of Supercomputing

- Reviewer of Mobile Networks and Applications

- Reviewer of IEEE Access

- Member Organizing Committee, Frontiers of Information Technology (FIT15)

- Member Organizing Committee, Frontiers of Information Technology (FIT14)

- Session Co-chair of (HPCC12), 2012

- Session Co-chair of (FIT12), 2012

- Session Co-chair of (FIT11), 2011

- Session Co-chair of (FIT10), 2010

- Session Co-chair of (FIT09), 2009

- Session Co-chair of (FIT08), 2008

- Session Co-chair of CWRC, 2008

- Reviewer of Frontiers of Information Technology (FIT14), 2014

- Reviewer of Frontiers of Information Technology (FIT13), 2013

- Reviewer of Frontiers of Information Technology (FIT12), 2012

- Reviewer of The 15th International Multi Topic Conference (INMIC 2012)

- Reviewer of Frontiers of Information Technology (FIT11), 2011

- Reviewer of Frontiers of Information Technology (FIT10), 2010

- Reviewer of Conference on Computers & Industrial Engineering (CIE39), 2009

- Reviewer of Frontiers of Information Technology (FIT09), 2009

- Reviewer of Frontiers of Information Technology (FIT08), 2008

Languages

- Attended English Language course from British Council
- Good in spoken Chinese language