

Prof. Dr. Engr. Shahzad Sarwar**PhD Electrical Engineering and Information Technology****with distinction**; CGPA 4.0/4.0, 2008

Vienna University of Technology, Austria

QS World University Ranking: # 192

MS Computer Science, 2004

CGPA: 3.38/4.0,

Lahore University of Management Sciences (LUMS), Lahore, Pakistan

QS World University Ranking: # 651-700

BSc Civil Engineering, 1998**Second position** in the University, Marks: 3805/5000

University of Engineering and Technology (UET) Taxila, Pakistan

Contact InformationModern Networking Lab (MNL),
Punjab University College of
Information Technology (PUCIT),
University of the Punjab, Allama
Iqbal (old) Campus, The Mall
Road, Lahore

Tel. No.: +92-(0)323-4387997

(cell.) +92-(0)42-111-923-923

Ext. 113

E-mail: s.sarwar@pucit.edu.pk



Experience	16 Years
Dean	June 2021 – to date
Faculty of Computing & Information Technology, University of the Punjab, Lahore.	
Chairman	Jan 2021 – to date
Department of Computer Science, University of the Punjab, Lahore.	
Principal	Sep 2020 – Jan 2021
Punjab University College of Information Technology (PUCIT), University of the Punjab, Lahore.	
Professor	Aug 2020 – to date
Department of Computer Science, University of the Punjab, Lahore.	
Tenured Assistant Professor	Jan 2009 – Aug 2020
Punjab University College of Information Technology (PUCIT), University of the Punjab, Lahore, Pakistan	

Distinctions, Honors, and Awards

PhD with distinction, Performance Evaluation of Optical Burst-Switched (OBS) Networks, Em.O.Univ.Prof. Dipl.-Ing. Dr.techn. Harmen R. Van As, Vienna University of Technology, Austria.

QS World University Ranking: # 199

Certificate of Merit for securing 2nd position in Engineering, UET Taxila

Certificate of Merit, Hockey & Badminton, University of Engineering and Technology (UET) Taxila and LUMS.

Research-based Award, Received Honorarium, University of the Punjab, Lahore

Research-based Award, Received Performance-based Increment (PBI), Year 2017 and 2018, as well. University of the Punjab, Lahore

Higher Education Commission (HEC) Approved PhD Supervisor, since 2010

Supervised/graduated PhD Computer Science Student

Ranked in Top Ten Faculty Member in teaching, Student Evaluation at PUCIT, University of the Punjab, Lahore

Program Evaluator, National Computing Education Accreditation Council (NCEAC), HEC of Pakistan

PhD Scholarship, Higher Education Commission (HEC) of Pakistan Oversees Scholarship for Studying in Austria

Evaluator, Research Proposal under Asi@Connect project by Trans-Eurasia Information Network (TEIN), funded by the European Union

Research Interests:

Internet of Things (IoT), M2M Communications

Teaching	
Graduate Courses	
Communication Protocols and Internet Architecture	
Internet of Things (IoT)	
Machine-to-Machine Communications	(M2M)
Optical Burst Switched (OBS) Networks	
Topics in Internet Research	
Performance Modelling and Evaluation	
Under-graduate Courses	
Computer Networks	
Cryptography and Network Security	
Operating Systems	
Scholarship, Research, or other Creative Work	
Count of Publications	45
Impact Factor Score	37.90
Citation Count	300+
h-index	8
i10-index	4
Research Gate (RG) Score	18.46
RG Percentile	70
International Journal Publication with Impact Factor	18
International Journal Publication without Impact Factor	1
HEC Recognized Journal Publications	11
International Conference Publications	14
International Book Chapter	1
Research Projects (PI/Co-PI) (worth in PKR million)	140+
Supervision	28
PhD Computer Science	4
MPhil Computer Science	14
BS/MSc Computer Science	14

Teaching Interest

Graduate Level Courses		
Course Code	Course Title	Semester
CS-534	* Communication Protocols and Internet Architecture	Fall 2020, Fall 2019, Fall 2018, Fall 2017, Spring 2017
CS-531	* Internet of Things (IoT)	Spring 2021, Spring 2020, Spring 2019, Spring 2018, Fall 2016, Fall 2015
CS-533	* Machine-to-Machine (M2M) Communication	Spring 2016
CS-538	* Optical Burst Switched (OBS) Networks	Spring 2013
CS-537	* Optical Switching Technologies	Spring 2012, Fall 2009
CS-532	* Topics in Internet Research	Fall 2011, Fall 2010
CS-507	* Performance Modelling and Evaluation	Spring 2010
CS-7xx	**Machine Learning for Internet of Things (IoT)	Spring 2018

Under-graduate Level Courses		
Course Code	Course Title	Semester
IT-330	Data Communications and Computer Networks	Fall 2019, Fall 2018, Fall 2017, Fall 2016, Fall 2015, Fall 2013 ⁺ , Fall 2012 ⁺ , Fall 2011 ⁺ , Fall 2010 ⁺ , Fall 2009 ⁺
CMP-330	Computer Networks	Spring 2016, Spring 2014 ⁺ , Spring 2013 ⁺ , Spring 2012 ⁺ , Spring 2011 ⁺ , Spring 2010 ⁺
CMP-225	Operating Systems	Spring 2018, Spring 2017, Spring 2016
IT-431	*Cryptography and Network Security	Spring 2014

* Developed course

⁺ Two sections of the course

** Independent study course

Scholarship, Research, or other Creative Work

Publications

Public Profile

Google Scholar: <https://scholar.google.com/citations?user=RWNwEBLwAAAAAJ&hl=en>

ResearchGate: https://www.researchgate.net/profile/Dr_Shahzad_Sarwar

DBLP Computer Science Bibliography: <https://dblp.org/pers/hd/s/Sarwar:Shahzad>

ACM Digital Library: https://dl.acm.org/author_page.cfm?id=81466647148&coll=DL&dl=ACM&trk=0#

Sr. No.	International Journal Publication with Impact Factor	Impact Factor
1.	Madiha, K., Mujahid, U., Najam Ul Ismal, M., Sarwar, S., "Ultralightweight Resilient Mutual Authentication Protocol for IoT based Edge Networks" Journal of Ambient Intelligence and Humanized Computing, 2021. https://doi.org/10.1007/s12652-020-02732-2 ISSN: 1868-5145	4.594
2.	S. Sarwar, R. Sirhindi, L. Aslam, G. Mustafa, M. M. Yousaf and S. W. U. Q. Jaffry, "Reinforcement Based Adaptive Duty Cycling in LR-WPANs," in IEEE Access, vol. 8, pp. 161157 - 161174, 2020. https://doi.org/10.1109/ACCESS.2020.3021016 ISSN: 2169-3536	3.745
3.	M. Yasir, S., Sarwar <i>et al.</i> , "D-GENE: Deferring the GENeration of Power Sets for Discovering Frequent	3.745

	Itemsets in Sparse Big Data," in IEEE Access, vol. 8, pp. 27375-27392, 2020. https://doi.org/10.1109/ACCESS.2020.2971834 ISSN: 2169-3536	
4.	Yasir, M., Habib, M. A., Ashraf, M., Sarwar, S., Chaudhry, M. U., Shahwani, H., Ahmad, M., Faisal, C. M. N., "TRICE Mining Frequent Itemsets by Iterative TRimmed Transaction LattICE in Sparse Big data," <i>IEEE Access</i> , vol. 7, pp. 181688–181705, 2019. https://doi.org/10.1109/ACCESS.2019.2959878 ISSN: 2169-3536	3.745
5.	Rehman, F., Khalid, O., Haq, N., Maqsood, T., Ali, M., Ahmad, R. W., Shuja, J., Sarwar, S., Madani, S. A., "A scalable model for real-time venue recommendations using MapReduce," <i>Concurrency and Computation: Practice and Experience</i> , 2019. https://doi.org/10.1002/cpe.5597 ISSN: 1532-0634	1.167
6.	Mustafa, S., Sattar, K., Shuja, J., Sarwar, S., Maqsood, T., Madani, S. A., Guizani, S., "SLA-Aware Best Fit Decreasing Techniques for Workload Consolidation in Clouds," <i>IEEE Access</i> vol. 7, pp. 135256–135267, 2019. https://doi.org/10.1109/ACCESS.2019.2941145 ISSN: 2169-3536	3.745
7.	Habib, M. A., Faisal, C. M. N., Sarwar, S., Latif, M. A., Aadil, F., Ahmad, M., Ashraf, R., Maqsood, M., "Privacy-based medical data protection against internal security threats in heterogeneous Internet of Medical Things," <i>International Journal of Distributed Sensor Networks</i> , vol. 15, no. 9, pp. 1–12, 2019. https://doi.org/10.1177/1550147719875653 ISSN: 1550-1477	1.151
8.	Yasir, M., Habib, M. A., Sarwar, S., Faisal, C. M. N., Ahmad, M., Jabbar, S., "HARPP: HARnessing the Power of Power Sets for Mining Frequent Itemsets," <i>Information Technology and Control</i> , vol. 48, no. 3, pp. 415–431, 2019. https://doi.org/10.5755/j01.itc.48.3.21137 ISSN: 2335-884X	0.905
9.	Sadiq, M. U., Yousaf, M. M., Aslam, L., Aleem, M., Sarwar, S., Jaffry, S. W., "NvPD: novel parallel edit distance algorithm, correctness, and performance evaluation," <i>Cluster Computing</i> , pp. 1–16, 2019. https://doi.org/10.1007/s10586-019-02962-w ISSN: 1573-7543	1.851
10.	Mubashir, M. M., Jaffry, S. W., Yousaf, M. M., Bajwa, I. S., Sarwar, S., Aslam, L., "A Smart Integrated Environment for Vehicular Traffic Simulation," <i>International Journal of Communication Systems</i> , vol. 32, no. 13, pp. 1–22, 2019. https://doi.org/10.1002/dac.4029 ISSN: 1099-1131	1.278
11.	Ahmad, A., Ahmad, M., Habib, M. A., Sarwar, S., Chaudhry, J., Latif, M. A., Dar, S. H., Shahid, M., "Parallel query execution over encrypted data in database-as-a-service (DaaS)," <i>Journal of Supercomputing</i> , vol. 75, pp. 2269–2288, 2019. https://doi.org/10.1007/s11227-019-02831-8 ISSN: 1573-0484	2.157
12.	Afzal, A., Siddiqi, H. M., Sarwar, S., Rubab, Z., Mujahid, A., "Polymer-particulate composites with differential interfaces: synthesis, characterization, and mathematical modeling to evaluate interface-yield strength correlations" <i>Colloid and Polymer Science</i> , vol. 297, no. 4, pp. 545–556, 2019. https://doi.org/10.1007/s00396-019-04477-7 ISSN: 1435-1536	1.906
13.	Ali, J., Ahmad, R. W., Maqsood, T., Rodrigues, J. J. P. C., Haq, N. U., Sarwar, S., Iqbal, T., Madani, S. A., "Network selection in heterogeneous access networks simultaneously satisfying user profile and QoS," <i>International Journal of Communication Systems</i> , vol. 31, no. 13, pp. 1–16, 2018. https://doi.org/10.1002/dac.3730 ISSN: 1099-1131	1.278
14.	Goher, M., Khan, N., Ahmed, A., Islam, M. N., Sarwar, S., Koh, S. J., "Cluster-Based Device Mobility Management in Named Data Networking for Vehicular Networks," <i>Mobile Information Systems</i> , 2018. https://doi.org/10.1155/2018/1710591 ISSN: 1574-017X	1.635
15.	Ahmad, R. W., Shan, R. U., Khan, A. R., Bilal, K., Junaid, J., Sarwar, S., Altameem, T. A., Madani, S. A., "An Investigation of Video Communication over Bandwidth Limited Public Safety Network," <i>Malaysian Journal of Computer Science</i> , vol. 31, no. 2, pp. 85–107, 2018.	0.723

	https://doi.org/10.22452/mjcs.vol31no2.1 ISSN: 0127-9084	
16.	Mujahid, U., Islam, M. N. and Sarwar, S., "A New Ultralightweight RFID Authentication Protocol for Passive Low Cost Tags: KMAP," <i>Wireless Personal Communications</i> , vol. 94, no. 3, pp 725–744, 2017. https://doi.org/10.1155/2019/3295616 ISSN: 1572-834x	0.929
17.	Faisal, S., Sarwar, M., Shahzad, K., Sarwar, S., Jaffry, W., and Yousaf, M. M., "Temporal and Evolving Data Warehouse Design," <i>Scientific Programming</i> , vol. 2017, pp. 1–18, 2017. https://doi.org/10.1155/2017/7392349 ISSN: 1058-9244	1.289
18.	Shuja, J., Madani, S. A., Bilal, K., Hayat, K., Khan, S. U., and Sarwar, S., "Energy-efficient data centers," <i>Computing</i> , vol. 94, no. 12, 973–994, 2012. https://doi.org/10.1007/s00607-012-0211-2 ISSN: 1436-5057	2.063
International Journal Publication without Impact Factor		
19.	Sarwar, S., Aleksic, S., and Aziz, K., "Optical Burst Switched (OBS) systems with Segmentation-based Dropping," <i>e&i Elektrotechnik & Informationstechnik</i> , vol. 125, no. 7/8, pp. 296–300, 2008. https://doi.org/10.1007/s00502-008-0555-7 ISSN: 1613-7620	
HEC Recognized Journals Publications		HEC Category
20.	Aslam, L., Sarwar, S., Akram, A., Saeed, U., Irfan, Z., "Dynamic Length Based Data Aggregation in Machine Type Communications," <i>Sindh University Research Journal (SURJ)</i> , vol. 52, no. 3, pp. 273–278, 2020. ISSN 1813-1743	Y
21.	Aslam, L., Sarwar, S., Yousaf, M. M., Jaffry, S. W., "Computational Complexity of the Cycle Discrepancy," <i>Sindh University Research Journal (SURJ)</i> , vol. 50, no. 4, pp. 537–540, 2018. ISSN 1813-1743	Y
22.	Ahmad, A., Yousaf, M. M., Sarwar, S., Jaffry, S. W., Aslam, L., Khalid, M., "Optimized Scheduling for Parallel Computing Environment," <i>Sindh University Research Journal (SURJ)</i> , vol 50, no. 2, pp. 295–302, 2018. ISSN 1813-1743	Y
23.	Aslam, L., Sarwar, S., Yousaf, M. M., Jaffry, S. W., "Cycle Discrepancy of Cubic Toeplitz Graphs," <i>Pakistan Journal of Engineering and Applied Sciences</i> , vol. 22, no. 1, pp. 14–19, 2018. https://journal.uet.edu.pk/ojs_old/index.php/pjeas/article/view/1152/280 ISSN: 1995-1302	X
24.	Yousaf, M. M., Sadiq, M. U., Aslam, L., Jaffry, S. W., Sarwar, S., "A Novel Parallel Algorithm for Edit Distance Computation," <i>Mehran University Research Journal of Engineering & Technology</i> , vol. 37, no. 1, pp. 223–232, 2018. https://hal.archives-ouvertes.fr/hal-01676728/ ISSN: 2413-7219	X
25.	Latif, I., Jaffry, S. W., Aslam, L., Sarwar, S., Yousaf, M. M. "Framework for Evaluating Credibility of External Links in Wikipedia," <i>Bahria University Journal of Information & Communication Technology</i> , vol. 10, no. 1, 2017. https://www.bahria.edu.pk/ojs/index.php/bujict/article/view/43 ISSN: 1999-4974	Y
26.	Sarwar, S., Zeeshan, F., Aslam, L., Yousaf, M. M., Jaffry, S. W. "Novel Composite Burst Assembly for OBS-Networks," <i>Sindh University Research Journal (SURJ)</i> , vol 49, no. 4, pp. 773–778, 2017. ISSN: 1813-1743	X
27.	Sarwar, S., Khalid, H., Aslam, L., Jaffry, S. W., Yousaf, M. M., "Analytical Model of Delayed Server System (DSS) for Energy Conservation," <i>Sindh University Research Journal (SURJ)</i> , vol 49, no. 3, pp. 529–534, 2017. http://faculty.pucit.edu.pk/swjaffry/rpr/SURJ17EnergyConservation.pdf	X

	ISSN 1813-1743	
28.	Junaid, S. M., Jaffry, S. W., Yousaf, M. M., Aslam, L., and Sarwar, S. , "Sentiment Analysis and Opinion Mining – A Facebook Posts and Comments Analyzer," <i>Technical Journal UET Taxila</i> , vol. 22, no. 2, pp. 98–104, 2017. http://faculty.pucit.edu.pk/swjaffry/rpr/TJ17SentimentAnalysis.pdf ISSN: 1813-1786	Y
29.	Ahmad S., Yousaf, M. M., Jaffry, S. W., Sarwar, S. , and Aslam, L., "Comparison of Resource Management Frameworks for Processing Big Data," <i>Bahria University Journal of Information & Communication Technology</i> , vol. 9, no. 2, pp. 34–38, 2016. https://bujict.bahria.edu.pk/2016-26-comparison-of-resource-management-frameworks-for-processing-big-data/ ISSN: 1999-4974	Y
30.	Aslam, L., Sarwar, S. , Yousaf, M. M., and Qounain, W. U., "Cycle Discrepancy of d-Colorable Graphs," <i>Pakistan Journal of Engineering and Applied Sciences</i> , vol. 18, no. 1, pp. 50–55, 2016. https://journal.uet.edu.pk/ojs_old/index.php/pjeas/article/view/88 ISSN: 1995-1302	X
International Conference Publications		
31.	H. U. Rahman, M. A. Habib, S. Sarwar, N. Mahmood, M. Ahmad and H. Ahmad, "Fundamental Issues of Future Internet of Things," 2020 International Conference on Engineering and Emerging Technologies (ICEET), Lahore, Pakistan, 2020, pp. 1-6. https://doi.org/10.1109/ICEET48479.2020.9048199	
32.	Sarwar, S. , Rauf, S., Rasheed, R., Aslam, L., Energy-aware Routing in Internet of Things (IoT), <i>2nd International Conference on Communication, Computing and Digital Systems (C-CODE' 19)</i> , pp. 81–86, 2019. https://doi.org/10.1109/C-CODE.2019.8680974	
33.	Sarwar, S. , Rasheed, R., Tariq, A., Aslam, L., Importance of Trickle Algorithm in IoT, <i>2nd International Conference on Communication, Computing and Digital Systems (C-CODE' 19)</i> , pp. 87–91, 2019. https://doi.org/10.1109/C-CODE.2019.8680997	
34.	Aslam, S., Farooq, F., and Sarwar, S. , Power Consumption in Wireless Sensor Networks (WSNs), <i>7th International Conference on the Frontiers of Information Technology (FIT 2009)</i> , 2009.	
35.	Farooq, F., Aslam, S., and Sarwar, S. , QoS-Based MPLS Multicast Tree-Selection Algorithms, <i>7th International Conference on the Frontiers of Information Technology (FIT 2009)</i> , 2009.	
36.	Sarwar, S. , Wallentin, L., Gerald, F., and van As, H. R., Composite Burst Assembly with High-Priority in the Middle of Burst, In Proceedings of <i>The 5th International Conference on Broadband Communications, Networks, and Systems (Broadnets 2008)</i> , London, UK, 2008. https://doi.org/10.1109/BROADNETS.2008.4769058	
37.	Sarwar, S. , Wallentin, L., Gerald, F., and van As, H. R., Segmentation-based Dropping of Composite Burst for Contention Resolution in an Optical Burst Switched Network, <i>13th European Conference on Networks and Optical Communications (NOC 2008)</i> , Krems, Austria, 2008.	
38.	Gerald, F., Aleksic, S., Statovci-Halimi, B., and Sarwar, S. , Quality of Transmission Management in Dynamically Routed All-Optical Networks <i>13th European Conference on Networks and Optical Communications (NOC 2008)</i> , Krems, Austria, 2008.	
39.	Aziz, K., Sarwar, S. , and Aleksic, S., Dimensioning an Optical Packet/Burst Switch – More Interconnections or More Delay Lines?, <i>12th Conference on Optical Network Design and Modelling (ONDM 2008)</i> , 2008. http://doi.org/10.1109/ONDM.2008.4578388	
40.	Sarwar, S. , van As, H. R., and Aziz, K., On a Cut-Off Threshold Delay-Loss System with N Types of Traffic for Overload Protection, In Proceedings of <i>The 11th IEEE International Multi-topic Conference (INMIC 2007)</i> , 2007. https://doi.org/10.1109/INMIC.2007.4557707	
41.	Aziz, K., van As, H. R., and Sarwar, S. , Performance of Non-exhaustive Cyclic Service Systems with Finite Queues and Non-zero Switchover Times, In Proceedings of <i>The 11th IEEE International Multi-topic Conference (INMIC 2007)</i> , 2007. https://doi.org/10.1109/INMIC.2007.4557709	

42.	Sarwar, S. , van As, H. R., and Aziz, K., Overload Protection in Packet Communication Systems, In Proceedings of The 5 th International Conference on the Frontiers of Information Technology (FIT 2007), 2007.
43.	Aziz, K., van As, H. R., and Sarwar, S. , Switchover Times in Optical Communication System-Can They Always be Ignored?, The 4 th International Symposium on High-Capacity Optical Networks and Enabling Technologies (HONET 2007), 2007. https://doi.org/ 10.1109/HONET.2007.4600252
44.	Aziz, K., Sarwar, S. , and Aleksic, S., Analytical Model for Performance Evaluation of a Novel Optical Packet/Burst Switch, In Proceedings of 9 th International Conference on Transparent Optical Networks (ICTON 2007), 2007. https://doi.org/ 10.1109/ICTON.2007.4296349
Book Chapter	
45.	Madani, S., Khattak, S., Jadoon, T., Sarwar, S. , Wireless Ad-hoc Networks, IEEE Industrial Electronics Society, Industrial Electronics Handbook, 2 nd Edition, CRC Press, Taylor and Francis Group, ISBN: 978-1439802816, 2011.

Research Funding

Sr. No.	Projects Title	Role: Principal / Co-Principal Investigator	Amount: PKR Million	Partners	Sponsoring Agency
Successful Proposals					
1.	Design and Evaluation of Capillary Networks Random Access Mechanisms in Cellular Networks, 2019	Principal Investigator (PI)	3.3		National Research Program for Universities (NRPU) Project, Higher Education Commission (HEC) of Pakistan, Islamabad
2.	Establishment of National Center for Artificial Intelligence (NCAI), 2018	Co-Principal Investigator (Co-PI)	97.705	NUST, CIIT, UET Lahore, UET Peshawar, NED	Higher Education Commission (HEC) of Pakistan, Islamabad
3.	Flexible Software Defined Monitoring & Controlling of Facility Utilities (FSDMCFU), 2018	Principal Investigator (PI)	0.0568	Ignite - National Grassroots ICT Research Initiative (NGIRI)	
4.	Analytical Model of Delayed Server System (DSS) for Energy Conservation, 2017	Principal Investigator (PI)	0.15		University of the Punjab, Lahore
5.	Boot Camp Program, 2011	Project Director	3.31		Punjab Information and Technology Board (PITB)
6.	Power-Aware Schemes for Wireless Sensor Networks, 2011	Principal Investigator (PI)	0.15		University of the Punjab, Lahore

7.	Integration of Open Source Software Projects in IT Education, 2009	Co-Principal Investigator (Co-PI)	37.63	FAST Lahore, Virtual University	National ICT R&D Fund, Pakistan
Submitted Research Proposals (under review)					
8.	Strengthening Internet of Things (IoT) Laboratory, 2017	Principal Investigator (PI)	2.93		Institutional Strengthening Grant for Upgrading Laboratories and Libraries (ISULL), Higher Education Commission (HEC) of Pakistan
9.	Design of Integrated Environment for Vehicular Traffic Simulation Experiments, 2017	Principal Investigator (PI)	3.0		Punjab Higher Education Commission (PHEC)
Prepared/Designed Proposals					
10.	Establishment of National Center for Robotics and Automation (NCRA), 2018	Principal Investigator (PI)	1000+	NTU, QAU, MUET	Higher Education Commission (HEC) of Pakistan, Islamabad
11.	A Business Process Model Repository for Admissions Counseling, 2016	Co-Principal Investigator (Co-PI)	8.936		National Research Program for Universities (NRPU) Project, Higher Education Commission (HEC) of Pakistan, Islamabad
12.	Center of Innovation (COI) of Telecommunications, 2012	Co-Principal Investigator (Co-PI)	14.927	LUMS, Confiz Solution (Pvt) Limited, CloudBPO Ltd	National ICT R&D Fund, Pakistan

Research/Project Supervision

Sr. No.	Thesis/Project Title	Student Name	Student ID	Status
PhD Theses Supervision				
1.	An Efficient and Scalable Technique to Mine Association Rules in Large Databases, 2020	Muhammad Yasir	14-NTU-705	Graduated
2.	Cycle Discrepancy of Graphs, 2017	Laeq Aslam	PHDCSF10M007	Graduated
3.	Quality-of-Service (QoS) Mechanisms for Internet of Things (IoT), 2017	Rashid Rasheed	PHDCSF15M506	Synopsis is approved
4.	Energy Efficient Internet of Things (IoT)	Habib Ur Rehman	16-NTU-7004	Synopsis in approved, National Textile University (NTU), Faisalabad
MPhil Theses Supervision				
1.	Cellular Networks Medium Access Control for Machine Type Communication (MTC), 2020	Abdullah Tariq	MSCSF16M010	Completed
2.	Vehicle Routing Problem, 2020	Mariha Asad	MSCSF16M013	

3.	Routing in Internet of Things (IoT), 2018	Sammia Rauf	MSCSF16M025		
4.	Energy Conservation by Limited Servers, 2017	Hafsa Khalid	MSCSF14M027		
5.	Quality-of-Service (QoS) in Optical Burst Switched (OBS) Networks, 2017	Zakir Ali	MSCSF16M025		
6.	Congestion Avoidance via Cross Layer Design, 2014	Mehroze Yaqoob	MSCSF11M012		
7.	Tri-coloring of Trees, 2014	Sohaib Nawaz	MSCSF12M011		
8.	Performance Modelling of Overload Protection Systems, 2011	Neelofer Nazish	MSCSF10M010		
9.	Performance Evaluation of Signalling Schemes for Flow Transfer Mode (FTM), 2010	Muhammad Farooq	MSCSF07M007		
10.	Improving Efficiency of CBR-based Autonomic Systems, 2010	Saadia Nasir	MSCSF07M006		
11.	Optimization of Routing Protocol in Internet of Things (IoT), 2019	Shamim Khanum	MSCSF17M039		
12.	A Framework Model for Improvement in Education, 2016	Hassan Waseem	MSCSF14M026		
13.	Energy Efficient Load Balancing Objective Function for RPL	Rozina Asghar	MSCSF18M034		
14.	Industrial Internet of Things (IIoT)	Rabia Zareen	MSCSF18M029		
15.	Avionics Predictive Maintenance	Muhmmad Bilal	PHDCSF20M501		Thesis in progress
16.	Dynamic Length Based Data Aggregation in Machine Type Communication, 2019	Usra Saeed	MSCSF16M025		
17.	Performance Evaluation of Routing in Internet of Things (IoT)	Abuzar Mehdi Naqvi	MSCSF18Mxxx		
BS/MSc Project Supervision					
1.	On Vehicle Measurements of Driver Distraction			Completed	
2.	Real-time Analytics for Building Utilities Management (RABUM)				
3.	Advanced Driver Assistant System				
4.	WiFi Fingerprinting for Indoor Navigation				
5.	Dual Overload Protection System				
6.	Buy Best				
7.	Check Market Rates				
8.	Original No Original				
9.	Technical Text Surfer				
10.	Enhanced Learning System				
11.	Health and Care				

12.	ASAN Safar Web Portal	
13.	Campus Management System (CMS) Messaging Service	
14.	24/7 Finance Manager	

Professional Services

Invited/Plenary Talks	
•	Knowledge-based Economy Stands on the Shoulders of Internet of Things (IoT), Big Data, and Deep Learning?, International Conference on Science, Engineering and Technology (ICSET-2021), March 18, 2021.
•	IETF Protocol Stack of Internet of Things (IoT), 3 rd National Conference on Computer Science & Information Technology, Lahore Garrison University, April 24 – 25, 2019.
•	Research Trend in IoT, 2 nd International Conference on Communication, Computing and Digital Systems (C-CODE' 19), Bahria University Islamabad, March 6 – 7, 2019.

Membership of Learned Societies	
1.	Institute of Electrical and Electronics Engineers (IEEE)
2.	IEEE Communication Society
3.	Institute of Computer Sciences, Social Informatics, and Telecommunications Engineering (ICST)
4.	Pakistan Engineering Council (PEC)
5.	Pakistan Engineering Congress

Reviewership of Journals and Conferences		
1.	Journal of Computer Networks and Communications, since 2020	Reviewer
2.	International Journal of Communication Systems (IJCS), since 2019	
3.	IEEE Access, since 2018	
4.	Journal of Ambient Intelligence and Humanized Computing, Springer, since 2018	
5.	Optics Communications, Elsevier, since 2016	
6.	13 th International Conference on Open Source System and Technologies (IEEE ICOSST-2019)	Member, Technical Program Committee (TPC)
7.	2 nd International Conference on Advancements in Computational Sciences (ICACS 2019)	
8.	12 th International Conference on Open Source System and Technologies (IEEE ICOSST-2018)	
9.	9 th International Conference on Open Source System and Technologies (IEEE ICOSST-2015)	
10.	Graduate Research Symposium (GRS 2015)	
11.	2 nd National Conference on Information Assurance (NCIA-2013)	
12.	10 th International Conference on Frontiers of Information Technology (FIT 2012)	

13.	6 th IFIP WG 11.11 International Conference on Trust Management (IFIPTM 2012)	
14.	International Conference on Emerging Technologies (ICET 2011)	

International Level		
1.	4th Call for Research Proposal, under Asi@Connect project by Trans-Eurasia Information Network (TEIN). Asi@Connctet is co-funded by the European Union under Grant contract ACA 2016/376-562, 2018	Evaluator
2.	3rd Call for Research Proposal, under Asi@Connect project by Trans-Eurasia Information Network (TEIN). Asi@Connctet is co-funded by the European Union under Grant contract ACA 2016/376-562, 2018	
3.	e-Photon/One+ , funded by European Commission through ICT-Framework Program. The Network of Excellence (NoE) e-Photon/ONE+, the central focus was on the 'Broadband for All' strategic objective of the IST 4th call of FP6, targeting network-oriented and system-oriented aspects of the optically enabled broadband. The NoE consortium was composed by 40 partners coming from Turkey to Portugal, and integrates academic and industrial partners, including major system companies, important device manufacturers and European telecommunication operators. In order to find more information please visit http://www.e-photon-one.org .	Research Associate
4.	Building the future Optical Network in Europe (BONE) , funded by European Commission through ICT-Framework Program. BONE-network brought together 49 laboratories and research institutes from all over Europe in a close networking infrastructure, built on the foundations laid down by the FP6 ePhoton/ONE Network and represents the research activities within Europe in the field of Optical Networks. The core activity of the BONE-project was the stimulation of intensified collaboration, exchange of researchers and integration of activities and know-how into and amongst partners. Further, additional details are available at http://www.ict-bone.eu .	Research Associate

National Level		
1.	Selection Board of Professor in Computer Science, National Textile University (NTU), 2021	Member
2.	Faculty Board of Studies, School of Science, National Textile University (NTU), Faisalabad, since 2021	Member
3.	Department Tenure Review Committee (DTRC), Department of Computer Science, National Textile University (NTU), Faisalabad since 2020.	Member
4.	National Curriculum Revision Committee (NCRC), Computer Engineering, Higher Education Commission (HEC) of Pakistan, 2014	Member
5.	National Computing Education Accreditation Council (NCEAC), HEC of Pakistan, since 2016	Programs' Evaluator
6.	Industrial Advisory Group (IAG) for Information Technology Sector. National Vocational and Technical Education Commission (NAVTEC), Pakistan, 2011	Member
7.	Evaluation of Affiliated Degree Colleges Punjab Region Against Minimum Quality Standards (MQS) for HEC of Pakistan, 2013	Evaluator
8.	HEC Curriculum Revision Committee for Associate Degree, 2015	Subject Expert

9.	Board of Studies for Computer Science Department, National Textile University (NTU), Faisalabad, since 2011	Member
10.	Interview panel of Federal Public Service Commission (FPSC), Pakistan	Member
11.	Selection Board, National Textile University (NTU), Faisalabad	Member

Accreditation Inspection Committee (AIC) for Field Audit Visit by National Computing Education Accreditation Council (NCEAC), Higher Education Commission (HEC) of Pakistan				
Sr. No.	Degree Program	University	Role	Date
1.	BS Computer Science (CS)	Fatima Jinnah Women University, Rawalpindi	Convener	27.1.2020
2.	BS Computer Science (CS)	Bahria University Islamabad Campus	Convener	30.12.2019
3.	BS Information Technology (IT)	Bahria University Islamabad Campus	Convener	30.12.2019
4.	BS Computer Science (CS)	Muslim Youth University, Islamabad	Convener	1.8.2019
5.	BS Computer Science (CS)	University of Agriculture, Faisalabad	Member	4.7.2019
6.	BS Software Engineering (SE)	University of Agriculture, Faisalabad	Member	4.7.2019
7.	BS Information Technology (IT)	University of Agriculture, Faisalabad	Member	4.7.2019
8.	BS Bioinformatics	University of Agriculture, Faisalabad	Member	4.7.2019
9.	BS Computer Science (CS)	Habib University, Karachi	Member	20.3.2019
10.	BS Computer Science (CS)	Bahria University Islamabad Campus	Member	7.1.2019
11.	BS Computer Science (CS)	SZABIST, Karachi	Member	28.9.2018
12.	BS Software Engineering (SE)	National University of Modern Languages (NUML), Islamabad	Member	16.5.2018

External Examiner for Evaluation of MS Computer Science (CS) Theses				
Sr. No.	Candidate Name	Thesis Title	University	Date of Thesis Defense
1.	Shabeeb Hassan	A Probabilistic Machine Learning Approach to Detect Depression and Anxiety Levels Through Facial Expression	Department of Computer Science,	28.6.2021
2.	Kumail Abbass	Deep-learning Based Computer Vision Approach for Segmentation of Ball Deliveries in Cricket	University of Karachi	28.5.2021
3.	Mian Ahmed Shafiq	Multi-Label Toxic Comment Classification of Urdu Language	Department of Computer Science,	21.1.2021
4.	Muhammad Abdul Jabbar	Formal Modeling and Analysis of Integrated Healthcare System	COMSATS	
5.	Muhammad Ehsan	Neural Architecture Based Urdu Named Entity Recognition	University Islamabad	
6.	Nida Sarwar	Classification of Malignant Mesothelioma Disease by Using Apriori Algorithm	Department of Computer Science,	14.1.2021
7.	Ihsan Elahi	Optimization of Freshwater consumption in the Textile Dyeing Industry by using the Effective Evolutionary Algorithm	National Textile University, Faisalabad	
8.	Ali Haider	D-HARPP: Distributed HARnessing the Power of Power sets for Frequent Itemset Mining from Big data	Department of Computer Science,	7.12.2020
9.	Muhammad Talha	Secure, Remote based and Traceable E-Voting System to		

		Increase the Turnout Ratio of Voting by using Blockchain Technology	National Textile University, Faisalabad	
10.	Abdul Qadeer Bilal	Software Requirements Traceability using Blockchain for Requirements Configuration Management		
11.	Sajid Hussain Raza	Advanced ransomware pre-attack detection algorithm for endpoint data protection		
12.	Rana Aarsal Mahmood	Machine Translation from Text to Pakistan Sign Language for Effective Communication with Deaf People		
13.	Muhammad Ul Saqlain Nawaz	Optimized Approach For Resource Allocation In IoT Based Cognitive 5G Networks	Department of Computer Science, Bahria University Lahore Campus (BUCL)	9.11.2020
14.	Ahmed Wali	Performance Comparison of Two-Phase Machine Learning Ensemble Classifier on Multiple Datasets	Department of Computer Science, University of Management Science (UMT)	5.6.2020
15.	Kainat Saleem	Development of Voting Based POS Tagger for Urdu Language	Department of Computer Science, COMSATS University Islamabad	15.1.2020
16.	Haseeb Younis	Protein Complex Detection and Predicting Cancerous Proteins in Protein Interaction Networks		15.1.2020
17.	Rabab Hafeez	Development of Urdu Lemmatizer for Information Retrieval Systems		15.1.2020
18.	Asia Shakoor	Formalization and Verification of Mobile Banking Critical Model	Department of Computer Science, Government College University Faisalabad (GCUF)	11.12.2019
19.	Rida Zaheer	Security Concerns of Near Field Communication (NFC) in Contactless Communication Technology		11.12.2019
20.	Juhinah Batool	A Blockchain Consensus-based Ring Network Topology		11.12.2019
21.	Naheed Akhtar	Architecture Model of IoT-based Smart Animal Farms in Pakistan		11.12.2019
22.	Ushna Khalil	Identifying Trustable Devices for Delegation in Internet of Things	Department of Computer Science, COMSATS University Islamabad	15.7.2019
23.	Nageen Naeem	I-Know: Knowledge Representation and Manipulation for Self-aware Robot		15.7.2019
24.	Seyyad Zishan Ali	Periodic Mining of Users Routine Desktop Behavior for Task Assistance		15.7.2019
25.	Muhammad Imran	Authenticity, Validity and Relevancy of Mined Data		17.1.2019
26.	Kashif Javeed Bajwa	An Audit Framework for Cloud Environment		17.1.2019
27.	Asmara Akram	On Using Business Object Ontology to Map Business Processes from User Feedback		17.1.2019
28.	Balawal Shehzad	Automatic Detection of J2EE Design Patterns		Spring 2017
29.	Sara Sameen	Measuring Urdu Text Reuse at Sentence/Passage Level		
30.	Iftikhar Ali	A Study of Paraphrased Plagiarism for Different Academic Groups		
31.	Shanawer Riaz	Detection of Object Oriented Design Smells		Fall 2016
32.	Syed Hussain Bukhari	Exploring Semantic Tagger, BabelNet and WordNet for Detecting Different Types of Paraphrased Plagiarism		
33.	Rimsha Anam	A Structural Variants Process Model Collection for Process Similarities Evaluation		
34.	Saman R. Abdi	A Methodological Exploration of BPM Community		
35.	Ambreen Naz	A Corpus of Sentential Paraphrases for Urdu Language		22.1.2016

36.	Ch. Ahmad Bilal	Developing a Corpus of Mono Language Extrinsic Plagiarism for Urdu -Urdu Language Pair	22.1.2016
37.	Maria Khan	Recovery of Mobile Game Design Patterns	22.1.2016
38.	Waqas Arshad	Developing a Corpus of SMS Based Author Profiles	16.6.2015
39.	Fahad Najib	Adapted Greedy String Tiling (aGST) algorithm for Paraphrased Text Reuse and Plagiarism Detection	16.6.2015
40.	Summaira Nosheen	Measuring Cross-lingual Text Reuse for English Urdu Language Pairs	16.6.2015
41.	Maria	Trust-based Ride Sharing	20.6.2014
42.	Raima Zafar	An Agent Model for Faculty Performance Evaluation	20.6.2014
43.	Samia Arshad	A New Method for Optimization of Dynamic Ride Sharing System	20.6.2014
44.	Hafiz Husnain Raza Sherazi	Multi-Radio over Fiber Architecture for Road Vehicle Communication in VANET	17.6.2013
45.	Hassan Akhtar	Detection of Design Patterns Variants Using Static Analysis	11.1.2013
46.	Syed Fakhar Abbass	Investigating Urban and Rural traffic in VANET using Topology Based Routing Protocols	11.1.2013
47.	Afnan Bashir	Design Patterns and Documentation Recovery Based on Annotation Implementations in Source Code	11.1.2013
48.	Saad Mustafa	Stable Path Routing for Multi-radio Multi-channel Wireless Mesh Networks	13.7.2010
49.	Sardar Nauman Aslam	Crowd Simulation - From Virtual to Reality	13.7.2010

University of the Punjab, Lahore		
1.	Advanced Studies Research Board (ASRB), University of the Punjab, Lahore, since 2021	Member
2.	Deans Committee, University of the Punjab, Lahore, since 2021	Member
3.	Committee for Preparation of Five Years Plan of University of the Punjab, Lahore, since 2021	Member
4.	Institutional Ethics Review Board (IERB), since 2020	Member
5.	Committee for the 130 th Convocation, since 2020	Member
6.	Academic Council, University of the Punjab, Lahore, since 2020	Member
7.	Senate, University of the Punjab, Lahore, since 2020	Member
8.	Board of Studies, Computer Science and Information Technology, University of the Punjab, Lahore, since 2020	Convener
9.	ORIC Steering Committee, Office of Research and Innovation Centre (ORIC), University of the Punjab, Lahore, 2018–2019	Member
10.	Election Commission for Elections of Academic Staff Association (ASA)	Member
11.	Member, Committee for Formulate Guidelines to Design the Courses of Programs, University of the Punjab, Lahore, 2013	Member
12.	Invitation and Reception Committee of Book Fair	Member
13.	Academic and Research Committee, Academic Staff Association	Member
14.	Admission Stalls Committee at Allama Iqbal (Old) Campus	Member
15.	Committee for First Conference of Vice Chancellors of Pakistan, University of the Punjab, November 2010	Member

Faculty of Computing and Information Technology (FCIT) Level Affairs		
1.	FCIT Council	Chair
2.	Department Doctoral Program Committee (DDPC), since 2020	Convener
3.	Department Tenure Review Committee (DTRC), since 2020	Chairman
4.	Purchase Committee, since 2020	Convener
5.	College Council, since 2020	Convener
6.	PC-I Construction of New Academic Block, since 2019	Member
7.	Departmental Tenure Review Committee (DTRC), since 2019	Member
8.	PUCIT Accreditation Committee NCEAC, since 2019	Chairperson
9.	PUCIT Research Advisory Committee (PRAC), since 2018	Member
10.	Office of Research and Innovation Centre (ORIC), University of the Punjab, 2014–2019	Focal Person at PUCIT
11.	PUCIT Undergraduate Admissions Committee	Member
12.	PUCIT Graduate Admissions Committee, Member	Member
13.	PUCIT College Council, 2010–2019	Member
14.	Degree Coordinator of BS IT Degree Program 2012–2019	Degree Coordinator
15.	Departmental Doctoral Program Committee (DDPC), 2010–2018	Secretary/Member
16.	PUCIT Research Advisory Committee (PRAC) 2013–2018	Chairperson
17.	PhD Financial Support Review Committee (PFSRC), 2014–2018	Member
18.	Degree Coordinator of PhD/MPhil Computer Science Program 2009–2012	Degree Coordinator
19.	Degree Coordinator, M Phil Remote Sensing and Geographical Information System (RS & GIS) Program 2011–2012	Degree Coordinator
20.	PUCIT Research Committee, 2009–2010	Secretary
21.	PUCIT Library Committee, 2009–2016	Chairperson

References

- Prof. Dr. techn. habil. Slavisa Aleksic**
 Telecommunication Technologies and Communication Networks
 Leipzig University of Telecommunications (HfTL)
 Institute of Communications Engineering
 Gustav-Freytag-Str. 43-45
 04277 Leipzig, Germany
 Tel. +49-341-3062-212 Fax. +49-341-3062-7212
 E-mail: Aleksic@hft-leipzig.de
http://www1.hft-leipzig.de/aleksic/index_en.html
- Em.O.Univ.Prof. Dipl.-Ing. Dr.techn. Harmen R. Van As**
 Institute of Telecommunications
 Vienna University of Technology (TUW)

Room CG0415, Gusshausstraße 25 / E389
1040 Vienna, Austria
Tel. +43 (1) 58801 – 38800 Fax. +49-341-3062-7212
E-mail: harmen.van.as@tuwien.ac.at
<https://www.nt.tuwien.ac.at/about-us/staff/harmen-r-van-as/>