

Dr. Ihsan Ayyub Qazi

Associate Professor (Tenured) & Chair of Computer Science
Director **NSG** (Networks and Systems Group)
SBA School of Science and Engineering, LUMS, Pakistan

SBASSE 9-G14A
Department of Computer Science
Lahore University of Management Sciences (LUMS)
D.H.A, Lahore Cantt, 54792, Lahore, Pakistan

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Research Interests

My research interests are in networked systems and span cloud computing, Internet censorship and online privacy, ICT for developing regions, and mobile/wireless networks.

Education

- **Ph.D. Computer Science** (August 2010)
University of Pittsburgh, Pennsylvania, USA
- **BSc (Honors), Double Major in Computer Science and Mathematics** (June 2005)
LUMS, Pakistan

Professional Experience

- **Chair and Associate Professor** (Jan 2018—Present)
Department of Computer Science, LUMS
- **Associate Professor with Tenure** (Sept 2017—Present)
Department of Computer Science, LUMS
- **Visiting Research Scientist** (June 2017—Dec 2017)
ICSI, University of California, Berkeley, USA — [Host: Prof. Vern Paxson]
- **Assistant Professor** (Oct 2011—Sept 2017)
Department of Computer Science, LUMS
- **Visiting Researcher** (July 2016—August 2016)
RWTH Aachen University, Germany — [Host: Prof. Klaus Wehrle]
- **Postdoctoral Research Fellow** (Sept 2010—Sept 2011)
Centre for Advanced Internet Architectures (CAIA), Melbourne, Australia
- **Researcher** (June 2009—Sept 2009)
GENI Group, BBN Technologies, Cambridge, USA
- **Course Instructor** (May 2006—Dec 2006)
Department of Computer Science, University of Pittsburgh, USA

Selected Awards

- [Facebook Research Award](#), 2019
- [Google Faculty Research Award](#), 2018
- [ACM SIGCOMM CCR Best Paper Award](#), 2018
- [LUMS Vice Chancellor's Alumni Achievement Award](#), 2018
- [Senior Information Controls Fellow, Open Technology Fund](#), 2017
- [Andrew Mellon Fellowship](#), 2009-2010

Selected Invited Talks

- [Google](#), Seattle, WA, USA, April 2018
- [Netflix](#), Los Gatos, CA, USA, October 2017
- [UC Berkeley](#), Berkeley, CA, USA, June 2017
- [MIT](#), Cambridge, MA, USA, March 2017

- [Harvard University](#), Cambridge, MA, USA, March 2017
- [Facebook](#), Menlo Park, CA, USA, March 2017
- [Carnegie Mellon University \(CMU\)](#), Pittsburgh, PA, USA, September 2016
- [Stanford University](#), Palo Alto, CA, USA, December 2015
- [Microsoft Research](#), Cambridge, UK, August 2014

“Selected” Refereed Publications

1. Hassan Iqbal, Muhammad Hamad Alizai, Ihsan Ayyub Qazi, Olaf Landsiedel, Zartash Afzal Uzmi
[Scylla: Interleaving Multiple IoT Stacks on a Single Radio](#)
ACM CoNEXT 2018, Greece, December 2018 (acceptance rate = 17%)
2. Abdullah Bin Faisal, Hafiz Mohsin Bashir, Ihsan Ayyub Qazi, Zartash Afzal Uzmi, Fahad Rafique Dogar
[Workload Adaptive Flow Scheduling](#)
ACM CoNEXT 2018, Greece, December 2018 (acceptance rate = 17%)
3. Aqib Nisar, Aqsa Kashaf, Ihsan Ayyub Qazi, Zartash Afzal Uzmi
[Incentivizing Censorship Measurements via Circumvention](#)
ACM SIGCOMM 2018, Budapest, Hungary, August 2018 (acceptance rate = 18%)
4. Hira Javaid, Hafiz Kamran Khalil, Zartash Afzal Uzmi, Ihsan Ayyub Qazi
[Online Advertising under Internet Censorship](#)
ACM HotNets 2017, Palo Alto, USA, November 2017 (acceptance rate = 21.8%)
5. Rijurekha Sen, Sohaib Ahmad, A. Phokeer, Z. Farooq, Ihsan Qazi, David Choffnes, K. Gummedi
[Inside the Walled Garden: Deconstructing Facebook's Free Basics Program](#)
ACM SIGCOMM CCR, October 2017 (**ACM SIGCOMM CCR best paper award**)
6. Syed M. Irteza, Hafiz Mohsin Bashir, Talal Anwar, Ihsan Ayyub Qazi, Fahad R. Dogar
[Load Balancing Over Symmetric Virtual Topologies](#)
IEEE INFOCOM 2017, Atlanta, USA, May 2017 (acceptance rate = 20.9%)
7. Ali Munir, Ghufuran Baig, Syed M. Irteza, Ihsan Ayyub Qazi, Alex Liu, Fahad R. Dogar
[PASE: Synthesizing Existing Transport Strategies for Datacenter Networks](#)
IEEE/ACM Transactions on Networking, 25(1): 320-334, February 2017
8. Kamran Nishat, Farrukh Javed, Saim Salman, Nofel Yaseen, Ans Fida, Ihsan Ayyub Qazi
[SlickFi: A Service Differentiation Scheme for High-Speed WLANs using Dual Radio APs](#)
ACM CoNEXT 2016, Irvine, USA, December 2016 (acceptance rate = 18%)
9. Ali Musa Iftikhar, Fahad Rafique Dogar, Ihsan Ayyub Qazi
[Towards a Redundancy Aware Network Stack](#)
ACM HotNets 2016, Atlanta, USA, November 2016 (acceptance rate = 27.8%)
10. Sohaib Ahmad, Abdul Haamid, Zafar A. Qazi, Zhenyu Zhou, Theophilus Benson, Ihsan A. Qazi
[A View from the Other Side: Understanding Mobile Phone Characteristics in the Developing World](#)
ACM IMC 2016, Santa Monica, USA, November 2016 (acceptance rate = 25%, Citations: 12+)
11. Aqib Nisar, Aqsa Kashaf, Zartash Afzal Uzmi, Ihsan Ayyub Qazi
[A Case for Marrying Censorship Measurements with Circumvention](#)
ACM HotNets 2015, Philadelphia, USA, November 2015 (acceptance rate = 18%)
12. Ali Munir, Ghufuran Baig, Syed Irteza, Ihsan Ayyub Qazi, Fahad Dogar, Alex Liu.
[Friends, not Foes – Synthesizing Existing Data Center Transport Strategies in PASE](#)
ACM SIGCOMM 2014, Chicago, USA, August 2014 (**First SIGCOMM paper for Pakistan**, acceptance rate = 19%, Citations: 90+)
13. Ruwaiifa Anwar, Kamran Nishat, Mohsin Ali, Zahaib Akhtar, Haseeb Niaz, Ihsan Ayyub Qazi.
[Loss Differentiation: Moving onto High-Speed Wireless LANs](#)

- IEEE INFOCOM 2014**, Toronto, Canada, April-May 2014 (acceptance rate = 19%, Citations: 16+)
14. Ali Munir, Ihsan A. Qazi, Zartash Uzmi, Aisha Mushtaq, S. Ismail, Safdar Iqbal, Basma Khan.
[Minimizing Flow Completion Times in Data Centers](#)
IEEE INFOCOM 2013, Italy, April 2013 (acceptance rate = 17%, Citations: 109+)
 15. Ihsan Ayyub Qazi, Lachlan Andrew, Taieb Znati.
[Congestion Control with Multi-Packet Feedback](#)
IEEE/ACM Transactions on Networking, 20(6), pp. 1721-1733, December 2012 (Citations: 15+)
 16. Ihsan Ayyub Qazi, Lachlan Andrew, Taieb Znati.
[Congestion Control using Efficient Explicit Feedback](#)
IEEE INFOCOM 2009, Rio de Janeiro, Brazil, April 2009 (acceptance rate = 19%, Citations: 41+)
 17. Ihsan Ayyub Qazi and Taieb Znati.
[On the Design of Load Factor based Congestion Control Protocols for Next-Generation Networks](#)
IEEE INFOCOM 2008, Phoenix, USA, April 2008 (acceptance rate = 20%, Citations: 68+)

"All" Refereed Publications

Peer-Reviewed Journals/Conferences/Workshops

1. Aadil Zia Khan and Ihsan Ayyub Qazi
[RecFlow: SDN-based Receiver-driven Flow Scheduling in Datacenters](#)
Cluster Computing 2019
2. Hassan Iqbal, Muhammad Hamad Alizai, Ihsan Ayyub Qazi, Olaf Landsiedel, Zartash Afzal Uzmi
[Scylla: Interleaving Multiple IoT Stacks on a Single Radio](#)
ACM CoNEXT 2018, Greece, December 2018 (acceptance rate = 17%)
3. Abdullah Bin Faisal, Hafiz Mohsin Bashir, Ihsan Ayyub Qazi, Zartash Afzal Uzmi, Fahad Rafique Dogar
[Workload Adaptive Flow Scheduling](#)
ACM CoNEXT 2018, Greece, December 2018 (acceptance rate = 17%)
4. Arsalan Ali Gohar Jumani, Fizza Zafar, Zafar Ayyub Qazi, Ihsan Ayyub Qazi
[Unraveling Poor Video Streaming Experiences in the Developing World](#)
ACM IMC 2018, Boston, USA, November 2018 (poster)
5. Ihsan Ayyub Qazi, Zafar A. Qazi, Theophilus Benson, Z. Farooq, A. Haamid, Sohaib Ahmad, Bismah Babar
[Untangling Web Browsing on Low-end Mobile Devices](#)
ACM IMC 2018, Boston, USA, November 2018 (poster)
6. Aqib Nisar, Aqsa Kashaf, Ihsan Ayyub Qazi, Zartash Afzal Uzmi
[Incentivizing Censorship Measurements via Circumvention](#)
ACM SIGCOMM 2018, Budapest, Hungary, August 2018 (acceptance rate = 18%)
7. Ihsan Ayyub Qazi
[Can We Design Ethically Sound Yet Effective Internet Censorship Measurement Platforms?](#)
NSDI 2018, Renton, USA, April 2018 (poster paper)
8. Syed M. Irteza, Hafiz Mohsin Bashir, Talal Anwar, Ihsan Ayyub Qazi, Fahad R. Dogar
[Efficient Load Balancing Over Asymmetric Datacenter Topologies](#)
Elsevier Computer Communications, May 2018
9. Hira Javaid, Hafiz Kamran Khalil, Zartash Afzal Uzmi, Ihsan Ayyub Qazi
[Online Advertising under Internet Censorship](#)
ACM HotNets 2017, Palo Alto, USA, November 2017 (acceptance rate = 21.8%)

10. Rijurekha Sen, Sohaib Ahmad, A. Phokeer, Z. Farooq, Ihsan Qazi, David Choffnes, K. Gummadi
[Inside the Walled Garden: Deconstructing Facebook's Free Basics Program](#)
ACM SIGCOMM CCR, October 2017 (**ACM SIGCOMM CCR best paper award**)
11. Rijurekha Sen, Siddharth Singh, Vedant Nanda, Sohaib Ahmad, S. Sengupta, Amreesh Phokeer, Zaid Farooq, Taslim Khan, P. Kumaraguru, Ihsan Qazi, David Choffnes, Krishna P. Gummadi
[Bringing Data to Facebook's Free Basics Debate](#)
ACM SIGMETRICS 2017, Illinois, USA, June 2017 (poster)
12. Syed M. Irteza, Hafiz Mohsin Bashir, Talal Anwar, Ihsan Ayyub Qazi, Fahad R. Dogar
[Load Balancing Over Symmetric Virtual Topologies](#)
IEEE INFOCOM 2017, Atlanta, USA, May 2017 (acceptance rate = 20.9%)
13. Tooba Ahsen, Fatima Tariq, M. Tirmazi, Ifrah Idrees, Zafar Qazi, Ihsan Qazi, Zartash Uzmi
[DRIBS: Flow Scheduling over Asymmetric Datacenter Topologies](#)
NSDI 2017, Boston, MA, USA, March 2017 (poster)
14. Ali Munir, Ghufuran Baig, Syed M. Irteza, Ihsan Ayyub Qazi, Alex Liu, Fahad R. Dogar
[PASE: Synthesizing Existing Transport Strategies for Datacenter Networks](#)
IEEE/ACM Transactions on Networking, 25(1): 320-334, February 2017
15. Aadil Zia Khan and Ihsan Ayyub Qazi
[Receiver-driven Flow Scheduling for Commodity Datacenters](#)
IEEE ICC 2017, Paris, France, May 2017
16. Kamran Nishat, Farrukh Javed, Saim Salman, Nofel Yaseen, Ans Fida, Ihsan Ayyub Qazi
[SlickFi: A Service Differentiation Scheme for High-Speed WLANs using Dual Radio APs](#)
ACM CoNEXT 2016, Irvine, USA, December 2016 (acceptance rate = 18%)
17. Ali Musa Iftikhar, Fahad Rafique Dogar, Ihsan Ayyub Qazi
[Towards a Redundancy Aware Network Stack](#)
ACM HotNets 2016, Atlanta, USA, November 2016 (acceptance rate = 27.8%)
18. Sohaib Ahmad, Abdul Haamid, Zafar A. Qazi, Zhenyu Zhou, Theophilus Benson, Ihsan A. Qazi
[A View from the Other Side: Understanding Mobile Phone Characteristics in the Developing World](#)
ACM IMC 2016, Santa Monica, USA, November 2016 (acceptance rate = 25%, Citations: 12+)
19. M. Saqib Ilyas, Ihsan Ayyub Qazi, Bilal Rassool, Zartash Afzal Uzmi
[Low-Carb: A Practical Scheme for Improving Energy Efficiency in Cellular Networks](#)
Elsevier Computer Communications, 94: 72-84, 2016
20. Aqib Nisar, Aqsa Kashaf, Zartash Afzal Uzmi, Ihsan Ayyub Qazi
[A Case for Marrying Censorship Measurements with Circumvention](#)
ACM HotNets 2015, Philadelphia, USA, November 2015 (acceptance rate = 18%)
21. Ubaid Hafeez, Aqsa Kashaf, Q. Bajwa, Aisha Mushtaq, Hassan Zaidi, Ihsan Qazi, Zartash Afzal Uzmi
[Mitigating Datacenter Incast Congestion Using RTO Randomization](#)
IEEE GLOBECOM 2015, San Diego, USA, December 2015
22. Hasnain Ali Pirzada, M. Raza Mahboob, Ihsan Ayyub Qazi
[eSDN: Rethinking Datacenter Transports Using End-Host SDN Controllers](#)
ACM SIGCOMM 2015, London, UK, August 2015 (poster)
23. Ali Munir, Ghufuran Baig, Syed Irteza, Ihsan Ayyub Qazi, Fahad Dogar, Alex Liu.
[Friends, not Foes – Synthesizing Existing Data Center Transport Strategies in PASE](#)

- ACM SIGCOMM 2014**, Chicago, USA, August 2014 (**First SIGCOMM paper for Pakistan**, acceptance rate = 19%, Citations: 90+)
24. Ruwaifa Anwar, Kamran Nishat, Mohsin Ali, Zahaib Akhtar, Haseeb Niaz, Ihsan Ayyub Qazi.
[Loss Differentiation: Moving onto High-Speed Wireless LANs](#)
IEEE INFOCOM 2014, Toronto, Canada, April-May 2014 (acceptance rate = 19%, Citations: 16+)
 25. Aisha Mushtaq, A. K. Ismail, A. Wasay, Bilal Mahmood, Ihsan Ayyub Qazi, Zartash A. Uzmi
[Rethinking Buffer Management in Data Center Networks](#)
ACM SIGCOMM 2014, Chicago, USA, August 2014 (poster)
 26. Syed Mohammad Irteza, Adnan Ahmed, Sana Farrukh, Babar N. Memon, Ihsan Ayyub Qazi.
[On the Coexistence of Transport Protocols in Data Centers](#)
IEEE ICC 2014, Sydney, Australia, June 2014
 27. Kamran Nishat, Ruwaifa Anwar, Ahmed Mehfooz, Bilal Zaidi, Haris Choudhary, Ihsan Ayyub Qazi.
[On the Effectiveness of High-Speed WLAN Standards for Long Distance Communication](#)
IEEE INFOCOM 2014, Toronto, Canada, April-May 2014 (poster)
 28. Suong H. Nguyen, Ihsan Ayyub Qazi, Lachlan L. H. Andrew, Hai Le Vu.
[Rate Equilibria in WLANs with Block ACKs](#)
IEEE LCN 2013, Sydney, Australia, October 2013 (acceptance rate = 26%)
 29. Ali Munir, Ihsan A. Qazi, Zartash Uzmi, Aisha Mushtaq, S. Ismail, Safdar Iqbal, Basma Khan.
[Minimizing Flow Completion Times in Data Centers](#)
IEEE INFOCOM 2013, Italy, April 2013 (acceptance rate = 17%, Citations: 109+)
 30. Zahaib Akhtar, Kamran Nishat, Haseeb Niaz, Ruwaifa Anwar, Mohsin Ali, Ihsan Ayyub Qazi.
[BLMon: A Loss Differentiation Scheme for 802.11n](#)
IEEE INFOCOM 2013, Italy, April 2013 (poster)
 31. Shahida Jabeen, Muhammad Bilal Zafar, Ihsan Ayyub Qazi, Zartash Afzal Uzmi.
[SplitBuff: Improving the Interaction of Heterogeneous RTT Flows on the Internet](#)
ICC 2013, Budapest, Hungary, June 2013
 32. Ali Munir, Ihsan Ayyub Qazi, S. Qaisar.
[On Achieving Low Latency in Data Centers](#)
ICC 2013, Budapest, Hungary, June 2013 (Citations: 11+)
 33. Ihsan Ayyub Qazi, Lachlan Andrew, Taieb Znati.
[Congestion Control with Multi-Packet Feedback](#)
IEEE/ACM Transactions on Networking, 20(6), pp. 1721-1733, December 2012 (Citations: 15+)
 34. Muhammad Kumail Haider, Asad Khalid Ismail, Ihsan Ayyub Qazi.
[Markovian Models for Electrical Load Prediction in Smart Buildings](#)
ICONIP 2012, Doha, Qatar, Nov 2012 (Citations: 10+)
 35. Ihsan Ayyub Qazi, Taieb Znati, Daniel Mosse.
[Improving Performance of Router-Assisted Transport Protocols over Variable Capacity Links](#)
ICC 2012, Ottawa, Canada, June 2012
 36. Ihsan Ayyub Qazi and Taieb Znati.
[On the Design of Load Factor based Congestion Control Protocols for Next-Generation Networks](#)
Computer Networks Journal, Elsevier, 55(1), pp. 45-60, 2011
 37. Ihsan Ayyub Qazi and Rami Melhem.

[Using GENI to Evaluate Congestion Control Protocols for Next Generation Networks](#)
GENI Experimenters Workshop (GEW), Princeton University, NJ, June 2010

38. Ihsan Ayyub Qazi, Lachlan Andrew, Taieb Znati.
[Incremental deployment of new ECN-compatible congestion control](#)
PFLDNeT, Tokyo, Japan, May 2009
39. Ihsan Ayyub Qazi, Lachlan Andrew, Taieb Znati.
[Congestion Control using Efficient Explicit Feedback](#)
IEEE INFOCOM 2009, Rio de Janeiro, Brazil, April 2009 (acceptance rate = 19%, Citations: 41+)
40. Ihsan Ayyub Qazi, Lachlan Andrew, Taieb Znati.
[Two bits are enough](#)
ACM SIGCOMM 2008, Seattle, WA, August 2008 (poster)
41. Ihsan Ayyub Qazi and Taieb Znati.
[On the Design of Load Factor based Congestion Control Protocols for Next-Generation Networks](#)
IEEE INFOCOM 2008, Phoenix, USA, April 2008 (acceptance rate = 20%, Citations: 66+)

Ph.D. Dissertation

42. Ihsan Ayyub Qazi
[An Efficient Framework of Congestion Control for Next-Generation Networks](#)
Doctoral Dissertation, University of Pittsburgh, Pittsburgh, PA USA, August 2010

Other Articles/Technical Reports

43. Kamran Nishat, Zartash Afzal Uzmi, Ihsan Ayyub Qazi. "MulWiFi: Flexible Policy Enforcement in Multi-Radio High-Speed WiFi Networks". **IJACSA**, Vol. 8, No. 12, December 2017
44. Ihsan Ayyub Qazi and Daniel Mosse. "Insights into the Design of Congestion Control Protocols for Multi-Hop Wireless Mesh Networks". **Tech. Report TR-09-164**, University of Pittsburgh
45. Ihsan Ayyub Qazi and Pratik Gandhi. "Performance Evaluation of Wireless Network Coding under Practical Settings". **Tech. Report TR-07-150**, University of Pittsburgh
46. Ihsan Ayyub Qazi and Taieb Znati. "Sizing of Router Buffers in the presence of Bi-directional Traffic". **Tech. Report TR-07-149**, University of Pittsburgh

Teaching Experience

- **LUMS**
 - Spring 2012–2018: [CS202](#) Data Structures
 - Ratings (Most recent first): 4.46/5 (160/164), 4.51/5 (110/140), 4.46/5 (84/172), 3.84/5 (47/209), 4.35/5 (58/160), 4.33/5 (60/160), 4.63/5 (37/64)
 - Spring 2012–2018: [CS678](#) Topics in Internet Research (graduate-level)
 - Ratings: 4.44/5 (11/11), 4.42/5 (22/23), 4.46/5 (26/30), 4.67/5 (4/27), 4.86/5 (7/24), 4.94/5 (12/16), 5/5 (6/8)
 - Spring 2016: CS382 Network-Centric Computing
 - Ratings: 4.14/5 (63/84)
 - Fall 2011–2016: [CS501](#) Applied Probability (graduate-level)
 - Ratings: 4.27/5 (10/64), 4.64/5 (13/62), 4.64/5 (22/66), 4.47/5 (38/75), 4.34/5 (26/40)
- **University of Pittsburgh**
 - CS0131 Softwares for Personal Computing (Fall 06, Summer 06)

- **Guest Lectures**

- ECON 4414 Topics in Energy Economics (Spring 19)
- CS4712 Introduction to the Internet: Protocols and Architecture (Fall 18)
- EE583 Network Protocols and Performance (Spring 16)
- CS471 Computer Networks: Principles and Practices, LUMS (Fall 13,15)
- CS100 Computational Problem Solving, LUMS (Fall 12, 13, 14)

Research Funding and Grants

1. **Facebook Integrity Foundational Research Award (Co-PI)**, 2019. Amount: \$50,000
2. **Google Faculty Research Award (PI)**, 2018–2019. Amount: \$25,000
3. **ISIF Asia Grant (Co-PI)**, 2018–2019. Amount: \$30,000
4. **Distributed Computing Lab (PI), National Centre in Big Data & Cloud Computing**, 2018–2021, Amount: PKR 78,467,207
5. **Establishment of National Centre in Big Data & Cloud Computing (Co-PI)**, 2018–2021, Amount: PKR 535,972,000
6. **Ignite (Formerly National ICTR&D Fund) (PI)**, "*Design and Implementation of a Failure Resilient Network Load Balancer for Cloud Datacenters*", 2017–2019, Amount: PKR 18,844,518
7. **Higher Education Commission (HEC) National Research Program for Universities (NRPU) (PI)**, "*A QoS Differentiation Framework for Next-Generation High-Speed WiFi Networks*", 2017–2019, Amount: PKR 2,660,242
8. **Higher Education Commission (HEC) National Research Program for Universities (NRPU) (PI)**, "*A High Performance Cloud Data Center Architecture Using Software-Defined Networks*", 2015–2017, Amount: PKR 5,612,842
9. **World Bank Grant (Co-PI)**, "*Provision of Technical Advisory and Research Services for Applications of ICT and Big Datasets for Governance Reform in Punjab*", June 2013–Sept 2014, Amount: PKR 19,857,063
10. **LUMS Faculty Initiative Fund (FIF) Grant**
 - i. **PI**, Feb 2019–Jan 2020, Amount: PKR 980,000
 - ii. **PI**, Feb 2018–Jan 2019, Amount: PKR 960,000
 - iii. **Co-PI**, Feb 2018–Jan 2019, Amount: PKR 960,000
 - iv. **Co-PI**, Jul 2017–Jun 2018, Amount: PKR 960,000
 - v. **PI**, Oct 2016–Sept 2017, Amount: PKR 960,000
 - vi. **Co-PI**, Mar 2016–Feb 2017, Amount: PKR 960,000
 - vii. **PI**, Feb 2015–Jan 2016, Amount: PKR 960,000
 - viii. **PI**, Jan 2013–Jan 2014, Amount: PKR 450,000
11. **LUMS Faculty Startup Grant (PI)**, LUMS, 2011-2013: PKR 1,600,000
12. **Research Grant (PI)**, CS Department, LUMS, Total Amount: PKR 750,000
 - i. Dec 2014 – June 2015: PKR 140,000
 - ii. Oct 2013 – April 2014: PKR 245,000
 - iii. Dec 2012 – June 2013: PKR 125,000
 - iv. Nov 2011 – June 2012: PKR 240,000

Research Supervision Experience

Ph.D. Students

1. Kamran Nishat. **Ph.D. Advisee**, LUMS, 2012-2018 (High-Speed Wireless Networks)
 - a. Best Graduate Student Research Award, LUMS (Winner, 2014)

- b. Invited Talk: University of Waterloo, Canada, May 2014
 - c. Cleared Ph.D. Qualifying Exams
 - d. Cleared Ph.D. Proposal Defense in November, 2015
 - e. Cleared Ph.D. Defense (January 9, 2018)
2. Syed Mohammad Irteza. **Ph.D. Advisee**, LUMS, Sept 2012-present (Data Centers)
 - a. Microsoft Research PhD Summer School 2014
 - b. Cleared Ph.D. Qualifying Exams
 - c. Cleared Ph.D. Proposal Defense in December, 2016
 - d. IEEE INFOCOM 2017 "*Best-in-Session-Presentation*" award
 - e. Cleared Ph.D. Defense (December 18, 2018)
 3. Aadil Zia Khan. **Ph.D. Advisee**, LUMS, Nov 2014-present (Data Centers and SDN)
 - a. Cleared Ph.D. Qualifying Exams
 - b. Cleared Ph.D. Proposal Defense in June, 2017
 - c. Cleared Ph.D. Defense (December 19, 2018)

MS Thesis/Project Students

1. Arsalan Ali Gohar Jumani (MS CS, 2019)
Thesis: "*Understanding Mobile Video Performance on Low-End Devices*"
SBASSE, LUMS, Pakistan
2. Syeda Fatima Naqvi (MS CS, 2018)
Thesis: "*Understanding Memory Bottlenecks in Low-End Devices*"
SBASSE, LUMS, Pakistan
3. Zaraq Ali Iqbal (MS CS, 2018)
Thesis: "*Adaptive Resource Scheduling in Datacenters*"
SBASSE, LUMS, Pakistan
4. Rubab Zahra Sarfraz (MS CS, 2018)
Thesis: "*Detecting Fake News on Social Media*"
SBASSE, LUMS, Pakistan
5. Hifza Khalid (MS CS, 2018)
Thesis: "*On Backpressure Scheduling in Datacenters*"
SBASSE, LUMS, Pakistan
6. Hira Javaid (MS CS, 2017)
Thesis: "*Advertising Under Internet Censorship*"
SBASSE, LUMS, Pakistan
7. Shazal Irshad (MS CS, 2017)
Thesis: "*On Joint Flow Scheduling and Load Balancing in Datacenters*"
SBASSE, LUMS, Pakistan
8. Muneeb Ullah (MS CS, 2017)
MS Project: "*Datacenter Flow Scheduling for Heterogeneous Workloads*"
SBASSE, LUMS, Pakistan
9. Owais Ahmad Jan (MS CS, 2016)
Thesis: "*Redundancy-Aware Datacenter Networks*"
SBASSE, LUMS, Pakistan
10. Hafiz Muhammad Mohsin Bashir (MS CS, 2016)
Thesis: "*Efficient Statistics Collection at the Endhosts Using SDN*"

SBASSE, LUMS, Pakistan

11. Ali Raza (MS CS, 2016)
Thesis: "*Context-Aware Rate Adaptation*"
SBASSE, LUMS, Pakistan
12. Maria Rehman (MS CS, 2016)
Thesis: "*Data Communication over Low Cost Channels*"
SBASSE, LUMS, Pakistan
13. Talal Anwar (MS CS, 2016)
Thesis: "*Datacenter Load Balancing Under Asymmetric Topologies*"
SBASSE, LUMS, Pakistan
14. Safa Khan (MS Project, 2014-2015)
MS Project: "*Effectiveness of Using CoDel in Data Center Networks*"
SBASSE, LUMS, Pakistan

Undergraduate Research Students

1. Abdul Wasay. Undergraduate RA, LUMS, 2013-2014 (Data Centers)
 - a. Now a Ph.D. student at Harvard University, USA
2. Aisha Mushtaq. Undergraduate RA, 2012-2015 LUMS (Data Centers)
 - a. Now a Ph.D. student at UC Berkeley, USA
 - b. First placement at Microsoft (Vancouver, Canada)
 - c. Fully-funded Ph.D. admission offers from UC Berkeley, Stanford University, and CMU (*All Ranked 1st in Computer Science per the US News University Rankings*)
 - d. Facebook Grace Hopper Scholarship Recipient, 2014
 - e. Best Undergraduate Research Award (Winner, 2014)
 - f. Google Anita Borg Memorial Scholar 2013
3. Ghufuran Baig. Undergraduate RA, LUMS, 2013-2014 (SDN/Data Centers)
 - a. Now a Ph.D. student at UT Austin, USA
4. Mohsin Ali. Undergraduate RA, LUMS, 2013-2014 (Wireless Networks)
 - a. Now at Facebook, CA, USA
 - b. MS in Computer Science, University of Southern California (USC), USA,
 - c. Undergraduate Research Award, LUMS (Runners Up, 2014)
5. Muhammad Ruwaifa Anwar. Undergraduate RA, LUMS, 2013-2014 (Wireless Networks)
 - a. Now at Cisco, CA, USA
 - b. MS in Computer Science, Stony Brook University, USA
 - c. Undergraduate Research Award, LUMS (Runners Up, 2013 & 2014)
6. Haseeb Niaz. Undergraduate RA, LUMS, 2011-2013 (Wireless Networks)
 - a. Now at Microsoft, Redmond, USA
 - b. Previously worked at Viptela, San Jose, CA, USA
 - c. MS in Computer Science, Stony Brook University, USA
7. Kumail Haider. Undergraduate RA, LUMS, 2011-2012 (Smart Grids)
 - a. Now a Ph.D. student at Rice University, USA
8. Asad Khalid Ismail. Undergraduate RA, LUMS, 2012-2013 (Smart Grids & Data Centers)
 - a. Now at Amazon, Seattle, USA
 - b. MS in Computer Science, UC Santa Barbara, USA

9. Ali Munir. Graduate RA, LUMS, 2012 (Data Centers)
 - a. Now a Ph.D. student at Michigan State University, USA
10. Muhammad Bilal Zafar. Undergraduate RA, LUMS, 2012 (Buffer Sizing and Mobile Networks)
 - a. Now a Ph.D. student at Max Planck, Germany
11. Zahaib Akhtar. Graduate RA, LUMS, 2012-2013 (Wireless Networks)
 - a. Now a PhD student at University of Southern California, USA
12. Uneeb Rathore. Research Student, LUMS, 2013-2014 (Smart Grids)
 - a. Now a Ph.D. student at UCLA, USA
13. Basma Khan. Graduate RA, LUMS, 2012 (Data Centers)
 - a. Now at Microsoft, Seattle, USA
14. Bilal Mahmood. Undergraduate RA, LUMS, 2013-2014 (Data Centers)
 - a. Now at Cisco, CA, USA
 - b. MS in Computer Science, UC San Diego, USA
15. Raza Mahboob. Undergraduate RA, LUMS, 2015 (SDN/Data Centers)
 - a. Now a MS student at UT Austin, USA
16. Haleema Saadia. RA, LUMS, 2015 (Data Centers)
 - a. Now a Ph.D. student at Purdue University, USA
17. Qurat-ul-Ain Bajwa. Undergraduate RA, LUMS, 2015 (Data Centers)
 - a. Now a Ph.D. student at Northwestern University
 - b. Google Anita Borg Memorial Scholarship Recipient, 2014
18. Hasnain Ali Pirzada. Undergraduate RA, LUMS, 2015 (SDN/Data Centers)
 - a. Now a Ph.D. student at Wisconsin Madison
 - b. Summer internship in the Networked Systems Research Group at the Max Planck Institute for Software Systems (MPI-SWS), 2016
19. Aqsa Kashaf. Undergraduate RA, LUMS, 2015-2016 (Internet Censorship & Data Centers)
 - a. Now a Ph.D. student at CMU, USA
 - b. Grace Hopper Scholarship Recipient, 2016
20. Farrukh Javed. Undergraduate RA, LUMS, 2015-2016 (Wireless Networks)
 - a. Now a MS student at Michigan Ann Arbor, USA
21. Adil Ahmad. Research Student, LUMS, 2015-2016 (SDN/Data Centers)
 - a. Now a Ph.D. student at Purdue University, USA
22. Aqib Nisar. Research Student, LUMS, 2015-2016 (Internet Censorship)
 - a. Now a Ph.D. student at the University of Southern California (USC), USA
23. Ubaid Ullah Hafeez. Research Student, LUMS, 2015-2016 (Data Centers)
 - a. Now a Ph.D. student at Stony Brook University, USA
24. Hashaam Mahboob. Research Student, LUMS, 2015-2016 (Wireless Networks)
 - a. Now a MS student at USC, USA
 - b. Summer internship at Koc University, Turkey (2015)
25. Ahmed Mehfooz. Research Student, LUMS, 2013-2015 (Wireless Networks)
 - a. Now at Aruba Networks, USA

- b. MS Computer Science, UC San Diego, USA
- 26. Hassan Mujtaba Zaidi. Research Student, LUMS, 2014-2015 (Data Centers)
 - a. Now a MS student at NYU, USA
- 27. Adnan Ahmed. Undergraduate RA, LUMS, 2014 (Data Centers)
 - a. Now a Ph.D. student at University of Iowa
- 28. Sana Farrukh. Research Student, LUMS, 2013-2015 (Data Centers)
 - a. Now a Ph.D. student at Tufts University, USA
- 29. Waleed Farrukh. Research Student, LUMS, 2013-2014 (Smart Grids)
 - a. Now a MS student at ETH Zurich
- 30. Ghous Amjad. Research Student, LUMS, 2014-2015 (Data Centers)
 - a. Now a Ph.D. student at Brown University
- 31. Bilal Zaidi, Research Student, LUMS, 2013-2015 (Wireless Networks)
 - a. Software Engineer at Afiniti
- 32. Haris Chaudhry, Research Student, LUMS, 2013-2015 (Wireless Networks)
 - a. MS in Computer Science, Brown University
- 33. Saad Naveed Ismail. Undergraduate RA, LUMS, 2013-2015 (Data Centers)
 - a. Now a MS Student at Rutgers University
- 34. Muneeb-Ur Rehman. Undergraduate RA, 2013 LUMS (Smart Grids)
 - a. Now a Ph.D. student at Utah State University, USA
- 35. Waleed Aslam. Undergraduate RA, LUMS, 2014 (Smart Grids)
 - a. Now a MS Student at NC State University
- 36. Sohaib Ahmad. Research Student, LUMS, 2015-2017 (ICT for Developing Regions)
 - a. **Winner:** Summer Research Programme (SRP) 2016 Award
 - b. Now a Ph.D. student at UMass Amherst, USA
- 37. Saim Salman. Research Student, LUMS, 2015-2017 (Wireless Networks & Internet Anonymity)
 - a. Now a Ph.D. student at Brown University, USA
- 38. Hafiz Muhammad Mohsin Bashir. Research Assistant, LUMS, 2015-2016 (Data Centers)
 - a. Now a Ph.D. student at Tufts University, USA
- 39. Abdullah Bin Faisal. Research Assistant, LUMS, 2015-2017 (Data Centers)
 - a. Now a Ph.D. student at Tufts University, USA
- 40. Nofel Yaseen. Research Student, LUMS, 2015-2017 (Wireless Networks & Internet Anonymity)
 - a. Now a Ph.D. student at University of Pennsylvania (UPenn), USA
- 41. Tooba Ahsen. Research Assistant, LUMS, 2015-2017 (Data Centers)
 - a. **Winner:** Summer Research Programme (SRP) 2016 Award
 - b. Now a Ph.D. student at Tufts University, USA
- 42. Ali Raza, Research Student, LUMS, 2015-2016 (Mobile/Wireless Networks)
 - a. Now a Ph.D. student at Boston University, USA
- 43. Fatima Tariq. Research Student, LUMS, 2015-2017 (Data Centers)

- a. **Winner:** Summer Research Programme (SRP) 2016 Award
 - b. Now a MS student at University of Illinois Urbana Champagne (UIUC), USA
44. Huzaifa Kamran. Research Student, LUMS, 2015-2017 (Wireless Networks)
- a. Now a MS student at University of Illinois Urbana Champagne (UIUC), USA
45. Ans Fida. Research Student, LUMS, 2015-2017 (Wireless & Internet Censorship)
- a. Now a MS student at Purdue University, USA
46. Hafiz Kamran Khalil. Research Student, LUMS, 2015-2017 (Internet Censorship)
- a. Now a Ph.D. student at Purdue University, USA
47. Hira Javaid. Graduate RA, LUMS, 2015-2017 (Internet Censorship)
- a. Now a Ph.D. student at Northeastern University, USA
48. Abeer Ahmed. Research Student, LUMS, 2015-2017 (ICT for Developing Regions)
- a. **Winner:** Summer Research Programme (SRP) 2016 Award
 - b. Now a Ph.D. student at Stony Brook University, USA
49. Abdul Lateef Haamid. Research Student, LUMS, 2015-2017 (ICT for Developing Regions)
- a. **Winner:** Summer Research Programme (SRP) 2016 Award
 - b. Now a MS student at Georgia Institute of Technology, USA
50. Moiz Imran. Research Student, LUMS, 2015-2017 (Data Centers)
- a. Now a MS student at USC, USA
51. Zaid Ahmed Farooq. Research Student, LUMS, 2017 (Mobile Web Performance)
- a. Intern at Duke University, USA, Summer 2017 (**Host:** Theophilus Benson)
 - b. **Winner:** Summer Research Programme (SRP) 2017 Award
 - i. Award co-recipient: Bismah Babar
 - c. Now a Ph.D. student at UMass Amherst, USA
52. Ifrah Idrees. Research Student, LUMS, 2017 (Data Centers)
- a. Intern at Duke University, USA, Summer 2017 (**Host:** Theophilus Benson)
 - b. Now a Ph.D. student at Brown University, USA
53. Syed M. Ahmad Tirmazi. Research Student, LUMS, 2017 (Data Centers & Mobile Web Performance)
- a. Intern at EPFL, Switzerland, Summer 2017
 - b. Now a Ph.D. student at Harvard University, USA
54. Shazal Irshad. Research Student, LUMS, 2017-2018 (Data Centers)
- a. Now a Ph.D. student at University of Colorado Boulder, USA
55. Ali Raza Tariq. Research Student, LUMS, 2017-2018 (ICT for Developing Regions)
- a. Now a Ph.D. student at University of Colorado Boulder, USA
56. Hifza Khalid. Research Student, LUMS, 2017-2018 (Data Centers)
- a. Now a Ph.D. student at Tufts University, USA

Independent Study/Directed Research/Internship Advisees

1. **CS497 – Directed Research Project (2 Credits)**
 - a. Fizza Zafar (Fall 2018)
 - b. Ghulam Murtaza (Fall 2018)
 - c. Osama Khurshid (Fall 2018)
 - d. Syed Muhammad Ahmad Tirmazi (Fall 2016)
 - e. Abeer Ahmad (Fall 2016 & Spring 2016)

- f. Fatima Tariq (Fall 2016 & Spring 2016)
 - g. Saim Salman (Fall 2016)
 - h. Nofel Yaseen (Fall 2016)
 - i. Aqib Nisar (Spring 2016)
 - j. Sohaib Ahmad (Spring 2016)
 - k. Tooba Ahsen (Spring 2016)
 - l. Huzaifa Kamran (Spring 2016)
 - m. Saim Salman (Spring 2016)
 - n. Gohar Irfan Choudhary (Spring 2015)
 - o. Jehan Khattak (Spring 2015)
 - p. Hasnain Ali Pirzada (Spring 2015)
2. **CS400A – Independent Study (1 Credit)**
- a. Abdul Lateef Haamid (Spring 2017)
 - b. Nofel Yaseen (Spring 2017)
 - c. Abeer Ahmad (Spring 2017)
 - d. Haseeb Wajid (Fall 2016)
 - e. Sana Farrukh (Spring 2015)
 - f. Qurat Ul Ann Danyal Akbar (Spring 2015)
3. **CS500A – MS Independent Study (1 Credit)**
- a. Furqan Baig (Spring 2014)
 - b. Momina Khan (Spring 2014)
 - c. Farhan Ul Haq (Spring 2014)
 - d. Muhammad Kamran Nishat (Spring 2012)
4. Mohsin Ali, Muhammad Ruwaifa Anwar, Aisha Mushtaq, Saad Naveed Ismail, Asad Khalid Ismail, Abdul Wasay, Aroosa Ijaz, Usman Zaheer. Summer Research Interns, LUMS (**Summer 2012**).
5. Ayan Azmat, Hassan Nawaz, Muhammad Ali Gulzar, Qurat-Ul-Ann Bajwa, Hasnain Ali Pirzada, Babar Memon, Muhammad Zaman, Sana Farrukh, Hasan Abbas, Uzair Mahmood, Adnan Ahmed, Haris Choudhary, Syed Muhammad Bilal Zaidi, Ahmed Mehfooz, Uneeb Yaqub Rathore, Waleed Farrukh. Summer Research Interns, LUMS (**Summer 2013**).
6. Hammad Mazhar, Hashaam Mahboob, Zeeshan Abid, Muhammad Farrukh Javed, Ghous Ali Amjad, Aqib Nisar, Adil Ahmad, Zaid Saeed Khan, Gohar Irfan Chaudhry, Bilal Bakht, Aqsa Kashaf, Ubaid Ullah Hafeez, Syed Muhammad Hassaan, Qandeel Tariq, Momina Haider, Jehan Khattak, Hassan Shahbaz, Muhammad Asher Anjum, Amna Abid, Shanzae Nadeem Khan, Muhammad Sumran, Muhammad Faez Riaz, Mohammad Laghari, Anas Saeed, Ali Raza. Summer Research Interns, LUMS (**Summer 2014**).
7. Sohaib Ahmad, Nofel Yaseen, Fatima Tariq, Muhammad Muqsit Nawaz, Huzaifa Kamran, Saim Salman, Tooba Ahsen, Ali Raza Tariq, Abdul Lateef Haamid, Abeer Ahmad, Palwisha Akhtar, Abdullah Bin Faisal, Ans Fida, Sameed Ali, Salman Sattar, Muhammad Taha Zaidi, Ali Raza, Habiba Farrukh, Syed Muhammad Meisam—(LUMS), Ramla Ijaz (UET), and Oneeb Babar (CMU Qatar). Summer Research Interns (**Summer 2015**).
8. Airas Akhtar, Ali Nowraiz Khan, Ayesha Shahid Saleem Lone, Baber Khalid, Hira Akbar, Ifrah Idrees, Maryam Shahid, Mubeen Zulfiqar, Muhammad Zain Qasmi, Noaman Ahmad, Sultan Hayat Khan Durrani, Syed Muhammad Ahmad Tirmazi. Summer Research Interns, LUMS (**Summer 2016**).

Thesis Committee Service

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1. [**Committee Member**] Saqib Ilyas (Ph.D. CS, 2016-Graduated)
 Thesis: *“Leveraging Workload Relocation and Resource Pruning for Electricity Cost Minimization in Service Provider Networks”*
 SBASSE, LUMS, Pakistan.

2. [**Committee Member**] Ridah Naseem (MS CS, 2019)
Thesis: *"Scaling the Processing of Signaling Traffic for Next Generation Cellular Networks"*
SBASSE, LUMS, Pakistan.
3. [**Committee Member**] Hassan Iqbal (MS CS, 2018)
Thesis: *"Dynamic Reconfiguration of Radio Chip to Support Multiple Wireless Stacks on IoT Devices"*
SBASSE, LUMS, Pakistan.
4. [**Committee Member**] Arsalan Ahmad (MS EE, 2018)
Thesis: *"Implementation and Evaluation of NDP"*
SBASSE, LUMS, Pakistan.
5. [**Committee Member**] Fatima Ahsan (MS EE, 2015)
Thesis: *"A Method for Wireless Co-existence"*
SBASSE, LUMS, Pakistan.
6. [**Committee Member**] Sharjeel Ahmed Qureshi (MS CS, 2013)
Thesis: *"Android Malware Analysis using Data Provenance Graphs"*
SBASSE, LUMS, Pakistan.
7. [**Committee Member**] Ali Munir (MS, 2012)
Thesis: *"Improving Flow Completion Times in Data Centers"*
SEECs, National University of Sciences & Technology (NUST), Pakistan.

Senior Projects Supervised

1. Fizza Zafar (BS 2019, LUMS)
Project: Device-aware Adaptive Video Bitrate Algorithms for the Developing World
2. Muhammad Salman Munaf (BS 2019, LUMS)
Project: Understanding Video Streaming Performance in Developing Countries
3. Ghulam Murtaza (BS 2019, LUMS)
Project: Deconstructing Memory Bottlenecks in Low-Cost Mobile Devices
4. Osama Khurshid (BS 2019, LUMS)
Project: On Metrics for Capturing Mobile QoE
5. Zaid Ahmad Farooq, Syed Muhammad Ahmad Tirmazi, and Bismah Babar (BS 2018, LUMS)
Project: Understanding Mobile Web Performance from the Developing World
6. Abdullah Bin Faisal and Moiz Imran (BS 2017, LUMS)
Project: Flow Scheduling Under Changing Workloads
7. Tooba Ahsen (BS 2017, LUMS)
Project: On Backpressure Scheduling in Datacenters
8. Aqib Nisar and Aqsa Kashaf (BS 2016, LUMS)
Project: Combining Internet Censorship Measurements with Circumvention
9. Adil Ahmad, Mohammad Laghari, Hashaam Mahboob (BS 2016, LUMS)
Project: QoS-Aware Traffic Management Using OpenFlow
10. Ahmed Mehfooz, Shanzae N. Khan, Amna Abid (BS 2015, LUMS)
Project: WiFi Multicast Rate Adaptation
11. Haris Choudhary, Hassan Zaidi, Bilal Zaidi (BS 2015, LUMS)

Project: Long Distance WiFi Using Steerable Antennas

12. Hasnain Pirzada and Raza Mahboob (BS 2015, LUMS)
Project: Joint Congestion Control and Load Balancing Using End-Host SDN Controllers
13. Sana Farrukh and Qurat-ul-Ain Bajwa (BS 2015, LUMS)
Project: Addressing TCP Incast Using SDN
14. Ruwaifa Anwar, Mohsin Ali, Saad Ismail (BS 2014, LUMS)
Project: Efficient and Resilient Data Centers
15. Aisha Mushtaq, Abdul Wasay, Ayan Azmat (BS 2014, LUMS)
Project: Transport Protocols Using SDN
16. Luqman Ghani, Ali Raza, Dilawar Khan (BS 2014, LUMS)
Project: Centralized WLAN Management
17. Haseeb Niaz (BS 2013, LUMS)
Project: Long-Distance WiFi
18. Hammad Malik (BS 2013, LUMS)
Project: Improving WiFi Performance using Sensor Hints
19. Tanzeel ur Rehman and M. Haseeb-Ul-Hassan Zahid (BS 2013, LUMS)
Project: Improving Mobile Battery Life using Cloudlets

Talks/Seminars

o Industry

1. [Google](#), Seattle, WA, USA, April 2018
2. [Netflix](#), Los Gatos, CA, USA, October 2017
3. [Facebook](#), Menlo Park, CA, USA, March 2017
 - a. Talk: "*Understanding Internet Access from the Developing World*"
4. [Facebook](#), Menlo Park, CA, USA, December 2015
5. [Microsoft Research](#), Cambridge, UK, August 2014

o Universities

1. [Tufts University](#), Medford, MA, USA, September 2018
2. [University of Washington](#), Seattle, WA, USA, April 2018
3. [UC Berkeley](#), Berkeley, CA, USA, October 2017
4. [UC Berkeley](#), Berkeley, CA, USA, June 2017
5. [MIT](#), Cambridge, MA, USA, March 2017
6. [Harvard University](#), Cambridge, MA, USA, March 2017
7. [University of Southern California \(USC\)](#), Los Angeles, CA, December 2016
8. [Carnegie Mellon University \(CMU\)](#), Pittsburgh, PA, USA, September 2016
 - a. [Privacy seminar \(http://privacy.cs.cmu.edu/seminar/index.html\)](http://privacy.cs.cmu.edu/seminar/index.html)
9. [RWTH Aachen University](#), Aachen, Germany, July 2016
10. [UC Berkeley](#), Berkeley, CA, USA, December 2015
11. [Stanford University](#), Palo Alto, CA, USA, December 2015
 - a. [Stanford University Networking Seminar \(http://netseminar.stanford.edu\)](http://netseminar.stanford.edu)
12. [Princeton University](#), Princeton, NJ, USA, November 2015
13. [Rutgers University](#), New Jersey, USA, August 2014
14. [Stony Brook University](#), New York, USA, May 2014
15. [University of Pittsburgh](#), Pennsylvania, USA, May 2014
16. [Swinburne University of Technology](#), Melbourne, Australia, September 2011
17. [Carnegie Mellon University](#), Qatar, March 2011

- **Conferences**

1. [SIGCOMM 2018](#), Budapest, Hungary, August 2018
2. [HotNets 2017](#), Palo Alto, USA, November 2017
3. [IMC 2016](#), Santa Monica, USA, November 2016
4. [GLOBECOM 2015](#), San Diego, USA, December 2015
5. [ICET 2014](#), Islamabad, Pakistan, December 2014
6. [ICC 2014](#), Sydney, Australia, June 2014
7. [INFOCOM 2013](#), Turin, Italy, April 2013
8. [ICC 2013](#), Budapest, Hungary, June 2013
9. [ICONIP 2012](#), Doha, Qatar, Nov 2012
10. [PFLDNet 2009](#), Tokyo, Japan, May 2009
11. [INFOCOM 2009](#), Rio De Janeiro, Brazil, April 2009
12. [INFOCOM 2008](#), Phoenix, AZ, April 2008

- **Other Talks**

1. [BigC 2018](#): Workshop on Big Data and Cloud Computing, Lahore, December, 2018
2. [*Distinguished Invited Speaker*] [IEEE ICE CUBE 2018](#), Quetta, Pakistan, November 2018
3. [LUMS](#), May 2015
 - a. Talk: "On Promoting Undergraduate Research" given to the LUMS faculty
4. [Namal College](#), Mianwali, Pakistan, March 2015
 - a. Talk: "On Promoting Undergraduate Research"

Professional Activities

- Organizing Committee
 - [ACM SIGCOMM 2020](#)
- Technical Program Committee (TPC) Member
 - [COMSNETS 2020](#)
 - [ACM HotNets 2019](#)
 - [ACM COMPASS 2019](#)
 - [ACM SIGCOMM 2019 NetAI Workshop](#)
 - [APNet 2019](#)
 - [COMSNETS 2019](#)
 - [ACM CoNEXT 2018](#)
 - [ACM COMPASS 2018](#) (Formerly ACM DEV)
 - [APNet 2018](#)
 - [COMSNETS 2018](#)
 - [APSys 2017](#)
 - [APNet 2017](#)
 - [ACM CoNEXT 2016](#)
 - [COMSNETS 2016](#)
 - [IEEE ICNP 2014](#)
 - INMIC 2013
- Panelist, "Hot Topics in Networking", [ACM CoNEXT Student Workshop](#), 2018
- Mentor, Mentoring Moments, [ACM SIGCOMM 2017](#) (Aug 21-24)
- Jury Member, Student Research Competition, [ACM SIGCOMM 2017](#).
- Invitee/Participant, [Citizen Lab Summer Institute on Monitoring Internet Openness and Rights](#), University of Toronto, Canada, July 12-14, 2017
- Session Chair, ACM CoNEXT 2016, Santa Monica, CA, USA
- Visiting Researcher, COMSYS Lab, RWTH Aachen University, Germany, 2016
 - Gave a series of research talks on Internet censorship, cloud networking, and mobile/wireless networks as part of this research visit (**Host**: Prof. Dr. Klaus Wehrle)
- Invitee/Participant in the Dagstuhl Seminar on "[Network Latency Control in Data Centres](#)", Schloss Dagstuhl, Wadern, Germany (July 10-13, 2016)
- Mentor, [Mentoring Moments](#) at ACM SIGCOMM 2015, London, UK
- Head of Working Group 2 (WG-2), IXP Stakeholders Group of Pakistan

- Goal of WG-2: *"Identifying the benefits of IXP, and making recommendations for the respective public/private organizations to achieve these benefits"*
- Invited Referee for Conferences and Journals (each listed only once)
 - IEEE/ACM Transactions on Networking, Elsevier Computer Networks Journal, ACM SIGCOMM Computer Communications Review (CCR), IEEE Transactions on Communications, IEEE Transactions on Vehicular Technology, IEEE Communication Letters, ACM CoNEXT, IEEE ICNP, IEEE INFOCOM, ACM HotNets, ACM Conference on Computer and Communications Security (CCS), ACM SIGCOMM (poster session), IEEE Real-Time Systems Symposium (RTSS), and others.

Departmental and University Services

- Member, HEC Integrated Undergraduate Curriculum for LUMS (2019- Present)
- Member, Sports Committee, LUMS (2019- Present)
- Member, SBASSE Strategic Planning Committee, LUMS (2018-2019)
- Member, Accessibility Committee, LUMS (2017-2018)
- Convener, Departmental Search Committee (DSC), CS Department, LUMS (2016-17 & 2018-Present)
- Convener, Undergraduate Curriculum Committee, CS Department, LUMS (2015-16)
- Member, Undergraduate Curriculum Committee, SBASSE, LUMS (2016-Present)
- Member, Graduate Program Committee (GPC), CS Department, LUMS (2012-2016)
 - a. Conducted a review of the CS graduate program
 - i. *Identified challenges and proposed solutions*
 - b. Conducted a review of the CS qualifying exams
 - i. *Helped in defining its syllabus*
 - c. Proposed an annual research competition for CS undergraduate and graduate students
 - d. MS and Ph.D. Admissions
 - i. *Contributed to the admissions exam every year since joining LUMS*
 - ii. *Conducted interviews of Ph.D. applicants*
- Member, Sports Committee, LUMS (2015-2016)
- Patron, ACM Student Chapter, LUMS
- Presentation to LUMS Students on *"Applying to Graduate School"*
 - a. 2012-2017 (1-2 talks/year)

Honors and Awards

- Facebook Research Award (2019)
- Google Faculty Research Award (2018)
- ACM SIGCOMM CCR Best Paper Award (2018)
- LUMS Vice Chancellor's Alumni Achievement Award (2018)
- Senior Information Controls Fellow, Open Technology Fund (2017)
- HEC Approved PhD Supervisor (2018-Present)
- GeoDiversity Travel Grant, ACM IMC 2015, Tokyo, Japan
- GeoDiversity Travel Grant, ACM SIGCOMM 2015, London, UK
- Andrew Mellon Fellowship (2009-2010)
- Best Graduate Student Research Award, University of Pittsburgh, USA (2009)
- Best Poster Award 2009 (faculty choice), University of Pittsburgh, USA (2009)
- Outstanding Paper Award, Graduate Expo, University of Pittsburgh (2008)
- Graduate Student Research Award (Runners Up), University of Pittsburgh (2008)
- NSF Student Travel Grant to Attend NSDI'06 held in San Jose, CA, USA (2006)
- Deans Honor List, LUMS
- Roll of Honor (Highest Student Award), Lahore Grammar School (2001)