Ahmad Hassan

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Department of Computer Science and Engineering
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EDUCATION

Ph.D. Computer Science, University of Minnesota, 2021–

B.S. Computer Science, Lahore University of Management Sciences, 2016–20

RESEARCH AREAS

My research interests include Mobile Systems, 5G Mobile Networking, and Networked VR/MR. My current research highlights challenges faced by today's 4G/5G applications and argues for a cross-layer design to overcome these challenges.

PUBLICATIONS

2022 Ahmad Hassan, Shuowei Jin, Arvind Narayanan, Ruiyang Zhu, Anlan Zhang, Wei Ye, Jason Carpenter, Z. Morley Mao, Zhi-Li Zhang, and Feng Qian. Vivisecting Mobility Management in 5G Cellular Networks. *In Proceedings of the 2022 ACM SIGCOMM,* Amsterdam, Netherlands.

2022 Arvind Narayanan, Muhammad Rochman, Ahmad Hassan, Bariq Firmansyah, Vanlin Sathya, Monisha Ghosh, Feng Qian, and Zhi-Li Zhang. A Comparative Measurement Study of Commercial 5G mmWave Deployments. *In Proceedings of the 2022 IEEE INFOCOM,* Virtual Conference.

2021 Arvind Narayanan, Xumiao Zhang, Ruiyang Zhu, Ahmad Hassan, Shuowei Jin, Xiao Zhu, Xiaoxuan Zhang, Denis Rybkin, Zhengxuan Yang, Zhuoqing Morley Mao, Feng Qian, and Zhi-Li Zhang. A variegated look at 5G in the wild: performance, power, and QoE implications. *In Proceedings of the 2021 ACM SIGCOMM,* Virtual Conference.

SELECTED PROJECTS

2021– **Networked VR:** An effort to enable wireless VR through novel network and system level optimizations.

2021–22 **5G Mobility Management:** An in-depth study to characterize 5G mobility management, and highlight the issues in today's 5G networks.

2020–21 **An in-depth study of 5G cellular networks:** A study of performance, power, and application quality-of-experience (QoE) of 5G cellular networks in the wild.

2019 **Fast-EPC: A Low Latency Cellular Control Planes:** An edge-based cellular control plane that significantly reduces the control procedures' latency while providing fast failure recovery.

2019 **Reducing LTE Handover Latency with State Replication:** An ns3-based system that replicates mobile device's state in neighboring base stations to reduce handover latency.

PROFESSIONAL EMPLOYMENT

2021 Data Analyst - AI Production Department, Afiniti Software Solutions Private Ltd.

2019–20 Research Assistant - Zong 4G Lab, LUMS.

AWARDS AND HONORS

2017–20 Placed on Dean's Honor List

2014–16 Merit Scholarship in High School (valued at $2,000)

TEACHING EXPERIENCE

University of Minnesota, Twin Cities

Graduate T.A. for Operating Systems, 2021.

Lahore University of Management Sciences

T.A. for Topics in Internet Research, 2020.

T.A. for Computer Vision, 2019.

T.A. for Calculus II, 2018.

STUDENT ACTIVITES

2019–20 Batch Representative for the School of Science and Engineering (SSE) - LUMS.

2019 Student Member - Disciplinary Appeals Committee, LUMS.

2019–20 Chair - Harassment and Disciplinary Committee, LUMS Student Council.

2018 Research Intern, Energy Informative Group (EIG), LUMS, Lahore.

2017 Camp Leader - Project 50 Kids, Lahore.

Updated June 2022