Ahmad Hassan

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University of Minnesota – Twin Cities

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EDUCATION

2021– **University of Minnesota – Twin Cities**
Ph.D. in Computer Science, Advisor: Prof. Feng Qian
GPA: 4.0/4.0

2016–20 **Lahore University of Management Sciences**
B.S. in Computer Science, Advisor: Prof. Zafar Ayyub Qazi
GPA: 3.73/4.0

RESEARCH AREAS

Topics that intrigue me include, but are not limited to, 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**, Arvind Narayanan, Anlan Zhang, Wei Ye, Ruiyang Zhu, Shuowei Jin, 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.

WORKING EXPERIENCE

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

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

TECHNICAL SKILLS

C/C++, Java, Golang, Javascript, Python, Pytorch, Perl, Node.js, React, Bootstrap, HTML/CSS.

AWARDS/HONORS/GRANTS

2022 SIGCOMM'22 Travel Grant

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

2021 Graduate T.A. for Operating Systems

Lahore University of Management Sciences

2020 T.A. for Topics in Internet Research

2019 T.A. for Computer Vision

2018 T.A. for Calculus II

STUDENT ACTIVITES

2019 Student Member - Disciplinary Appeals Committee, LUMS.

2019–20 Batch Representative for the School of Science and Engineering (SSE) - 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 July 2022