

# Ahmad Hassan

Ph.D. Candidate  
Department of Electrical and Computer Engineering  
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## EDUCATION

- 2023– **University of Southern California**  
Ph.D. in Computer Engineering, Advisor: Prof. Feng Qian
- 2021–23 **University of Minnesota – Twin Cities**  
M.S. in Computer Science
- 2016–20 **Lahore University of Management Sciences**  
B.S. in Computer Science, Advisor: Prof. Zafar Ayyub Qazi

## RESEARCH AREAS

Topics that intrigue me include, but are not limited to, Mobile Systems, Wireless Networking, ML for Systems, and Multimedia Systems (VoD/VR/MR). My current research highlights challenges faced by today's wireless technologies and argues for a cross-layer design to overcome these challenges.

## WORKING EXPERIENCE

- 2025 Research Intern - SMI Lab, Samsung Research America
- 2023– Research Assistant - IMMERSE Lab, USC
- 2023–24 Associate Research Intern - NDSL, Hewlett Packard Labs
- 2021–23 Research Assistant - Feng Qian's Lab, UMN
- 2020 Data Analyst - AI Production Department, Afiniti Software Solutions Private Ltd.
- 2019–20 Research Assistant - Zong 4G Lab, LUMS
- 2018 Research Intern - Energy Informative Group (EIG), LUMS, Lahore

## ONGOING PROJECTS

- 2025– **Traffic Shaping for Satellite Links:** In collaboration with UIUC.
- 2025– **Interference-aware TDD Scheduling:** In collaboration with NEU.
- 2025– **Energy-aware Adaptive Video Streaming for Smartphones.**
- 2025– **A Comprehensive Analysis of Download Time Estimation Techniques.**

## PUBLICATIONS

- 2025 **Ahmad Hassan**, Vutha Va, Anum Ali, Yuqiang Heng, Boon Loong Ng. Prediction-based Adaptive RRM Measurement Relaxation for UE Power Saving. [*In submission.*]

- 2025      **Ahmad Hassan**, Wei Ye, Anlan Zhang, Rostand A. K. Fezeu, Akshay Jajoo, Myungjin Lee, Jason Carpenter, Ruiyang Zhu, Shuwei Jin, Z. Morley Mao, Zhi-Li Zhang, and Feng Qian. OPCM: Opportunistic Performance-driven Connectivity Management for 5G/xG Networks. *ACM CoNext 2025*.
- 2024      **Ahmad Hassan**, Shivang Aggarwal, Mohamed Ibrahim, Puneet Sharma, and Feng Qian. Wixor: Dynamic TDD Policy Adaptation for 5G/xG Networks. *ACM CoNext 2024*. *Best Paper Runner-up!*
- 2024      Wei Ye, Xinyue Hu, Steven Sleder, Anlan Zhang, Udhaya Dayalan, **Ahmad Hassan**, Rostand Fezeu, Akshay Jajoo, Myungjin Lee, Eman Ramadan, Zhi-Li Zhang, and Feng Qian. Dissecting Carrier Aggregation in 5G Networks: Measurement, QoE Implications and Prediction. *ACM SIGCOMM 2024*.
- 2024      Xumiao Zhang, Shuwei Jin, Yi He, **Ahmad Hassan**, Z. Morley Mao, Zhi-Li Zhang, and Feng Qian. QUIC is not Quick Enough over Fast Internet. *WWW 2024*.
- 2024      Shuwei Jin, Ruiyang Zhu, **Ahmad Hassan**, Xiao Zhu, Z. Morley Mao, Zhi-Li Zhang, and Feng Qian. OASIS: Collaborative Neural-Enhanced Mobile Video Streaming. *ACM MMSys 2024*. *Best Paper Award!*
- 2024      **Ahmad Hassan**, Wei Ye, Anlan Zhang, Jason Carpenter, Ruiyang Zhu, Shuwei Jin, Z. Morley Mao, Zhi-Li Zhang, and Feng Qian. The Case for Boosting Mobile Application QoE via Smart Band Switching in 5G/xG Networks. *ACM HOTMOBILE 2024*.
- 2024      Anlan Zhang, Chendong Wang, Yuming Hu, **Ahmad Hassan**, Zejun Zhang, Bo Han, Feng Qian, and Shichang Xu. Habitus: Boosting Mobile Immersive Content Delivery through Full-body Pose Tracking and Multipath Networking. *USENIX NSDI 2024*.
- 2023      Rostand A. K. Fezeu, Eman Ramadan, Wei Ye, Benjamin Minneci, Jack Xie, Arvind Narayanan, **Ahmad Hassan**, Jaideep Chandrashekhar, Myungjin Lee, Zhi-Li Zhang, and Feng Qian. An In-Depth Measurement Analysis of 5G mmWave PHY Latency and its Impact on End-to-End Delay. *PAM 2023*.
- 2022      **Ahmad Hassan**, Arvind Narayanan, Anlan Zhang, Wei Ye, Ruiyang Zhu, Shuwei Jin, Jason Carpenter, Z. Morley Mao, Zhi-Li Zhang, and Feng Qian. Vivisecting Mobility Management in 5G Cellular Networks. *ACM SIGCOMM 2022*.
- 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. *IEEE INFOCOM 2022*.
- 2021      Arvind Narayanan\*, Xumiao Zhang\*, Ruiyang Zhu, **Ahmad Hassan**, Shuwei 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. *ACM SIGCOMM 2021*.

## PATENTS

- 2025      Prediction-based Adaptive RRM Measurement Relaxation for UE Power Saving. [*In submission.*]
- 2024      Proactive Dynamic TDD Scheduling for 5G networks. [*In submission.*]

## **AWARDS/HONORS/GRANTS**

- 2025 Best Intern Poster Presentation Runner-up, SMI Lab, Samsung Research America  
2024 Best Paper Award, MMSys 2024; Best Paper Runner-up, CoNEXT 2024  
2022–24 (Student) Travel Grant: SIGCOMM 2022, HotMobile 2024  
2017–20 Placed on Dean's Honor List  
2014–16 Merit Scholarship in High School (valued at \$2,000)

## **SERVICE**

**Program Committee:** ACM CoNEXT 2025 (Shadow), ACM ImmerCom 2024  
**Journal Reviewer:** IEEE/ACM ToN, IEEE TMC, IEEE ComNet, IEEE TNSM  
**Artifact Evaluation Committee:** ACM SIGCOMM 2024

## **TEACHING EXPERIENCE**

### **University of Minnesota – Twin Cities**

- 2021 T.A. for Operating Systems

### **Lahore University of Management Sciences**

- 2018–20 T.A. for Topics in Internet Research, Computer Vision, and Multi-variable Calculus

## **STUDENT ACTIVITIES**

- 2024– VP of Programming - Viterbi Graduate Student Association, USC  
2019–20 Batch Representative for the School of Science and Engineering (SSE) - LUMS  
2019–20 Chair - Harassment and Disciplinary Committee, LUMS Student Council  
2017 Camp Leader - Project 50 Kids, Lahore