ALI RAZA

email: araza@bu.edu ⋄ webpage: www.razaali.net

RESEARCH INTERESTS

serverless, cloud computing, computer networks, software defined networks, content delivery networks, machine learning usage in systems & networks, optimization theory, ICTD

EDUCATION

Boston University - USA   Aug. 2017 - *[expected]* 2022
PhD in Computer Science
Advisor: Abraham Matta
Lahore University of Management Sciences - PAK   Aug. 2010 - Jun. 2014
B.S in Computer Science

TECHNICAL SKILLS

Languages: Python, Java, C++, C, HTML, CSS, PHP, MySQL, JavaScript, MATLAB
Others: Computer Networking, Serverless, Machine Learning

EXPERIENCE

Boston University - USA   Sep. 2017 - present
Graduate Research Assistant
- Building frameworks to utilize various cloud services to deploy SLO-aware applications.
- Published research work at IEEE *NetSoft, INFOCOM, IC2E, TNSM and JSys.*
Boston University - USA   Sep. 2017 - present
Teaching Fellow
- Teaching assistant for various undergraduate and graduate level courses.
- Held office hours, interactive lab-sessions and graded exams.
Meta Inc. - USA   May 2022 - Aug. 2022
Software Engineer Intern
- I worked with the Infrastructure team.
Akamai Technologies - USA   May 2021 - Aug. 2021
Summer Intern with Performance Engineering Team
- Created tools to manage Akamai backbone network through simulations.
Red Hat - USA   Jun. 2019 - Aug. 2019
Summer Intern
- Developed FLOCX, a cloud marketplace to trade computing resources.
New York University Abu Dhabi - UAE   Mar. 2015 - Mar. 2017
Research Assistant
- Designed and implemented a cloud based web-cache to enhance user experience in developing regions.
- Co-authored and published results at ACM SIGCOMM'15 and ACM ICTD'17.

AWARDS & HONORS

- Best paper award at **IEEE International Conference on Cloud Engineering**, 2021.
- First place award in **GENI Experimenter Contest** at *IEEE INFOCOM*, 2018.
- **Chair's Fellowship** from the Computer Science department at *Boston University*, 2017.
- Received **National Outreach Program Scholarship** from *LUMS*, 2010.

TALKS & PRESENTATIONS

- Presented our work **LIBRA** at **IEEE IC2E'21**.
- Gave a research talk about serverless computing at **New York University Abu Dhabi**, 2020
- Presented my recent research work at CS Colloquium at **Saint Louis University**, 2020.
- Presented our research work on configuring serverless functions at **IEEE INFOCOM**, 2020.
- Gave a talk about serverless computing at **DevConf** organized by **Red Hat**, 2019.
- Presented FLOCX at **DevConf** organized by **Red Hat**, 2019.
- Presented xCache at **ACM ICTD**, 2017.

PUBLICATIONS

Journal Papers

1. **Ali Raza**, Ibrahim Matta, Nabeel Akhtar, Vasiliki Kalavri, Vatche Ishakian, **"Function-as-a-Service: From An Application Developer's Perspective."** *Journal of Systems Research (JSys), 2021.*

2. Nabeel Akhtar, Ibrahim Matta, **Ali Raza**, Torsten Braun, Leonardo Goratti, Flavio Esposito, **"Managing Chains of Application Functions over Multi-Technology Edge Networks."** *IEEE Transactions on Network and Service Management (TNSM), 2020.*

Conference Papers

1. **Ali Raza**, Zongshun Zhang, Nabeel Akhtar, Vatche Ishakian, Ibrahim Matta, **"LIBRA: An Economical Hybrid Approach for Cloud Applications with Strict SLAs."** *IEEE International Conference on Cloud Engineering (IC2E), 2021, Virtual.* (Best Research Track Paper!)

2. Nabeel Akhtar, **Ali Raza**, Vatche Isahagian, Ibrahim Matta, **"COSE: Configuring Serverless Functions using Statistical Learning."** *IEEE International Conference on Computer Communications (INFOCOM), 2020, Beijing, China.*

3. Nabeel Akhtar, Ibrahim Matta, **Ali Raza**, Torsten Braun, Leonardo Goratti, Flavio Esposito, **"Virtual Function Placement and Traffic Steering over 5G Multi Technology Networks."** *IEEE Conference on Network Softwarization (NetSoft), 2018, Montreal, Canada.*

4. **Ali Raza**, Yasir Zaki, Thomas Potsch, Jay Chen, Lakshmi Subramanian, **"xCache: Rethinking Edge Caching for Developing Regions."** *ACM International Conference on Information and Communication Technologies and Development (ICTD), 2017, Lahore, Pakistan.*

5. M. S. Ilyas , G. Baig, M. A. Qureshi, Q. U. A. Nadeem, **A. Raza**, M. A. Qazi, B. Rassool, **"Low-Carb: Reducing Energy Consumption in Operational Cellular Networks."** *IEEE Global Communications (GLOBECOM), 2013, GA, USA.*

Workshop/Poster/Demo Papers

1. Nabeel Akhtar, Ibrahim Matta, **Ali Raza**, Yuefeng Wang, **"EL-SEC: ELastic Management of SECurity Application on Virtualized Infrastructure."** *IEEE INFOCOM Workshop CNERT, 2018, HI, USA.* (Winner: GENI Experimenter Contest!)

2. Nabeel Akhtar, Ibrahim Matta, **Ali Raza**, Yuefeng Wang, **"EL-SEC: ELastic Management of SECurity Application on Virtualized Infrastructure."** *IEEE INFOCOM 2018, HI, USA.*

3. **Ali Raza**, Yasir Zaki, Thomas Potsch, Jay Chen, Lakshmi Subramanian, **"Extreme Web Caching for Faster Web Browsing."** *ACM SIGCOMM 2015, London, UK.*

PROFESSIONAL SERVICES

Reviewer: *IEEE Networking Letters, IEEE Transactions on Mobile Computing, IEEE Conference on Network Softwarization, IEEE Transactions on Network and Service Management, IEEE INFOCOM CNERT Workshop*