E-mail: asim.jamshed@gmail.com

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Contact Information ${\bf SEA42}$ - Corp Office -re: Invent Building,

2121 8th Ave, Seattle, WA 98121

Interests

Networked systems design & implementation, distributed systems, network security and operating systems.

EDUCATION

Korea Advanced Institute of Science & Technology (KAIST), Republic of Korea

• PhD, Electrical Engineering (Spring '17). Advisor – Prof. KyoungSoo Park

University of Pittsburgh, Pittsburgh, Pennsylvania, USA

• MS, Computer Science (Apr '10). Advisors – Prof. KyoungSoo Park & Prof. Daniel Mossé

Lahore University of Management Sciences, Pakistan

• BSc (Hons), Computer Science, (May '05).

EMPLOYMENT EXPERIENCE (SELECTED) Amazon Web Services (AWS), Seattle, WA

• SDE II, EC2 VPC (Aug '20-onwards). Reporting to Mustafa Arisoylu (SDM)

Intel Labs, Intel Jones Farm 2 (JF2), Hillsboro, OR

• Research Scientist, Telco Systems (May '17-Aug '20). Reporting to Christian Maciocco(Sr Principal Engineer)

International Computer Science Institute (ICSI), Berkeley, CA

• Research Intern (May '14-Aug '14, Oct '15-Dec '15). Mentor – Dr. Robin Sommer

Palmchip Corporation, Lahore, Pakistan

• Software Engineer (May '05-July '06). Reporting to Ahrar Naqvi (VP Engineering)

PROJECTS/ SOFTWARE (SELECTED)

- 1. AETHER PROJECT (https://github.com/omec-project/upf)
- 4G/5G Control User Plane Separated (CUPS) TS23501 based packet core controlled by PFCP
- *URL*: https://opennetworking.org/aether/
- 2. OMEC PROJECT (https://github.com/omec-project/ngic-rtc)
- Control User Plane Separated (CUPS) TS23501 based EPC Service & Packet Gateways (SGW, PGW)
- URL: https://www.opennetworking.org/omec/
- 3. mOS STACK (https://github.com/mos-stack/mOS-networking-stack)
- A Specialized Network Programming Library for Stateful Middelboxes.
- Pub: NSDI 2017, URL: http://mos.kaist.edu/
- 4. PACKET BRICKS (https://github.com/zeek/packet-bricks)
- A netmap-based packet layer for distributing and filtering traffic.
- 5. mTCP (https://github.com/mtcp-stack/mtcp/)
- A Highly Scalable User-level TCP Stack for Multicore Systems.
- Pub: NSDI 2014, URL: http://shader.kaist.edu/mtcp/
- 6. KARGUS
- A Highly-scalable Software-based Network Intrusion Detection System.
- Pub: CCS 2012, URL: http://shader.kaist.edu/kargus/

Publications (Selected)

- [1] "AccelTCP: Accelerating Network Applications with Stateful TCP Offloading." NSDI '20
- [2] "Reducing Tail Latency via Safe and Simple Duplication." CoNEXT '19
- [3] "mOS: A Reusable Networking Stack for Flow Monitoring Middleboxes." NSDI '17 Best Paper Award
- [4] "APUNet: Revitalizing GPU as Packet Processing Accelerator." NSDI '17
- [5] "DFC: Accelerating String Pattern Matching for Network Applications." NSDI '16
- [6] "Haetae: Scaling the Performance of Network Intrusion Detection with Many-core Processors." RAID '15
- 7] "mTCP: a Highly Scalable User-level TCP Stack for Multicore Systems." NSDI '14 Community Award
- [8] "Kargus: a Highly-scalable Software-based Intrusion Detection System." CCS '12
- [9] "Suppressing Bot Traffic with Accurate Human Attestations." ApSys '10
- [10] "Sentinel: Hardware-Accelerated Mitigation of Bot-Based DDoS Attacks." ICCCN '08

AWARDS

ONF OMEC/COMAC Community Award, & Intel Division Recognition Award for Aether & OMEC NSDI Best Paper Award 2017 for mOS

2nd Runner-up Samsung Humantech Paper Award 2016 for DFC

NSDI Community Award 2014, & Runner-up Samsung Humantech Paper Award 2014 for mTCP

"10 Achievements of 2012 that put KAIST on the Spotlight" for Kargus

Graduate Fellowship Spring 2006, & Undergraduate Dean's Honor List 2001-03

SKILLS

C/C++, C#, Java, Python, CUDA, Lua, Javascript, HTML/XML, Linux, x86 Assembly, TILE-Gx, Intel DPDK