Sepehr Abdous

✉ sabdous1@jh.edu   •   🖥 sepehrabdous.github.io

Education

Johns Hopkins University   **Baltimore**
PhD   *2019-Present*
School of Computer Science

Sharif University of Technology   **Tehran**
BSc, *GPA: 17.06/20*   *2014 - 2019*
School of Computer Engineering

Area of research

My main field of research focuses on ways of measuring and resolving microsecond-scale congestion events, known as **microbursts**, in large datacenters. Currently, I am probing packet deflection, ı.e., re-routing the packets forwarded to a congested port instead of dropping them, as a potential solution to microbursts.

In the past, I have spent some time probing **Named Data Networking (NDN**) as a new architecture proposed for the network layer that tries to resolve the limitations of IP-based architecture using names instead of IPs.

Experiences

Research Experiences

Resolving short-term congestion events in datacenters   **2019 - present**
HopNets group, Johns Hopkins University   *Baltimore, MD*
Supervised by Prof. Soudeh Ghorbani, I work on developing approaches for measuring and absorbing bursts with microsecond granularity, namely microbursts, in datacenters.

Creating an NDN-based AR browser   **Summer 2018**
UCLA REMAP group, Summer Internship at UCLA   *Los Angeles, CA*
Wroked as an intern with UCLA REMAP group under the supervision of Prof. Jeff Burke and focused on creating an AR-enabled browser, using chromium's codebase, that uses NDN as the network architecture for more responsiveness.
`https://remap.ucla.edu/category/team/`

Probing the effects of load-balancing in NDN-based networks   **2017 - 2019**
BSc Thesis   *Tehran*
Evaluated the influences of the "power-of-two-choices" load-balancing scheme in a network grid while using NDN as the base network architecture. For this project, I was advised by Dr. Gharib and and Prof. Movaghar from Sharif University of Technology.

Teaching Experiences

TA of the "Computer Networks" course   **Baltimore, MD**
Prof. Ghorbani   *Johns Hopkins University*
Spring 2021

TA of the "Mathematical Statistics" course   **Tehran**
Prof. Sharifi Zarchi   *Sharif University of Technology*
Fall 2018

TA of the "Data Structure" course   **Tehran**
Prof. Ghodsi   *Sharif University of Technology*
Fall 2018

TA of the "Computer Structure" course   **Tehran**
Prof. Asadi   *Sharif University of Technology*
Fall 2018

TA of the "Fundamentals of Operating Systems" course   **Tehran**
Prof. Jalili   *Sharif University of Technology*
Fall 2018

TA of the "ITPM" course   **Tehran**
Information Technology Project Management, Prof. Abtahi   *Sharif University of Technology*
Fall 2018

TA of the "Data Structure" course   **Tehran**
Prof. Sharifi Zarchi   *Sharif University of Technology*
Spring 2018

TA of the "Numerical methods" course   **Tehran**
Dr. Gharib   *Sharif University of Technology*
Spring 2018

TA of the "Fundamentals of Operating Systems" course   **Tehran**
Prof. Jalili   *Sharif University of Technology*
Spring 2018

TA of the "Fundamentals of Operating Systems" course   **Tehran**
Prof. Jalili   *Sharif University of Technology*
Fall 2017

TA of the "Advanced Programming in Java"   **Tehran**
Dr. Marvasti   *Sharif University of Technology*
Spring 2017

TA of the "Advanced Programming in Java" course   **Tehran**
Dr. Marvasti   *Sharif University of Technology*
Fall 2016

TA of the "Data Structure" course   **Tehran**
Prof. Jamzad   *Sharif University of Technology*
Fall 2016

TA of the "Advanced Programming in Java" course   **Tehran**
Dr. Marvasti   *Sharif University of Technology*
Spring 2016

TA of the "Fundamentals of Programming in C" course   **Tehran**
Dr. Gheibi   *Sharif University of Technology*
Fall 2015

Work Experiences

HPDS(High Performance Data Storage) Company   **2018**
Intern   *Tehran*
Responsible for automating the system update process and conducting system FIO tests

Darmaneh Company   **2016-2018**
Android and IOS Developer   *Tehran*
Responsible for developing the Android and IOS app

Publications

Papers

Burst-tolerant Datacenter Networks with Vertigo   **2021**
Sepehr Abdous*, Erfan Sharafzadeh*, Soudeh Ghorbani (*Equal contribution)
CoNEXT 2021

Stock price forecasting using machine learning with event detectionon candlestick   **2018**
*Salman Marvasti, **Sepehr Abdous**, Negin Majidi*
File available in Researchgate

Posters

Vertigo: A Priority-aware Burst-tolerant Datacenter Fabric   **2021**
***Sepehr Abdous**, Erfan Sharafzadeh, Sougol Gheissi, Soudeh Ghorbani*   *Virtual*
16'th Coordinated Science Laboratory Student Conference (CSLSC)

Valinor: Transport-Agnostic Packet Prioritization and Ordering at the Edge   **2021**
*Erfan Sharafzadeh, **Sepehr Abdous**, Sougol Gheissi, Soudeh Ghorbani*   *Virtual*
16'th Coordinated Science Laboratory Student Conference (CSLSC)