

Sepehr Abdous

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Education

Johns Hopkins University
PhD

School of Computer Science

Baltimore
2019-Present

Sharif University of Technology
BSc, GPA: 17.06/20

School of Computer Engineering

Tehran
2014 - 2019

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, i.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

Worked 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 Prof. Movaghar from Sharif University of Technology.

Teaching Experiences.....

TA of the "Computer Networks" course

Prof. Ghorbani

Spring 2021

Baltimore, MD

Johns Hopkins University

TA of the "Mathematical Statistics" course

Prof. Sharifi Zarchi

Fall 2018

Tehran

Sharif University of Technology

TA of the "Data Structure" course

Prof. Ghodsi

Fall 2018

Tehran

Sharif University of Technology

TA of the "Computer Structure" course

Prof. Asadi

Fall 2018

Tehran

Sharif University of Technology

TA of the "Fundamentals of Operating Systems" course

Prof. Jalili

Fall 2018

Tehran

Sharif University of Technology

TA of the "ITPM" course

Information Technology Project Management, Prof. Abtahi

Fall 2018

Tehran

Sharif University of Technology

TA of the "Data Structure" course

Prof. Sharifi Zarchi

Spring 2018

Tehran

Sharif University of Technology

TA of the "Numerical methods" course

Dr. Gharib

Spring 2018

Tehran

Sharif University of Technology

TA of the "Fundamentals of Operating Systems" course

Prof. Jalili

Spring 2018

Tehran

Sharif University of Technology

TA of the "Fundamentals of Operating Systems" course

Prof. Jalili

Fall 2017

Tehran

Sharif University of Technology

TA of the "Advanced Programming in Java"

Dr. Marvasti

Spring 2017

Tehran

Sharif University of Technology

TA of the "Advanced Programming in Java" course

Dr. Marvasti

Fall 2016

Tehran

Sharif University of Technology

TA of the "Data Structure" course

Prof. Jamzad
Fall 2016

Tehran
Sharif University of Technology

TA of the "Advanced Programming in Java" course

Dr. Marvasti
Spring 2016

Tehran
Sharif University of Technology

TA of the "Fundamentals of Programming in C" course

Dr. Gheibi
Fall 2015

Tehran
Sharif University of Technology

Work Experiences.....

HPDS(High Performance Data Storage) Company

Intern

Responsible for automating the system update process and conducting system FIO tests

2018

Tehran

Darmaneh Company

Android and IOS Developer

Responsible for developing the Android and IOS app

2016-2018

Tehran

Publications

Papers.....

Realizing Burst-tolerant Datacenter Networks with Vertigo

Sepehr Abdous*, Erfan Sharafzadeh*, Soudeh Ghorbani (*Equal contribution)
CoNEXT 2021

2021

Stock price forecasting using machine learning with event detection on candlestick

Salman Marvasti, **Sepehr Abdous**, Negin Majidi

File available in Researchgate

2018

Posters.....

Vertigo: A Priority-aware Burst-tolerant Datacenter Fabric

Sepehr Abdous, Erfan Sharafzadeh, Sougol Gheissi, Soudeh Ghorbani
16'th Coordinated Science Laboratory Student Conference (CSLSC)

2021

Virtual

Valinor: Transport-Agnostic Packet Prioritization and Ordering at the Edge

Erfan Sharafzadeh, **Sepehr Abdous**, Sougol Gheissi, Soudeh Ghorbani
16'th Coordinated Science Laboratory Student Conference (CSLSC)

2021

Virtual