

# Dilini Rukshani Athapathu

First Year PhD Student, University of California San Diego

[dathapathu@ucsd.edu](mailto:dathapathu@ucsd.edu) | <https://arukshani.github.io/>

---

## RESEARCH INTERESTS

Network Congestion Control, Transport Protocols, Network Measurement, Energy Efficiency in Datacenters

---

## CURRENT

### PhD Student

Sep. 2021 – Present

*University of California San Diego*

*San Diego, CA, USA*

- Working on identifying energy saving opportunities in data centers

---

## PUBLICATIONS

- A. A. Philip, R. Ware, **R. Athapathu**, J. Sherry, and V. Sekar. Revisiting TCP Congestion Control Throughput Models and Fairness Properties At Scale. In Proceedings of the 2021 ACM SIGCOMM Internet Measurement Conference (IMC). Virtual

---

## POSTERS AND RESEARCH TALKS

- **R. Athapathu**, Energy Consumption of TCP (Lightning Talk). Google Networking Research Summit, February 2022
- **R. Athapathu**, R. Ware, A. Philip, S. Seshan. and J. Sherry. A Watchdog Service for Measuring Congestion Control Harm on the Internet. N2Women'20, ACM SIGCOMM, August 2020
- S. Vincent, A. Philip, **R. Athapathu**, S. Seshan. and J. Sherry. NADA Fairness: Analyzing the Future of WebRTC. N2Women'20, ACM SIGCOMM, August 2020

---

## EXPERIENCE

### Research Scholar

Mar. 2020 – Apr. 2021

*Carnegie Mellon University*

*Pittsburgh, PA, USA*

- Developed a testbed to measure congestion control harm and fairness of Internet services
- Conducted video streaming experiments to understand how different adaptive bitrate (ABR) algorithms in conjunction with different congestion control algorithms affect competing traffic

### Associate Technical Lead

May 2017 – Feb. 2020

*WSO2*

*Colombo, Sri Lanka*

- Involved in the design and implementation of MIME, HTTP/1.1, and HTTP/2 protocols for the standard library of ballerina programming language

### Senior Software Engineer

Jan. 2013 – Apr. 2017

*eBuilder Technology Centre Pvt Ltd*

*Colombo, Sri Lanka*

- Involved in the continuous design and development of the eBuilder service network management solution for large mobile manufacturing companies (Telia, Halebop, MTS, HMD/Nokia, Microsoft, and Sony Mobile)

### Software Engineer

Sep. 2011 – Jan. 2013

*Sri Lanka Insurance Corporation*

*Colombo, Sri Lanka*

- Developed SLIC Health Plus application, which is a mobile portable application to speed up SLIC medical insurance claim settlement process

---

## OPEN SOURCE CONTRIBUTIONS

- ballerina-lang : Open source programming language and platform developed for cloud-era application programmers
- transport-http : HTTP protocol handling implementations that are used by various WSO2 products
- Netty : Asynchronous event-driven network application framework for development of protocol servers and clients

## EDUCATION

---

**M.S. in Advanced Software Engineering**, Distinction, Batch Top, University of Westminster, Oct. 2015

**B.S. in Information Technology**, First Class Honours, Middlesex University, June 2011

## ADVISING AND MENTORING

---

- 2020: Serena Vincent (CMU ISR REUSE student from Spelman College, USA)
- 2019: Tharuja Sandeepanie (Intern at WSO2 who is an undergraduate from University of Moratuwa, Sri Lanka)