

# Anubhavnidhi “Archie” Abhashkumar

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## EDUCATION

*University of Wisconsin, Madison*

Phd in Computer Sciences

Aug 2014 – Aug 2020

*Anna University, India*

Bachelor of Engineering (B.E.) in Computer Science and Engineering

Aug 2010 – Jun 2014

## WORK

*ByteDance*

Sep 2020 – Current

## EXPERIENCE

Research Scientist

- I am part of the Networking R&D group at ByteDance.

*University of Wisconsin, Madison*

Aug 2015 – Aug 2020

Research Assistant

- I worked with Professor Aditya Akella. My thesis was on automated network policy management.

*Facebook, Menlo Park*

Nov 2019 – Jun 2020

Research Collaborator

- I worked with Hyojeong Kim at Facebook’s Routing team.

*HP Labs, Networking and Mobility, Palo Alto*

May 2016 – Jan 2017, May 2016 – Jan 2017

Research Associate

- I worked with Joon-Myung Kang and Sujata Banerjee on representing and configuring diverse dynamic intent-based policies.
- I worked with Jeongkeun Lee and Sujata Banerjee on programming switch data-path from high-level policies.

## PUBLICATIONS

1. **Crescent: Emulating Heterogeneous Production Network at Scale.** Zhaoyu Gao, Anubhavnidhi Abhashkumar, Weirong Jiang, Yi Wang, et al. In *Networked Systems Design and Implementation (NSDI)*, 2024
2. **NetAssistant: Dialogue Based Network Diagnosis in Data Center Networks.** Haopei Wang, Anubhavnidhi Abhashkumar, Changyu Lin, Weirong Jiang, Yi Wang, et al. In *Networked Systems Design and Implementation (NSDI)*, 2024
3. **D2R: Dataplane-Only Policy-Compliant Routing Under Failures.** Kausik Subramanian, Anubhavnidhi Abhashkumar, Loris D’Antoni, and Aditya Akella. In *Symposium on SDN Research (SoSR)*, 2021
4. **Running BGP in Data Centers at Scale..** Anubhavnidhi Abhashkumar\*, Kausik Subramanian\*, Alexey Andreyev, Hyojeong Kim, Nanda Kishore, Jingyi Yang, Petr Lapukhov, Aditya Akella, and James Hongyi Zeng. In *Networked Systems Design and Implementation (NSDI)*, 2021
5. **AED: Incrementally Synthesizing Policy-compliant and Manageable Configurations.** Anubhavnidhi Abhashkumar, Aaron Gember-Jacobson, and Aditya Akella. In *Conference on emerging Networking EXperiments and Technologies (CoNext)*, 2020
6. **Tiramisu: Fast and General Network Verification.** Anubhavnidhi Abhashkumar, Aaron Gember-Jacobson, and Aditya Akella. In *Networked Systems Design and Implementation (NSDI)*, 2020
7. **Liveness Verification of Stateful Networks.** Farnaz Yousefi, Anubhavnidhi Abhashkumar, Kausik Subramanian, Kartik Hans, Soudeh Ghorbani, and Aditya Akella. In *Networked Systems Design and Implementation (NSDI)*, 2020
8. **Detecting Network Load Violations for Distributed Control Planes.** Kausik Subramanian, Anubhavnidhi Abhashkumar, Loris D’Antoni, and Aditya Akella. In *Programming Language Design and Implementation (PLDI)*, 2020
9. **Supporting Diverse Dynamic Intent-based Policies using Janus.** Anubhavnidhi Abhashkumar, Joon-Myung Kang, Sujata Banerjee, Aditya Akella, Ying Zhang, and Wenfei Wu. In *Conference on emerging Networking EXperiments and Technologies (CoNext)*, 2017
10. **P5: Policy-driven optimization of P4 pipeline.** Anubhavnidhi Abhashkumar, Jeongkeun Lee, Jean Tourrilhes, Sujata Banerjee, Joon-Myung Kang, Wenfei Wu, and Aditya Akella. In *Symposium on SDN Research (SoSR)*, 2017
11. **Paving the Way for NFV: Simplifying Middlebox Modifications using StateAlyzr.** Junaid Khalid, Aaron Gember-Jacobson, Roney Michael, Anubhavnidhi Abhashkumar, and Aditya Akella. In *Networked Systems Design and Implementation (NSDI)*, 2016

## **PATENTS**

**Generating composite network policy.** Joon Myung Kang, Anubhavnidhi Abhashkumar, Sujata Banerjee, Ying Zhang, Wenfei Wu. U.S. Patent Application No. 15/581,826.

## **SERVICES**

### **Program Committee Member**

- CoNEXT 2024
- INFOCOM 2024
- SoCC 2022
- PAM 2022
- SIGCOMM 2022 Poster and Demo
- CoNEXT 2021
- SOSR 2021
- SPIN 2021
- SIGCOMM 2021 Poster and Demo

### **Program Chair**

- Cloudnet 2022 Poster and Demo

### **Journal Reviewer**

- ToN 2021
- ToN 2022
- IJCS 2021
- IJCS 2020

### **Other**

- Artifact Evaluation Program Committee for SIGCOMM 2021
- Shadow Program Committee for IMC 2019