

# Sulyab Thottungal Valapu

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in [sulyab](#)

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## Research Interests

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• Computer Networking • Blockchain • Mechanism Design • Internet of Things

## Experience

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- 2021 –
- ◇ **University of Southern California** | Graduate Research / Teaching Assistant
    - Teaching Assistant for *Fundamentals of Computation* (Spring '21), *Intro to Algorithms and Theory of Computing* (Fall '21), and *Intro to Computer and Network Security* (Spring '22)
- 2018 – 2020
- ◇ **Arista Networks** | Software Engineer
    - Developed Network Layer software for Arista EOS®
    - Involved in all stages of software development process including design, development, deployment, debugging and maintenance

## Education

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- 2021 –
- ◇ **Ph.D., University of Southern California** Computer Science
    - Advised by [Prof. Bhaskar Krishnamachari](#)
    - Member of [Autonomous Networks Research Group](#)
    - CGPA: 3.94 / 4.0
- 2014 – 2018
- ◇ **B.Tech. Information Technology, IIT Allahabad**, Graduated with Honors.
    - CGPA: 9.37 / 10

## Publications

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### Conference Proceedings

- 1 **S. Thottungal Valapu**, T. Sarkar, J. Coleman, A. Avyukt, H. Embrechts, D. Torfs, M. Minelli, and B. Krishnamachari, "DARSAN: A Decentralized Review System Suitable for NFT Marketplaces," in *Blockchain – ICBC 2023*, Q. Wang, J. Feng, and L.-J. Zhang, Eds., Cham: Springer Nature Switzerland, 2023, pp. 3–20, ISBN: 978-3-031-44920-8. [DOI: 10.1007/978-3-031-44920-8\\_1](#).

### Technical Reports

- 1 **S. Thottungal Valapu** and B. Krishnamachari, "A Survey of Probabilistic Micropayment Schemes," IEEE Blockchain Technical Briefs, Tech. Rep., Mar. 2022.

## Skills

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- Languages
- ◇ Proficient: Python • C • C++
  - Used: WebAssembly • Rust • Java • MATLAB
- Tools / Technologies
- ◇ Tendermint • GDB • Git • Wireshark

## Miscellaneous Experience

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### Internships

- 2017/05 - 2017/07   ◇ **Yonsei University, South Korea**
- Designed and implemented a blockchain-based protocol for intelligent autonomous vehicles to exchange messages and purchase services.
  - Explored the concept of blockchain branching to tackle scaling limitations

### Awards and Achievements

- 2017   ◇ Dean's Merit List, IIT Allahabad

### Activities

- 2017   ◇ Core Team member of Hack In The North, the largest student-led hackathon in India
- 2022, 2023   ◇ Research Coach for the Viterbi Summer Institute program, an initiative by USC Viterbi School of Engineering to provide incoming freshmen from underrepresented backgrounds with introductory research experience.

### Selected Coursework

- Systems   ◇ Advanced Computer Networking  
Internet Measurement  
Autonomous Cyber-Physical Systems  
Applied Cryptography  
Network Security  
Operating Systems
- Algorithms   ◇ Advanced Analysis of Algorithms
- AI   ◇ Cognitive Science  
Natural Language Processing  
Artificial Intelligence