

# Siva Kesava Reddy Kakarla

Computer Science (PhD), UCLA

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🌐 [sivakesava1.github.io](https://github.com/sivakesava1)

## Interests

I am a third year PhD Student in the Network Verification (NetVerify) Group at University of California, Los Angeles. My research interests lie at the intersection of Networks and Programming Languages.

## Education

- 2017 – Present **M.S. and Ph.D. in Computer Science.**  
University of California, Los Angeles (UCLA), CA, USA.  
CGPA: 4.0 / 4.0.  
Advisors: [Prof. Todd Millstein](#) and [Prof. George Varghese](#)
- 2013 – 2017 **B. Tech. in Computer Science and Engineering (Honors).**  
Indian Institute of Technology, Kharagpur, India.  
CGPA: 9.67 / 10.0.

## Publications

- SIGCOMM '20 GRoot: Proactive Verification of DNS Configurations. (Best Student Paper Award)**  
[Siva Kesava Reddy Kakarla](#), Ryan Beckett, Behnaz Arzani, Todd Millstein, George Varghese.  
✎ *Proceedings of the Conference of the ACM Special Interest Group on Data Communication, SIGCOMM 2020.*  
Artifact [https://github.com/dns-groot/2020\\_SIGCOMM\\_Artifact\\_157](https://github.com/dns-groot/2020_SIGCOMM_Artifact_157)
- NSDI '20 Finding Network Misconfigurations by Automatic Template Inference (SELFSTARTER).**  
[Siva Kesava Reddy Kakarla](#), Alan Tang, Ryan Beckett, Karthick Jayaraman, Todd Millstein, Yuval Tamir, George Varghese.  
✎ *Proceedings of the 17<sup>th</sup> USENIX Symposium on Networked Systems Design and Implementation, NSDI 2020*, pages 999–1013.  
Artifact <https://github.com/SivaKesava1/SelfStarter>
- arXiv '19 Expect More from the Network: DDoS Mitigation by FITT in Named Data Networking.**  
Zhiyi Zhang, Vishrant Vasavada, [Siva Kesava Reddy Kakarla](#), Eric Osterweil, and Lixia Zhang.  
✎ *CoRR*, abs-1902-09033.
- GLOBECOM '17 IEEE 802.11ac DBCA: A Tug of War between Channel Utilization and Fairness.**  
Mahankali Saketh, [Siva Kesava Reddy Kakarla](#), Raja Karmakar, Samiran Chattopadhyay, Sandip Chakraborty.  
✎ *Proceedings of the IEEE Global Communications Conference, 2017*, pages 1–6.

## Awards and Honors

- 2020 “Best Student Paper” award at the ACM SIGCOMM 2020
- 2018–2019 [UCLA Dean's Graduate Student Research \(GSR\) Fellowship](#)
- 2017 [UCLA Graduate Dean's Scholar Award \(GDSA\)](#), the prestigious award offered to the department's top incoming PhD student

2013 – 2017 [JBNSTS Scholarship](#)  
 2013 All India Rank-330 in IIT-JEE Advance  
 2013 All India Rank-229 in Joint Entrance Examination(JEE) Mains  
 2011 – 2013 [KVPY Fellowship](#) from Dept. of Science and Technology, India

## Talks and Presentations

Aug '20	GROOT – The 2020 ACM SIGCOMM Conference	Virtual
Jul '20	GROOT – Intentionet	Virtual
Feb '20	SELFSTARTER – The 2020 NSDI Conference	Santa Clara, CA
Sep '19	GROOT – MNR Group, Microsoft Research	Redmond, WA
Aug '19	SELFSTARTER – Intentionet and Microsoft Research	Seattle/Redmond, WA

## Research Experience

### **Google From Text to Graph Templating of Google Metro Networks**

(Intern) with Jayaram Mudigonda and, Anees Shaikh, NetInfra Group. Summer '20

### **Microsoft GROOT: Proactive Verification of DNS Configurations**

(Intern, Remote) with Ryan Beckett, Behnaz Arzani (MNR Group, MSR), Prof. Todd Millstein and, Prof. George Varghese Summer '19 – Spring '20

### **UCLA Finding Network Misconfigurations by Automatic Template Inference**

(Graduate RA) with Ryan Beckett (Mobility and Networking group, Microsoft Research), Karthick Jayaraman (Windows Azure security group, Microsoft), Prof. Todd Millstein, Prof. Yuval Tamir and, Prof. George Varghese Summer '18 – Summer '19

### **UCLA Producer-Assisted Pushback**

(Course Project) with Prof. Lixia Zhang, Internet Research Lab. Winter '18 – Spring '18

### **IIT Kharagpur Does QUIC Kill Your Data Plan? A View Using YouTube Adaptive Streaming Clients**

(UG Thesis) with Prof. Sandip Chakraborty, Complex Network Research Group (CNeRG). Fall '16 – Spring '17

### **IIT Kharagpur IEEE 802.11ac DBCA: A Tug of War Between Channel Utilization & Fairness**

(UG RA) with Prof. Sandip Chakraborty, Complex Network Research Group (CNeRG). Fall '16 – Spring '17

### **IISc Bangalore Experimenting with Akka Package**

(Intern) with Prof. Komondoor V. Raghavan, Compilers, PL and SE Group. Summer '15

## Professional Experience

### **LinkedIn Enhancement of LinkedIn spam detection tool with dependency injection model and Mockito unit tests**

(Intern) with Prashanth Nimmagadda, Content Filtering & Spam Detection Team. Summer '16

## Teaching Experience

### **UCLA CS 118 – Computer Network Fundamentals**

Graduate Teaching Assistant Fall '19