

VARUN CHANDRASEKARAN

PERSONAL INFORMATION	1210 West Dayton Street Madison, WI 53706 Website : http://pages.cs.wisc.edu/~chandrasedkaran/	
EDUCATION	University of Wisconsin-Madison, Madison <i>Doctoral Candidate, Computer Science, Advised by Suman Banerjee</i>	Sep 2016 onwards
	New York University, New York <i>M.S in Computer Science, Advised by Lakshminarayanan Subramanian</i>	Aug 2014 - June 2016
	Anna University, India <i>B.E. in Computer Science and Engineering</i>	Aug 2010 - May 2014
AREAS OF INTEREST	<ul style="list-style-type: none">• Security & Privacy• Networks & Mobile Systems• Distributed Computing	
PROFESSIONAL EXPERIENCE	Intern, Microsoft Research, Bangalore - Systems & Security <ul style="list-style-type: none">• Mentor: Ranjita Bhagwan, Ramachandran Ramjee• Secure Machine Learning	Feb 2017 - June 2017
	Intern, IBM Research, Yorktown Heights - Networks and OS <ul style="list-style-type: none">• Mentor: John Tracey, Next Generation Data Centers• Can discuss on request.	July 2016 - Sep 2016
	Intern, AT&T Labs & Research, Middletown - Networks and OS <ul style="list-style-type: none">• Manager: Matt Szela• Performed feasibility study, Proof of Concept level testing & bench-marking focused on Network Function Virtualization of Packet Routing & Forwarding functions using proprietary software & hardware.• Implemented the same on a white-box, using Software Defined Networking techniques.	June 2015 - Aug 2015
	Intern, Tata Communications, Chennai - Networks and OS <ul style="list-style-type: none">• Gained a detailed understanding of Software Defined Networks using both Floodlight (Java) and the NOX controller.• Implemented the OpenFlow protocol on Linux mounted on VirtualBox in OSX.• Additionally, developed the structure and implemented a scaled version of SDN for testing and security analysis using Wireshark, Mininet and cbench.	Jan 2014 - April 2014
	Intern, IBM, Bangalore - Database Systems and Web Technologies <ul style="list-style-type: none">• Worked on aggregating real-time information to implement an Inventory Management System of computational resources for the Systems and Technology group to use regularly.• Performed periodic maintenance tests to ensure optimal throughput and validated system performance through scaling (LAN vs Wireless) and the TPC-C and OLTP-Bench benchmarking techniques.	May 2011 - July 2011
PUBLICATIONS	Alphacodes: Usable, Secure Transactions with Untrusted Providers using Human Computable Puzzles <ul style="list-style-type: none">• Ashlesh Sharma, Varun Chandrasekaran, Fareeha Amjad, Dennis Shasha, Lakshminarayanan Subramanian• ACM DEV, November 2016	
	Traversing the Quagmire that is Privacy in your Smart Home <ul style="list-style-type: none">• Chuhan Gao*, Varun Chandrasekaran*, Kassem Fawaz, Suman Banerjee• ACM SIGCOMM Workshop on IoT Security and Privacy, August 2018	

MANUSCRIPTS

Secure Mobile Identities

- *Research Guide:* Lakshminarayanan Subramanian, New York University
- *Objective:* Decentralized identity authentication.

Compact Search: A Search Abstraction for Mobile Devices

- *Research Guide:* Lakshminarayanan Subramanian, New York University; Sunandan Chakraborty, IUPUI
- *Objective:* A new paradigm for resource-aware web-search.

Maximum Entropy Robust Routing, New York University

- *Research Guide:* Lakshminarayanan Subramanian, New York University
- *Objective:* Devising a new multi-pathing mechanism for Internet routing.

Understanding Model Theft

- *Research Guides:* Somesh Jha, University of Wisconsin-Madison; Kamalika Chaudhuri, UCSD
- *Objective:* To understand similarities between machine learning model theft, and the process of active learning, to formulate defense strategies.

ONGOING RESEARCH PROJECTS

Linguistic Obfuscation

- *Research Guide:* Lakshminarayanan Subramanian, New York University
- *Objective:* To obfuscate user-entered search queries to hinder profiling.

Verified Microservice Architectures

- *Research Guides:* Suman Banerjee, Somesh Jha, University of Wisconsin-Madison
- *Objective:* To provide new programming paradigms to ensure that specification of large-scale microservice architectures are formally verified for correctness.

Rearchitecting Mobile Applications with Edge Support

- *Research Guides:* Suman Banerjee, University of Wisconsin-Madison
- *Objective:* To benchmark performance of mobile applications in the status quo to discover alternate avenues of design using edge support for enhanced performance.

GRADUATE TEACHING EXPERIENCE

Networks and Mobile Systems

- Teaching Assistant for course taught by Lakshminarayanan Subramanian in Spring 2016

Computer Systems Organization

- Teaching Assistant for course taught by Jinyang Li in Fall 2015

Technology and Economic Development

- Teaching Assistant for course taught by Lakshminarayanan Subramanian in Spring 2015

AWARDS AND HONORS

- NYU M.S. Thesis/Research Fellowship, Spring 2016
- Selected for the AT&T Student Research Summit, Spring 2016

PROGRAMMING SKILLS

- **Programming Languages:** Java, C, C++, Python, Golang, SQL, Matlab
- **Scripting Languages:** JavaScript, PHP
- **Markup Languages:** XML, HTML, Latex

MISCELLANEOUS

- Participant at
 - New England Security Day 2016, Boston, MA
 - NSDI'17, Boston, MA
 - SOSP'17, Shanghai, China
 - IEEE S&P'18, San Francisco, CA
- Reviewer for Transactions of Mobile Computing
- Received Support for
 - OSDI'16, Savannah, GA
 - SecUnity Summer School 2017, Darmstadt, GER

REFERENCES

- Prof. Suman Banerjee, University of Wisconsin-Madison
- Prof. Somesh Jha, University of Wisconsin-Madison
- Prof. Lakshminarayanan Subramanian, New York University
- Larry Rudolph, Two Sigma