

# Deepak Kumar

Stanford University

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## Research Interests

Computer security & privacy, Online abuse, Internet measurement

## Education

Postdoctoral researcher, Stanford University, 2020—2022. Building tools to study and mitigate the effects of online abuse.

PI: Zakir Durumeric

Ph.D. Computer Science, University of Illinois, Urbana-Champaign, August 2020.

Advisor: Michael Bailey

B.S Computer Science, University of Michigan, 2016.

## Publications

**No Calm in the Storm: Investigation QAnon Website Relationships** Hans Hanley, Deepak Kumar, Zakir Durumeric

In International Conference on Web and Social Media (ICWSM), Atlanta, GA. June 2022.

**Designing Toxic Content Classification for a Diversity of Perspectives** Deepak Kumar, Patrick Gage Kelley, Sunny Consolvo, Joshua Mason, Elie Bursztein, Zakir Durumeric, Kurt Thomas, Michael Bailey  
In 17th USENIX Symposium on Usable Privacy and Security (SOUPS '21), Vancouver, BC. August 8 - 10, 2021.

**SoK: Hate, Harassment, and the Changing Landscape of Online Abuse** Kurt Thomas, Devdatta Akhawe, Michael Bailey, Elie Burszstein, Dan Boneh, Sunny Consolvo, Nicki Dell, Zakir Durumeric, Patrick Gage Kelley, Deepak Kumar, Damon McCoy, Sarah Meiklejohn, Thomas Ristenpart, Gianluca Stringhini

In 42nd IEEE Symposium on Security and Privacy (Oakland '21), San Francisco, California. May 23 - 27, 2021.

**Measuring Identity Confusion with Uniform Resource Locators**

Joshua Reynolds, Deepak Kumar, Zane Ma, Rohan Subramaniam, Meishan Wu, Martin Shelton, Joshua Mason, Emily Stark, Michael Bailey

In ACM Computer and Human Interaction Conference (CHI) 2020, Honolulu, Hawaii.

**All Things Considered: An Analysis of IoT Devices on Home Networks**

Deepak Kumar, Kelly Shen, Benton Case, Deepali Garg, Galina Alperovich, Dmitry Kuznetsov, Rajarshi Gupta, Zakir Durumeric

In 28th USENIX Security Symposium (USENIX '19), Santa Clara, California. Aug 14 - 16, 2019.

**Skill Squatting Attacks on Amazon Alexa**

Deepak Kumar, Riccardo Paccagnella, Paul Murley, Eric Hennenfent, Joshua Mason, Adam Bates, Michael Bailey

In 27th USENIX Security Symposium (USENIX '18), Baltimore, Maryland. Aug 15 - 17, 2018.

**Erays: Reverse Engineering Ethereum's Opaque Smart Contracts**

Yi Zhou, Deepak Kumar, Surya Bakshi, Joshua Mason, Andrew Miller, Michael Bailey

In 27th USENIX Security Symposium (USENIX '18), Baltimore, Maryland. Aug 15 - 17, 2018.

**SoK: "Plug & Pray" Today – Understanding USB Insecurity in Versions 1 through C.**

Dave (Jing) Tian, Nolen Scaife, Deepak Kumar, Michael Bailey, Adam Bates, Kevin R. Butler

In 39th IEEE Security and Privacy Symposium (Oakland '18), San Francisco, California. May 21 - 23, 2018.

**Tracking Certificate Misissuance in the Wild.**

Deepak Kumar, Zhengping Wang, Matthew Hyder, Joseph Dickinson, Joshua Mason, Michael Bailey, Gabrielle Beck, David Adrian, Zakir Durumeric, J. Alex Halderman.

In 39th IEEE Security and Privacy Symposium (Oakland '18), San Francisco, California. May 21 - 23, 2018.

**Understanding the Mirai Botnet.**

Manos Antonakakis, Tim April, Michael Bailey, Matt Bernhard, Elie Bursztein, Jaime Cochran, Zakir Durumeric, J. Alex Halderman, Luca Invernizzi, Michalis Kallitsis, Deepak Kumar, Chaz Lever, Zane Ma, Joshua Mason, Damian Menscher, Chad Seaman, Nick Sullivan, Kurt Thomas, Yi Zhou.

In 26th USENIX Security Symposium (USENIX Security '17), Vancouver, Canada, August 16-18, 2017.

**Security Challenges in an Increasingly Tangled Web.**

Deepak Kumar, Zane Ma, Zakir Durumeric, Ariana Mirian, Joshua Mason, Michael Bailey, and J. Alex Halderman.

In 26th World Wide Web Conference (WWW'17). Perth, Australia. April 3 - 7, 2017.

## External Service

Program Committee. 30th USENIX Security Symposium.

## Invited Talks

**Security Challenges in an Increasingly Tangled Web.**, World Wide Web Conference (WWW'17). Perth, Australia. April 2017.

**Tracking Certificate Misissuance in the Wild.**, IEEE Symposium on Security and Privacy (Oakland '18). San Francisco, CA. May 2018.

**Skill Squatting Attacks on Amazon Alexa.**, USENIX Security Symposium. Baltimore, Maryland. Aug 2018.

**All Things Considered: An Analysis of IoT Devices on Home Networks.**, USENIX Security Symposium. Santa Clara, CA. Aug 2019.

**SoK: Hate, Harassment, and the Changing Landscape of Online Abuse.**, IEEE Symposium on Security and Privacy (Oakland '21). Virtual. May 2021.

**Designing Toxic Content Classification for a Diversity of Perspectives**, USENIX Symposium on Usable Security and Privacy (SOUPS '21). Virtual. August 2021.

## Professional Experience

**Postdoctoral Scholar**, Stanford University. September 2020 – Present.

**Software Engineering Intern**, Google. May 2018 – Aug 2018.

**Research Assistant**, University of Illinois, Urbana-Champaign. May 2017 – August 2020.  
Advisor: Michael Bailey

**Graduate Teaching Assistant, CS 461**, University of Illinois, Urbana-Champaign. January 2017 – May 2017.

**Research Assistant**, University of Illinois, Urbana-Champaign. August 2016 – December 2016.  
Advisor: Michael Bailey

**Software Engineering Intern**, Microsoft. May 2016–August 2016.

**Teaching Assistant, EECS 388**, University of Michigan. August 2015–May 2016.

**Software Engineering Intern**, Microsoft. May 2015–August 2015.

**hackNY Fellow**, hackNY. May 2014–August 2014.

## Volunteering and Mentorship

**Master's Student Mentor**, University of Illinois, Urbana-Champaign.

**ICOS Big Data BootCamp**, Ann Arbor, Michigan. June 2016.