

Deepak Kumar

University of Illinois, Urbana-Champaign
Computer Science
445 Coordinated Science Laboratory

Phone: (248) 231-3575
Email: dkumar11@illinois.edu
Homepage: <https://kumarde.com/>

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

Conflicting Perspectives: Exploring Design Pitfalls and Opportunities to Automatically Detect Abusive Conversations Online. In submission.

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.

Era5: 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.

Invited Talks

Security Challenges in an Increasingly Tangled Web., World Wide Web Conference (WWW'17). Perth, Australia. April 3-7, 2017.

Tracking Certificate Misissuance in the Wild., IEEE Symposium on Security and Privacy (Oakland '18). San Francisco, CA. May 21-23, 2018.

Skill Squatting Attacks on Amazon Alexa., USENIX Security Symposium. Baltimore, Maryland. Aug 15 - 17, 2018.

Professional Experience

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

Research Assistant, University of Illinois, Urbana-Champaign. May 2017 – Present.
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.

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