




Karthika Subramani

Research Engineer II
Georgia Institute of Technology
School of Electrical and Computer Engineering

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 [Google Scholar Profile](#)
 <https://karthikaS03.github.io>

Education

- 2015 - 2021 **Doctor of Philosophy**, Computer Science | *University of Georgia - Athens, GA*
Advisors: Roberto Perdisci, Kyu Hyung Lee
Thesis: “*Investigating the Security of Emerging Web Technologies and their Role in Social Engineering Attacks*”
- 2008 – 2012 **Bachelor of Engineering**, Computer Science | *SREC College – Tamil Nadu, India*
Graduated in top 5%. Was elected as *Joint Secretary* of CSI student chapter

Research Experience

- 2022 – Present **Research Engineer II** | *Astrolavos Lab @ Georgia Institute of Technology*
- Advisors: Manos Antonakakis, Roberto Perdisci
 - Actively working on measuring security posture of network technologies, implementing behavior-based traffic classification and processing high-speed network traffic to enhance IDS outcomes
 - Advise students on projects concerning network traffic analysis and classification, social engineering attacks and web crawling automation
- 2022 **Post-Doctoral Researcher** | *NIS Lab @ University of Georgia*
- Advisor: Roberto Perdisci
 - Published 2 first-author papers related to the abuse of emerging web technologies
 - Assisted with the supervision of junior members of the laboratory
 - Advocated starting of student chapter for Women in CyberSecurity (WiCyS)
- 2015 - 2021 **Research Assistant** | *NIS Lab @ University of Georgia*
- Advisors: Roberto Perdisci, Kyu Hyung Lee
 - Published 4 first-author papers related to DDoS attacks in IXP, social engineering attacks such as spams, malvertisements and fingerprinting encrypted traffic to identify smart home devices
- 2012 – 2015 **Trainer** | *Education & Research Dept @ Infosys Ltd, Mysore, India*
- Developed an end-to-end automated system using selenium, SQL for evaluating training assessments, significantly reducing the manual efforts involved in the evaluations of large batches of trainees.
 - Mentored interns in multiple windows app development projects

Teaching Experience

- Spring 2017 **Instructor** | *University of Georgia*
- Instructed Discrete Mathematics course for a class of 60 students. In addition to teaching, was involved in crafting assignments and assessments
- 2015 – 2016 **Teaching Assistant** | *University of Georgia*
- Taught multiple lab classes assisting students with lab programs and assessing their projects
- 2012 – 2015 **Trainer** | *Education & Research Dept @ Infosys Ltd, Mysore, India*
- Trained new recruits in Java, SQL, Web and Microsoft .NET technologies handling batches of 100+ trainees
 - Developed coursework for Web technologies and e-learning portal

Scholarships & Grants

- 2023 Faculty Scholarship | Women in CyberSecurity, WiCyS 2023 Conference
- 2021 Student Grant | USENIX 2021 Conference

Research Publications

- IEEE S&P'24** H. Nguyen, [K. Subramani](#), B. Acharya, R. Perdisci and P. Vadrevu, "C-FRAME: Characterizing and measuring in-the-wild CAPTCHA attacks," in 2024 IEEE Symposium on Security and Privacy (SP), San Francisco, CA, USA, 2024.
[Acceptance Rate: 18%, (261/1389 submissions)]
- WWW'24** [Subramani, Karthika](#), Roberto Perdisci, Pierros-Christos Skafidas, and Manos Antonakakis. 2024. [Discovering and Measuring CDNs Prone to Domain Fronting](#). In Proceedings of the ACM on Web Conference 2024 (WWW '24). Selected for Oral Presentation.
[Acceptance Rate: 20%, (405/2008 submissions)]
[selected for Oral presentation ~ only 50% accepted papers]
- IMC '22** [Subramani, Karthika](#), William Melicher, Oleksii Starov, Phani Vadrevu, and Roberto Perdisci. "PhishInPatterns: measuring elicited user interactions at scale on phishing websites." In Proceedings of the 22nd ACM Internet Measurement Conference, 2022.
[Acceptance Rate: 26%, (56/212 submissions)]
- EURO S&P '22** [Subramani, Karthika](#), Jordan Jueckstock, Alexandros Kapravelos, and Roberto Perdisci. "SoK: Workerounds-Categorizing Service Worker Attacks and Mitigations." In 2022 IEEE 7th European Symposium on Security and Privacy (EuroS&P), IEEE, 2022.
[Acceptance Rate: 29%, (42/141 submissions)]
- PMC '22** [Subramani, Karthika](#), Omid Setayeshfar, Xingzi Yuan, Raunak Dey, Dezhi Hong, In Kee Kim, and Kyu Hyung Lee. "Privacy invasion via smart-home hub in personal area networks." Pervasive and Mobile Computing 85 (2022).
- DIMVA '21** [Subramani, Karthika](#), Roberto Perdisci, and Maria Konte. "Detecting and Measuring In-The-Wild DRDoS Attacks at IXPs." In International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment, 2021.
[Acceptance Rate: 29%, (19 /65 submissions)]
- SMARTCOMP '21** [Subramani, Karthika](#), Omid Setayeshfar, Xingzi Yuan, Raunak Dey, Dezhi Hong, Kyu Hyung Lee, and In Kee Kim. "ChatterHub: Privacy Invasion via Smart Home Hub." In 2021 IEEE International Conference on Smart Computing (SMARTCOMP), IEEE, 2021.
[Acceptance Rate: 31%, (20/65 submissions)]
- IMC '20** [Subramani, Karthika](#), Xingzi Yuan, Omid Setayeshfar, Phani Vadrevu, Kyu Hyung Lee, and Roberto Perdisci. "When push comes to ads: Measuring the rise of (malicious) push advertising." In Proceedings of the ACM Internet Measurement Conference, 2020.
[Acceptance Rate: 25%, (53/216 submissions)]

Poster Sessions

- May 2024 [Discovering and Measuring CDNs prone to Domain Fronting](#)
WWW 2024, Poster Session
- Jul 2022 [Workerounds - Categorizing Service Worker Attacks and Mitigations](#)
2022 CAE in Cybersecurity Symposium
- Dec 2019 [IXmon: detecting and analyzing DRDoS attacks at internet exchange points](#)
ACSAC 2019, Poster Session
- Oct 2019 [SmartRecon: Spy on Smart-Home Devices Hidden Behind the Hub](#)
Research Day at University of Georgia
[Awarded 3rd Prize]
- Apr 2018 [A Detailed Study of Phishing Sites via Site Deconstruction & Clustering Techniques](#)
Research Day at University of Georgia

Invited Talks

Conferences

- May 2024 [Discovering and Measuring CDNs Prone to Domain Fronting](#)
WWW 2024
- Oct 2022 [PhishInPatterns: Measuring Elicited User Interactions at Scale on Phishing Websites](#)
IMC 2022
- July 2021 [Detecting and Measuring In-The-Wild DRDoS Attacks at IXPs](#)
DIMVA 2021
- May 2020 [When Push comes to Ads: Measuring the Rise of \(Malicious\) Push Advertising](#)
IMC 2020

Seminars & Guest Lectures

- Mar 2023 [PhishInPatterns: Measuring Elicited User Interactions at Scale on Phishing Websites](#)
Centers of Academic Excellence in Cybersecurity
- Nov 2022 [PhishInPatterns: Measuring Elicited User Interactions at Scale on Phishing Websites](#)
Palo Alto Networks, Security Seminar
- Oct 2022 [PhishInPatterns: Measuring Elicited User Interactions at Scale on Phishing Websites](#)
University of Georgia, Guest Lecture in Computer Networks Course
- Nov 2020 [When Push comes to Ads: Measuring the Rise of \(Malicious\) Push Advertising](#)
Georgia Institute of Technology, Cyber Security Lecture Series

Services

Professional

- 2025 Program Committee | WWW'25
- 2024 Reviewer | TWeb
- 2024 Mentor for Artifacts Evaluation | ACSAC'24
- 2024 Program Committee | ACSAC'24
- 2024 Program Committee | MADWeb'24
- 2024 Program Committee | WWW'24
- 2023 Mentor for Artifacts Evaluation | ACSAC'23
- 2023 Program Committee | ACSAC'23
- 2023 Reviewer (Mentorship Program) | SecWeb'23
- 2023 Judge for Poster Session | WiCys'23
- 2023 Peer Reviewer | TOPS
- 2022 Peer Reviewer | TOPS
- 2022 Member | WiCys'22
- 2021 External Reviewer | EUROSP'21

Institutional and Volunteering

- 2023 Volunteer Judge for K-12 School Stem Competition
- 2019 - 2021 Executive Member | Computer Science Graduate Student Association at UGA
- 2016 - 2017 Public Relations Officer | Indian Student Association at UGA
- 2014 - 2015 Tutor for Underprivileged Kids | Make a Difference NGO

Awards

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| 2022 | Creative Solving for a CTF Challenge WiCys CTF Challenge |
| 2019 | 3 rd Place, Poster Competition at Research Day University of Georgia, USA |
| 2015 | Tech Champion Infosys Ltd., India |
| 2011 | 1 st Place, C Programming Code Champion Sri Ramakrishna Engineering College, India |
| 2010 | 2 nd Place, Project Presentation Ranganathan Engineering College, India |

References

Roberto Perdisci

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Manos Antonakakis

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