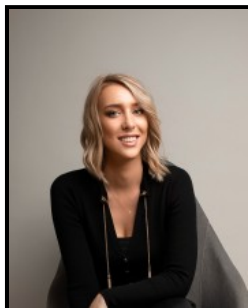




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Cybersecurity Lecture Series

Unlocking Arm Assembly: From Basics to Hacker's Shellcode

Maria Markstedter

Founder and CEO of Azeria Labs

Digital Media Center Theatre
April 10, 2024 - 04:30 pm

CANCELLED

Abstract:

Ever wondered what magic lies behind the scenes of compiled binaries and how reverse engineers interpret software without having access to the source code? The answer is: Assembly language! Security experts need an understanding of assembly language to analyze malicious binaries (malware) or compiled software for vulnerabilities.

The Arm processor, originally a staple in mobile devices and IoT gadgets, has now ascended to the realms of laptops and servers, and is more relevant than ever before in today's tech landscape. In this 90-minute journey we will explore the secrets of assembly language, see what assembly actually is, how assembly languages differ and why, and how Arm assembly instructions work under the hood. But that's not all—we're taking a step into the hacker's world to see how exploit developers write shellcode to connect remote targets back to their host machine. To ensure your adventure continues beyond our session, you'll receive a practical workbook for honing your newfound skills at home.

Speaker's Bio:

Maria Markstedter is the founder and CEO of Azeria Labs, a company that provides training services to some of the world's top tech companies and law enforcement agencies. In addition, Maria is the author of the book "Arm Assembly Internals and Reverse Engineering - Blue Fox Edition", published in May 2023. With a Bachelor's degree in Corporate Security and a Master's degree in Enterprise Security, Maria has held key positions in various startups, including her role as the Chief Product Officer for Arm virtualization startup Corellium. In 2018, Maria was honored as a Forbes "30 under 30" in technology and has since been featured in Vogue Business Magazine. Her expertise in Arm reverse engineering and binary exploitation earned her the title of Forbes Person of the Year in Cybersecurity 2020. Maria has collaborated with Arm on exploit mitigation research in Cambridge and continues to empower security researchers and developers globally to effectively attack and defend Arm-based software.

This lecture has refreshments @ 03:30 pm

