

Billy Tsouvalas

Research Assistant & PhD Candidate at SUNY Stony Brook
Electrical & Computer Engineer BSc, MSc
IBM & Google Cybersecurity Professional Certifications
[Website](#), [LinkedIn](#), [Google Scholar](#)

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Education

Stony Brook University (SBU)	2022-Present
Computer Science PhD	
Virginia Commonwealth University (VCU)	2021-2022
Computer Science Graduate Studies	
University of Patras	2014-2020
BSc, MSc in Electrical and Computer Engineering	
Master's Thesis: Malware Classification Methodologies	

Work Experience

SBU Research Assistant	2023-Present
Web Security Research	
SBU PragSec Lab System Administrator	2023-Present
Network & Server Administrator	
SBU Teaching Assistant	2022-2023
Web Security Research	
TA for Computer Networks course	
VCU Research Assistant	2021-2022
Network Intrusion Detection and Prevention Systems	
Critical Infrastructure Cybersecurity: Energy Sector (Solar, Wind)	
VCU Cybersecurity Center Social Media Administrator	2021-2022
Social Media Marketing and Digital Presence	
University of Patras Research Intern	2019-2020
Static and Dynamic Malware Analysis and Detection	
Online Misinformation Propagation	
Website Development and Maintenance	2018-2020
Web Design/Development	
Web Applications	
Social Media and Digital Marketing	

Research

SBU PragSec Lab	2022-Present
Web Security	
Honeypots, Bot Behavior, Deception-based Defenses	
VCU Modern Heuristics Research Group	2021-2022
Network Security and Cyber Threat Analysis and Characterization	
Critical Infrastructure Cybersecurity	
University of Patras Malware Analysis Team	2019-2020
Development of Static and Dynamic Malware Detection Tool	

Publications

	2023
Efficient Graph-Based Malware Detection Using Minimized Kernel and SVM	
<i>Billy Tsouvalas, Dimitrios Serpanos</i>	
Cyber Malware: Offensive and Defensive Systems	

Surgical teaching of the retropubic midurethral sling: a virtual reality training system
Lauren Siff, Vasileios Tsouvalas, Lewis F Bost, Milos Manic
 International Urogynecology Journal **AWARD: Best Video Presentation at AUGS/IUGA 2022**
 2022

Location and Language Independent Fake Rumor Detection through Epidemiological and Structural Graph Analysis of Social Connections
Dimitrios Serpanos, Georgios Xenos, Billy Tsouvalas
 Frontiers in Artificial Intelligence
 2021

Data-driven correlation of cyber and physical anomalies for holistic system health monitoring
Daniel L Marino, Chathurika S Wickramasinghe, Billy Tsouvalas, Craig Rieger, Milos Manic
 IEEE Access
 2020

Malware classification methodologies.[\(link\)](#)
B. Tsouvalas
 University of Patras, Greece MSc Thesis

Academic Service

USENIX 2024 Artifact Evaluation Committee 2023
 Publicity Chair IEEE EuroS&P Workshop 2022, 2023
 Active Defense & Deception Workshop under IEEE European Security and Privacy Conference
 Reviewer for IEEE Transactions on Industrial Informatics 2022

Certifications & Courses

INFOSEC Advanced Python Scripting for Cybersecurity Specialization Course duration: 1 month	Obtained: Sep. 2023
INFOSEC OWASP Top 10 Specialization Course duration: 1 month	Obtained: Sep. 2023
INFOSEC Privacy Fundamentals Specialization Course duration: 1 month	Obtained: Aug. 2023
Google Cybersecurity Professional Certificate Course duration: 6 months	Obtained: Aug. 2023
Palo Alto Networks Cybersecurity Prof. Cert. Course duration: 1 month	Obtained: June 2023
CISCO Network Automation Engineering Fundamentals Specialization Course duration: 3 months	Obtained: June 2023
(ISC) ² Certified in Cybersecurity Specialization (CC) Course duration: 1 month	Obtained: June 2023
INFOSEC JavaScript Security Specialization Course duration: 1 month	Obtained: June 2023
EC-Council Cybersecurity Attack and Defense Fundamentals Course duration: 5 months	Obtained: June 2023
Google IT Automation w/ Python Prof. Cert. Course duration: 8 months	Obtained: Oct. 2021
INFOSEC Cyber Incident Response Specialization Course duration: 4 months	Obtained: Aug. 2021
IBM Cybersecurity Analyst Prof. Cert Course duration: 8 months	Obtained: Dec. 2020
Homeland Security and Cybersecurity Specialization University of Colorado, Colorado Springs Course duration: 4 months	Obtained: Dec. 2020

Professional Skills

Network & Systems	Network Security
Nginx, Apache, Mitmproxy, Openresty, Lua, Docker, Hydra, Wpscan, Honeybot Deployment, Bot Behavior Analysis	IDS/IPS, Wireshark, Zeek, Suricata, Snort, Stratosphere IPS, Anomaly Detection, Intrusion Detection Datasets
Penetration Testing and Forensics	Malware Analysis
OWASP, Burp Suite, Metasploit, NMAP, Hashcat, Aircrack-ng, Volatility	NSA Ghidra, Hex Rays IDA Pro, Radare, gdb, Malware Reverse Engineering, Control Flow & API Call Graphs
Machine Learning and Data Mining	Programming and Scripting
Binary Decision Trees, Random Forest, SVM, Neural Networks, Markov Chains, BERT	Python, C, C++, DSP Assembly, Java, Javascript, Git, Matlab

Languages

English ¹	●●●●●
French ²	●●●●●
Greek (Native)	●●●●●
German	●●●●●

¹ETS TOEFL
²DALF C1 CERF

Soft Skills

Fast Learner	Responsible	Performance Under Pressure	Team Work
Multitasking	Stamina	Verbal Communication	Public Speaking

Misc

Military Service Obligations Fulfilled	2018-2019
Hellenic Navy	