

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) Computer Science PhD Expected Graduation: May 2026	2022-Present
Virginia Commonwealth University (VCU) Computer Science Graduate Studies	2021-2022
University of Patras BSc, MSc in Electrical and Computer Engineering Master's Thesis: Malware Classification Methodologies	2014-2020

Work Experience

Cloudflare Research Scientist Intern Bot & Fraud Research and Development	Summer 2024, Summer 2025
Research Assistant Stony Brook University, Stony Brook, NY Web Security, Deception-based Defenses Bot Management and Mitigation	2023-Present
System Administrator Stony Brook University, Stony Brook, NY Computer Science Dept PragSec Lab Network & Server administrator	2023-Present
Teaching Assistant Stony Brook University, NY Computer Networks course	2022-2023
Research Assistant Virginia Commonwealth University, Richmond, VA Network Intrusion Detection and Prevention Systems Critical Infrastructure Cybersecurity: Energy Sector (Solar, Wind)	2021-2022
Publicity and Media Administrator Virginia Commonwealth University Cybersecurity Center, Richmond, VA Publicity, Social Media Marketing, and Digital Presence	2021-2022
Research Intern University of Patras, Greece Static and Dynamic Malware Analysis and Detection Online Misinformation Propagation	2019-2020
Freelance Web Developer Web Design, Full-Stack Web Development Business-oriented Web Applications Social Media and Digital Marketing Strategy	2018-2020

Research

SBU PragSec Lab Web Application Security, Honey pots, Bot behavior Active Defenses and Deception-based Security	2022-Present
VCU Modern Heuristics Research Group Critical Infrastructure and Network Security, Cyber-Physical Systems Anomaly Detection for IDS (Collaboration with DoE)	2021-2022

University of Patras Malware Analysis Team 2019-2020
Development of Static and Dynamic Malware Detection Tools
Online Rumor Propagation and Misinformation Detection Framework

Publications

2024

[Knocking on Admin's Door: Protecting Critical Web Applications with Deception](#)
Billy Tsouvalas, Nick Nikiforakis
International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment (DIMVA 2024) 2023

[Efficient Graph-Based Malware Detection Using Minimized Kernel and SVM](#)
Billy Tsouvalas, Dimitrios Serpanos
Cyber Malware: Offensive and Defensive Systems

[\[PATENT\] Methods and systems for surgical training](#)
Lauren Siff, Milos Manic, Lewis Franklin Bost, Vasileios Tsouvalas
Patent number: WO2023215822A2, Application number: PCT/US2023/066595

[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

[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

[CyStAR: Cyber-Physical Threat Detection and Asset Monitoring](#)
Craig Rieger, Jacob P Lehmer, Daniel Marino Lizarazo, Chathurika S Wickramasinghe, Billy Tsouvalas, Milos Manic
Idaho National Laboratory Software

[Cyber State Awareness For Resilience](#)
Craig Rieger, Daniel Marino Lizarazo, Chathurika S Wickramasinghe, Billy Tsouvalas, Milos Manic, Jacob P Lehmer
Idaho National Laboratory Software 2020

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

Academic Service - Volunteering

Annual Computer Security Applications Conference (ACSAC) 2025 2025
Reviewer

USENIX 2025 2025
Artifact Evaluation Committee

Information Security Conference (ISC) 2024 2024
Web Security Session Chair, Publicity Chair

USENIX WOOT Conference on Offensive Technologies 2024 2024
Artifact Evaluation Committee

ACM CCS 2024 2024
Artifact Evaluation Committee

USENIX 2024 Artifact Evaluation Committee	2024
<i>Women in Science and Engineering (WSE)</i> Instructor for SBU Course on Web Security and Network Intrusion Course	Spring 2024
<i>Women in Science and Engineering (WSE)</i> Instructor for SBU Course on Web Security and Network Intrusion Course	Fall 2023
Publicity Chair IEEE EuroS&P Workshop Active Defense & Deception Workshop	2022, 2023
IEEE Transactions on Industrial Informatics Reviewer	2022

Awards - Grants

Distinguished Artifact Reviewer ACM CCS 2024	2024
Best Video Abstract Presentation at AUGS/IUGA 2022 Virtual Reality Training Model for Retropubic Sling Surgery American Urogynecologic Society (AUGS) and International Urogynecological Association (IUGA) 2022	2022
NSF Student Travel Grant for 2020 IEEE/IFIP Network Operations and Management Symposium (NOMS'2020) Award Abstract # 2014439	2021

Invited Talks

Center of Academic Excellence in Cyber Research (CAE-R) Knocking on Admin's Door: Protecting Critical Web Applications with Deception	2025
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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 Professional Certificate Course duration: 8 months	Obtained: Oct. 2021

INFOSEC Cyber Incident Response Specialization Course duration: 4 months	Obtained: Aug. 2021
IBM Cybersecurity Analyst Professional Certificate 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 Nginx, Apache, Mitmproxy, Openresty, Lua, Docker, Hydra, Wpscan, Honeybot Deployment, Bot Behavior Analysis	Network Security IDS/IPS, Wireshark, Zeek, Suricata, Snort, Stratosphere IPS, Anomaly Detection, Intrusion Detection Datasets
Penetration Testing and Forensics OWASP, Burp Suite, Metasploit, NMAP, Hashcat, Aircrack-ng, Volatility	Malware Analysis NSA Ghidra, Hex Rays IDA Pro, Radare, gdb, Malware Reverse Engineering, Control Flow & API Call Graphs
Machine Learning and Data Mining Binary Decision Trees, Random Forest, SVM, Neural Networks, Markov Chains, BERT	Programming and Scripting Python, PHP, Rust, 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 Hellenic Navy	2018-2019
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