

Michele Campobasso

PhD in Information Security @ Eindhoven University of Technology

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about me

Computer scientist with an unusual interest for social relations. I am often called optimistic, but I consider myself realistic. I believe that many problems need just a different approach to be solved. I am the kind of guy that wonders 'why' a thing has always been like that, often between 10PM and 3AM.

personal

pronouns: he/him
nationality: Italian

languages

Italian: mother tongue
English: professional proficiency

areas of specialization

Threat modeling,
emerging threats,
underground market
investigation, threat
quantification,
penetration testing

interests

Biking, go-karts, hiking,
organizing social
events, on-the-road
travels, fixing 'broken'
electronics, cooking
Italian & exotic food, my
nerdy YouTube feed



@alpha_centauri3



michelecampobasso

RESEARCH OVERVIEW & IMPACT

- EXPERTISE IN: **underground forum marketplaces** and their **impact** in the threat landscape [2], **emerging threats** and **threat modeling** [6], underground community infiltration, **stealth** data collection [3], **attacker preferences** and **cyber threat quantification** [1]
- RESEARCH ON EMERGENT THREAT [6] instrumental to **international investigation led by the Dutch National Police, FBI & EUROPOL**, leading to hundreds of arrests worldwide & market shutdown in a massive law enforcement operation ([press release](#)).
- CONTRIBUTION ON ACCESS-AS-A-SERVICE [4] was **presented to the U.S. Department of Commerce**; NSO Group was included as a company threatening the US national security ([press release](#)).
- LARGE INDUSTRY & MEDIA ATTENTION ([Troy Hunt](#), [Recorded Future on Genesis Market](#), [local media](#))
- AWARDS: **Best Dutch Cybersecurity Paper 2024**, runner up [1], Distinguished **Paper** with Artifacts [5].
- EXPLOIT PREDICTION SCORING SYSTEM (EPSS) special interest group member and contributor ([link](#)).

WORK EXPERIENCE

2019-2022	Head of lab activities for Offensive Computer Security ORGANIZING HANDS-ON LAB SESSIONS AND MANAGING 150+ STUDENTS <i>Eindhoven University of Technology</i> 📍
2019-2024	Supervisor and coordinator of scientific projects at the MSc level 9 GROUPS, 35 STUDENTS OA – THREAT INTEL EXTRACTION, MALWARE ANALYSIS <i>Eindhoven University of Technology</i> 📍
2019-2023	Analyst of underground cybercriminal markets: infiltration, stealth monitoring, threat modeling, and activity estimation OBTAIN ACCESS TO SEGREGATED MARKETS; AUTOMATED, STEALTH DATA EXTRACTION WITH TAILORED, CUSTOM CREATED CRAWLERS; EMPIRICAL AND STATISTICAL METHODS, UNDERGROUND INVESTIGATIONS <i>Eindhoven University of Technology</i> 📍
2019-2024	Doctorate in Information Security - Specialty: Cybercrime Ecosystem <i>Eindhoven University of Technology</i> 📍
May-Sep 2016	Internship: Junior Backend Developer and Beta Tester <i>GetConnected S.r.l.</i> 📍
Mar-Jun 2015	Internship: Junior Developer <i>AltaVia S.r.l.</i> 📍

EDUCATION

2019-2024	Doctorate in Information Security – Specialty in Cybercrime Ecosystem Thesis title: Understanding and Characterizing the Cybercriminal Ecosystem Enabling Attack Innovation at Scale <i>Eindhoven University of Technology</i>
2016-2019	Master in Computer Science and Engineering Thesis title: CARONTE: a Crawler for Adversarial Resources Over Non-Trusted, high-profile Environments <i>Alma Mater Studiorum - University of Bologna</i>
2011-2016	Bachelor in Computer Engineering <i>Alma Mater Studiorum - University of Bologna</i>

INVITED TALKS

Dec 2024	'Collecting Useful CTI from Underground Markets' – UNDERGROUND THREAT SOURCES, EMERGING THREATS @ <i>Studio 471, Intel 471, Online</i>
May 2023	'Not all cybercrime is boring if you know what to look for' – UNDERGROUND THREAT SOURCES, CYBER THREAT QUANTIFICATION @ <i>INTERSET 2023, The Hague, NL</i>
Mar 2023	""Do we have an agreement?": Exploiting Trust Mechanisms in Cybercrim. Undergr. Mark. to Derive Attacker Pref. and Estimate Threat Levels' – UNDERGR. THREAT SOURCES, CYBER THREAT QUANTIF. @ <i>University of Bologna, Bologna, IT</i>
May 2022	'Impersonation-as-a-Service: Characterizing the Emerging Criminal Infrastructure for User Impersonation at Scale' – EMERGING THREATS, THREAT MODELING, CYBER THREAT QUANTIFICATION @ <i>INTERSET 2022, Enschede, NL</i>
Dec 2021	'The Role of the Criminal Economy on the Emergence of User Imp. at Scale' – EMERG. THRS., THRT. MOD. @ <i>NYU Computational Disinformation Sympos., Online</i>
Feb 2021	'Not all threat (actors) are the same: a multidisciplinary take on cybercrime proliferation' – EMERG. THRS., THRT. MOD. @ <i>Dutch Police Cybercrime Team, Online</i>
Nov 2020	'Impersonation-as-a-Service: Characterizing the Emerging Criminal Infrastructure for User Impersonation at Scale' – EMERGING THREATS, THREAT MODELING @ <i>ASML, Eindhoven, NL</i>
Mar 2020	'Myth-busting the underground: a journey into the (often un)organized cyber-crime' – UNDERGROUND ECOSYSTEM @ <i>University of Bologna, Bologna, IT</i>

TECHNICAL CYBERSECURITY EXPERIENCE

2019-2022	Head of lab activities for Offensive Computer Security at Eindhoven University of Technology ORGANIZING HANDS-ON LAB SESSIONS AND MANAGING 150+ STUDENTS
2019-2021	Malware analysis and reverse engineering EXPERIENCE WITH GHIDRA & GDB MATURED WITH CTFs AND ACADEMIC RESEARCH
2018-2023	Tool creation for stealth data extraction BROWSER INSTRUMENTATION, HUMAN BEHAVIOR MODELING, DATA PARSING ON THE FLY
2016-2020	HackTheBox CTFs BEST RANKING GLOBALLY ON THE PLATFORM: 187, COMPLETION SCORE OF 76%
2019-2020	HackTheBox write-ups blog CO-AUTHOR OF A BLOG CONTAINING DETAILED WRITE-UPS OF RETIRED BOXES FROM THE PLATFORM HACKTHEBOX
2017-2019	IO NetGarage REVERSE ENGINEERING & BINARY EXPLOITATION. BASIC EXPLOIT CRAFTING SKILLS
2018-2019	Various CTF challenges AS A MEMBER OF THE UNIVERSITY OF BOLOGNA'S HACKING TEAM ULISSELABBO

CERTIFICATIONS

Nov 2024	Tech Against Terrorism Europe – TCO Regulation <i>Requirements, obligations and recommendations for IT professionals to counter terrorist content; identification and assessment of terrorist content; moderation mechanisms; tools for identification and disruption of terrorist content.</i> TECH AGAINST TERRORISM EUROPE – CERTIFICATE LINK
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FULL LIST OF PUBLICATIONS

Aug 2023	[1] Know Your Cybercriminal: Evaluating Attacker Preferences by Measuring Profile Sales on an Active, Leading Criminal Market for User Impersonation at Scale (paper) . MICHELE CAMPOBASSO , LUCA ALLODI ; <i>32nd USENIX Security Symposium (USENIX Security 2023)</i> , Los Angeles, USA 📍
Jul 2023	[2] You Can Tell a Cybercriminal by the Company they Keep: A Framework to Infer the Relevance of Underground Communities to the Threat Landscape (paper) . MICHELE CAMPOBASSO , LUCA ALLODI ; <i>The 22nd Workshop on the Economics of Information Security (WEIS 2023)</i> , Geneva, Switzerland 📍
Nov 2022	[3] THREAT/crawl: a Trainable, Highly-Reusable, and Extensible Automated Method and Tool to Crawl Criminal Underground Forums (paper) . MICHELE CAMPOBASSO , LUCA ALLODI ; <i>The 17th Symposium on Electronic Crime Research (APWG eCrime 2022)</i> , online
Feb 2022	SAIBERSOC: A Methodology and Tool for Experimenting with Security Operation Centers (paper) . MARTIN ROSSO , MICHELE CAMPOBASSO , GANDGUULGA GANKHUYAG , LUCA ALLODI ; <i>Digital Threats: Research and Practice</i> .
Mar 2021	[4] A Primer on the Proliferation of Offensive Cyber Capabilities (paper) . WINNONA DESOMBRE , MICHELE CAMPOBASSO , LUCA ALLODI , JAMES SHIRES , JD WORK , ROBERT MORGUS , PATRICK HOWELL O'NEILL , TREY HERR ; <i>In-Depth Research & Reports</i> , Atlantic Council
Feb 2022	[5] SAIBERSOC: Synthetic Attack Injection to Benchmark and Evaluate the Performance of Security Operation Centers (paper) . MARTIN ROSSO , MICHELE CAMPOBASSO , GANDGUULGA GANKHUYAG , LUCA ALLODI ; <i>The 36th Annual Computer Security Applications Conference (ACSAC 2020)</i> , online Distinguished Paper with Artifacts
Nov 2020	[6] Impersonation-as-a-Service: Characterizing the Emerging Criminal Infrastructure for User Impersonation at Scale (paper) . MICHELE CAMPOBASSO , LUCA ALLODI ; <i>2020 ACM SIGSAC Conference on Computer and Communications Security (CCS 2020)</i> , online Mentioned in ACM CCS 2020 Highlights
Jul 2019	CARONTE: a Crawler for Adversarial Resources Over Non-Trusted, high-profile Environments (paper) . MICHELE CAMPOBASSO , LUCA ALLODI ; <i>The 2019 IEEE European Symposium on Security and Privacy Workshops (EuroS&PW) - 1st Workshop on Attackers and Cyber-Crime Operations</i> , Stockholm, Sweden 📍