




Fabio Pagani

AFFILIATION	Postdoctoral Researcher, University of California Santa Barbara (UCSB)	
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BIO	<p>I am a postdoctoral researcher working with Giovanni Vigna and Christopher Kruegel in the SecLab at UC Santa Barbara. My research interests focus on several aspects of systems security. Currently, I am actively involved in projects related to automated vulnerability discovery (in firmware blobs and Android applications), and related to human-assisted cyber reasoning systems.</p> <p>I earned a Ph.D at EURECOM, where I was advised by Davide Balzarotti. Among other things, we investigated how non-atomic acquisitions impact the consistency of memory dumps, and we developed a framework to discover and to assess the quality of memory forensics heuristics.</p> <p>When I am away from keyboard, I enjoy hiking, rock climbing, surfing, and playing chess.</p>	
EDUCATION	Postdoctoral Researcher University of California, Santa Barbara, US	<i>Jan 2020-Current</i>
	Doctor in Philosophy (PhD) Eurecom, France Thesis: Advances in Memory Forensics	<i>Jan 2016-Sept 2019</i>
	MSc in Computer Science Università degli Studi di Milano, Italy Thesis: Defeating Return Oriented Programming Attacks Using Program Analysis Techniques Graduated with a final grade of 110/110 cum laude	<i>Feb 2013-Oct 2015</i>
	Internship Eurecom, France	<i>Feb 2015-May 2015</i>
	Erasmus Uppsala University, Sweden	<i>Jan 2014-Jun 2014</i>
	BSc in Computer Science Università degli Studi di Milano, Italy Thesis: When Hardware Meets Software: A Bulletproof Solution to Forensic Memory Acquisition Graduated with a final grade of 107/110	<i>Sep 2009-Feb 2013</i>
PUBLICATIONS	<ul style="list-style-type: none">[7] Fabio Gritti, Lorenzo Fontana, Eric Gustafson, Fabio Pagani, Andrea Continella, Christopher Kruegel, Giovanni Vigna. SYMBION: Interleaving Symbolic With Concrete Execution. In Proceedings of the IEEE Conference on Communications and Network Security (CNS) 2020[6] Fabio Pagani, Davide Balzarotti. Back to the Whiteboard: a Principled Approach for the Assessment and Design of Memory Forensic Techniques. In Proceedings of the 28th USENIX Security Symposium (USENIX Security 19) 2019[5] Fabio Pagani, Oleksii Fedorov, Davide Balzarotti. Introducing the Temporal Dimension to Memory Forensics. ACM Transactions on Privacy and Security (TOPS) 22, no. 2 (2019)	

- [4] **Fabio Pagani**, Matteo Dell'Amico, Davide Balzarotti. Beyond Precision and Recall: Understanding Uses (and Misuses) of Similarity Hashes in Binary Analysis. In Proceedings of the Eighth ACM Conference on Data and Application Security and Privacy (CODASPY) 2018
- [3] Marius Muench, **Fabio Pagani**, Yan Shoshitaishvili, Christopher Kruegel, Giovanni Vigna, Davide Balzarotti. Taming Transactions: Towards Hardware-Assisted Control Flow Integrity Using Transactional Memory. In International Symposium on Research in Attacks, Intrusions, and Defenses (RAID) 2016
- [2] **Fabio Pagani**, Matteo De Astis, Mariano Graziano, Andrea Lanzi, Davide Balzarotti. Measuring the Role of Greylisting and Nolisting in Fighting Spam. In Proceedings of the 46th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) 2016
- [1] Alessandro Reina, Aristide Fattori, **Fabio Pagani**, Lorenzo Cavallaro, Danilo Bruschi. When Hardware Meets Software: a Bulletproof Solution to Forensic Memory Acquisition. In Proceedings of the 28th Annual Computer Security Applications Conference (ACSAC) 2012

TALKS

- [1] **Fabio Pagani**. Memory Smearing: Myth Or Reality?. SANS DFIR Europe Summit 2019

SERVICE

Computers & Security (COSE)

TEACHING EXPERIENCE

- | | |
|---|-------------------------------|
| Lecture on Memory Forensics (Cybercrime and Computer Forensics)
Eurecom, France | <i>Apr. 2019</i> |
| Lecture on Python Optimization and Integration (Software Development)
Eurecom, France | <i>Dec. 2018</i> |
| Lecture on Memory Forensics (Cybercrime and Computer Forensics)
Eurecom, France | <i>May 2018</i> |
| Lecture on Python Optimization and Integration (Software Development)
Eurecom, France | <i>Dec. 2017</i> |
| Lecture on Python Optimization and Integration (Software Development)
Eurecom, France | <i>Dec. 2016</i> |
| Computer Programming - Teaching Assistant
Università degli Studi di Milano, Italy | <i>Sept. 2014 - Feb. 2015</i> |

HACKING COMPETITIONS

I am a core member of the NOPS team. Along with my teammates, I qualified twice for the CSAW Europe Finals (in 2017 we got 2nd place) and **won** hxp CTF 2018.