Simone Aonzo

Résumé (Updated to: 2024/09/04)

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— *Assistant Professor of Cybersecurity* —

Education

2017–2020	**Ph.D. in Computer Science and Systems Engineering**, *University of Genoa*.
2010-2015	**Master in Computer Science**, *University of Genoa (Italy)*, *110/110 cum laude*.

Thesis

Ph.D.	*"Novel Attacks and Defenses in the Userland of Android"* (2020)
Master	*"A new permission handling in Android"* [1] (2015)

Work Experience

2022-now	**Assistant Professor**, *Eurecom*, Sophia Antipolis/France.
2021-2022	**Research Engineer**, *Eurecom*, Sophia Antipolis/France.
2020-2021	**Postdoctoral Researcher**, *Eurecom*, Sophia Antipolis/France.
2020	**Malware Analyst**, *NDA*.
2015-2017	**Android Pentester**, *Talos srls*, Genoa/Italy.
2007-2010	**Network and Computer Systems Administrator**, *Teknoos*, Savona/Italy.

Teaching

2023-now	**Introduction to Cybersecurity**, *for Eurecom (France)*.
2017-2020	**Android Reverse Engineering**, *for Talos srls in private companies*.
2018-2019	**Mobile Security**, *Master in Cybersecurity*, University of Genoa (Italy).
2017-2019	**Android Programming**, *B.Sc. Computer Engineering*, University of Genoa (Italy).
2017-2018	**Operating Systems**, *B.Sc. Computer Engineering*, University of Genoa (Italy).

Services

2020-now	International Symposium on Research in Attacks, Intrusions and Defenses (RAID)
2023-now	USENIX Security Symposium

Third-Party Funded Projects

2022-now	DefMal, PEPR Cyber Security Research Project on Malware Analysis
2023-now	CKRISP, ANR Research Project on Artificial Intelligence

Publications

[1] S. Aonzo, G. Lagorio, and A. Merlo, "Rmperm: A tool for android permissions removal.," in *SECRYPT*, pp. 319–326, 2017.

[2] S. Aonzo, A. Merlo, M. Migliardi, L. Oneto, and F. Palmieri, "Low-resource footprint, data-driven malware detection on android," *IEEE Transactions on Sustainable Computing*, 2017.

[3] S. Aonzo, A. Merlo, G. Tavella, and Y. Fratantonio, "Phishing Attacks on Modern Android," in *Proceedings of the ACM Conference on Computer and Communications Security (CCS)*, (Toronto, Canada), October 2018.

[4] D. Caputo, L. Verderame, S. Aonzo, and A. Merlo, "Droids in disarray: Detecting frame confusion in hybrid android apps," in *IFIP Annual Conference on Data and Applications Security and Privacy*, pp. 121–139, Springer, 2019.

[5] A. Mantovani, S. Aonzo, X. Ugarte-Pedrero, A. Merlo, and D. Balzarotti, "Prevalence and impact of low-entropy packing schemes in the malware ecosystem," in *Network and Distributed System Security (NDSS) Symposium*, February 2020.

[6] S. Aonzo, G. C. Georgiu, L. Verderame, and A. Merlo, "Obfuscapk: An open-source black-box obfuscation tool for android apps," *SoftwareX*, vol. 11, p. 100403, 2020.

[7] A. Possemato, S. Aonzo, D. Balzarotti, and Y. Fratantonio, "Trust, But Verify: A Longitudinal Analysis Of Android OEM Compliance and Customization," in *2021 IEEE Symposium on Security and Privacy (SP)*, IEEE, 2021.

[8] A. Mantovani, S. Aonzo, Y. Fratantonio, and D. Balzarotti, "RE-Mind: a First Look Inside the Mind of a Reverse Engineer," in *31st USENIX Security Symposium (USENIX Security 22)*, USENIX, 2022.

[9] A. Ruggia, A. Possemato, S. Dambra, A. Merlo, S. Aonzo, and D. Balzarotti, "The dark side of native code on android," *Authorea Preprints*, 2023.

[10] S. Aonzo, Y. Han, A. Mantovani, and D. Balzarotti, "Humans vs. Machines in Malware Classification," in *32st USENIX Security Symposium (USENIX Security 23)*, USENIX, 2023.

[11] A. Ruggia, A. Possemato, A. Merlo, D. Nisi, and S. Aonzo, "Android, notify me when it is time to go phishing," in *EUROS&P 2023, 8th IEEE European Symposium on Security and Privacy*, 2023.

[12] S. Dambra, Y. Han, S. Aonzo, P. Kotzias, A. Vitale, J. Caballero, D. Balzarotti, and L. Bilge, "Decoding the secrets of machine learning in malware classification: A deep dive into datasets, feature extraction, and model performance," in *Proceedings of the 2023 ACM SIGSAC Conference on Computer and Communications Security*, pp. 60–74, 2023.

[13] A. Ruggia, D. Nisi, S. Dambra, A. Merlo, D. Balzarotti, and S. Aonzo, "Unmasking the veiled: A comprehensive analysis of android evasive malware," in *Proceedings*

of the 19th ACM Asia Conference on Computer and Communications Security, pp. 383–398, 2024.

[14] I. Tsingenopoulos, J. Cortellazzi, B. Bošanskỳ, S. Aonzo, D. Preuveneers, W. Joosen, F. Pierazzi, and L. Cavallaro, "How to train your antivirus: Rl-based hardening through the problem space," in *Proc. of the International Symposium on Research in Attacks, Intrusions and Defenses (RAID)*, 2024.

Research Topics by Keyword

- Artificial Intelligence [2, 5, 9, 10, 12, 14]
- Human Studies in Security Processes [8, 10]
- Malware Analysis [2, 5, 9, 10, 13]
- Phishing [3, 11]
- Reverse Engineering [1, 4, 6, 7, 8]