

Francesco Sassi

Curriculum Vitae

Current Position

- 2024 – now **PostDoctoral Researcher**, *Computer Science Department*, Sapienza University of Rome
Main Research interests:
 - Blockchain security
 - Cryptocurrency manipulations
 - Cybersecurity and network analysisAuthor of ≈ 10 peer reviewed papers in international journals and conferences, detailed in the publication list.

Education

- 2020 – 2024 **PhD in Computer Science**, *Sapienza University of Rome*, Italy
Advisor: *Prof. Alessandro Mei*, **Cycle:** XXXVI, **Grade:** Summa cum Laude
PhD Schools:
 - *International Summer School on Deep Learning*, Gran Canaria, Spain, 2021
 - *CS Doctoral Workshop*, Bertinoro, 2021
 - *Challenges in Building Billion User Cloud Applications*, Rocca Sinibalda, 2019
 - *Pre-doctoral Research School in CS*, Saarbrücken, Germany, 2019

2019 – 2020 **Master degree in Computer Science**, *Sapienza University of Rome*, Italy
Summa cum Laude

2015 – 2018 **Bachelor degree in Computer Science**, *Sapienza University of Rome*, Italy
Summa cum Laude

Grants

- 2021 **Avvio Alla Ricerca Tipo 1**, *ASFocus: un nuovo approccio per la rilevazione di attacchi al routing in Internet*, Sapienza Università di Roma
Role: **Principal Investigator** $\approx 1'000\text{€}$
- 2021 **Progetti di Ricerca Grandi**, *Prebunking: predicting and mitigating coordinated inauthentic behaviors in social media*, Sapienza Università di Roma
Role: **Component** $\approx 40'000\text{€}$
- 2021 - 2022 **MISE**, *"Applicazione del machine learning per Tunnel Boring Machine"*, Brevetti+ - MISE , Dipartimento di Informatica Sapienza - SWS Engineering S.P.A.
Role: **Component** $\approx 25'000\text{€}$
- 2019 - 2021 **POR FESR**, *"ARCHEM: Augmented Reality for Cultural Heritage in Etruria Meridionale"*, POR FESR 2014-2020 RIPOSIZIONAMENTO COMPETITIVO – FASE II , Dipartimento di Informatica Sapienza
Role: **Component** $\approx 80'000\text{€}$

Scholarships and Awards

- 2024 **Postdoctoral Research Fellowship**, *Winner of a one year research grant at the Department of Computer Science of Sapienza University of Rome.*
Code: AR-B 07/2024
- 2024 **Telespazio Innovation Award**, *Winner of a Special Mention at the Telespazio Innovation Award for the project: "Implementation of cloud-native AI-based system for error detection and classification on large volumes of satellite, aerial, and drone ortho image"*
- 2020 **ARCHEM: Software for system analytics**, *Winner of a self-employment assignment for the ARCHEM project, at the Department of Computer Science, University of Rome La Sapienza.*
Code: ICE 12/2020
- 2020 **Doctoral scholarship**, *Winner of a three years doctoral scholarship at the Department of Computer Science of Sapienza University of Rome, cycle XXXVI, Dipartimento di Informatica, Sapienza Università di Roma*
- 2019 **Research Fellowship**, *Winner of a one year research fellowship at the Department of Computer Science of Sapienza University of Rome.*
Code: BS-junior N.008/2019

Industrial Experience and Technological Transfer

- 2024 **Digital Engineering**, *Telespazio*
Integration of cutting-edge AI models into the video stream captured by Unmanned Aerial Vehicles (UAVs). This involved working at the intersection of artificial intelligence, computer vision, and UAV technology to develop advanced solutions for real-time video processing.
- 2020 **OR6: integration and testing of speech recognition algorithms**
The project aims to investigate Automatic Speech Recognition artificial intelligence methods for transcribing call center phone calls. I started with a literature review and a subsequent test of various commercial and open-source ASR solutions across different scenarios, including phone calls, podcasts, and videos.
- 2019 **Airmapp: an application for airport navigation with augmented reality**
This project, in cooperation with a large Airport IT Solutions company, aimed to create an Android app for indoor navigation with augmented reality (AR) capabilities. The app uses a 3D arrow for navigation and enhances the environment with virtual buttons, images, and 3D character models for advertising, attracting users to stores and offering promotional codes.

Courses

- 2022 **Decentralized Finance MOOC**, *UC Berkeley*

Conferences

- 2024 **Cybertech Europe**, *Centro Congressi La Nuvola, Roma*
- 2022 **International Conference on emerging Networking EXperiments and Technologies (CoNEXT)**, *Rome*
- 2019 **Conferenza sullo statuto etico e giuridico dell'intelligenza artificiale**, *Camera dei Deputati, Rome*

Publications

- [1] V. Imperati, M. La Morgia, A. Mei, M. Alberto, and F. Sassi, "The conspiracy money machine: Uncovering telegram's conspiracy channels and their profit model," *34th USENIX Security Symposium (USENIX Security 25)*, 2025.
- [2] F. Amadini, D. Baliani, M. Cernerla Federico and La Morgia, A. Mei, and F. Sassi, "Hard rock tbms—the experience of brenner basis tunnel, construction lot mules 2-3, for the evaluation of risk prediction tools," *Rapid Excavation and Tunneling Conference*, pp. 523–533, 2023.
- [3] F. Cernerla, M. La Morgia, A. Mei, A. M. Mongardini, and F. Sassi, "Ready, aim, snipe! analysis of sniper bots and their impact on the defi ecosystem," in *Companion Proceedings of the ACM Web Conference 2023*, ser. WWW '23 Companion, Austin, TX, USA: Association for Computing Machinery, 2023, pp. 1093–1102, ISBN: 9781450394192. DOI: [10.1145/3543873.3587612](https://doi.org/10.1145/3543873.3587612).
- [4] F. Cernerla, M. L. Morgia, A. Mei, and F. Sassi, "Token spammers, rug pulls, and sniper bots: An analysis of the ecosystem of tokens in ethereum and in the binance smart chain (BNB)," in *32nd USENIX Security Symposium (USENIX Security 23)*, Anaheim, CA: USENIX Association, Aug. 2023, pp. 3349–3366, ISBN: 978-1-939133-37-3.
- [5] A. Flor, F. Sassi, M. La Morgia, *et al.*, "Artificial intelligence for tunnel boring machine penetration rate prediction," *Tunnelling and Underground Space Technology*, vol. 140, p. 105249, 2023, ISSN: 0886-7798. DOI: [10.1016/j.tust.2023.105249](https://doi.org/10.1016/j.tust.2023.105249).
- [6] M. La Morgia, A. Mei, E. N. Nemmi, L. Sabatini, and F. Sassi, "Translated texts under the lens: From machine translation detection to source language identification," in *Advances in Intelligent Data Analysis XXI: 21st International Symposium on Intelligent Data Analysis, IDA 2023*, 2023, pp. 222–235, ISBN: 978-3-031-30046-2. DOI: [10.1007/978-3-031-30047-9_18](https://doi.org/10.1007/978-3-031-30047-9_18).
- [7] M. La Morgia, A. Mei, F. Sassi, and J. Stefa, "The doge of wall street: Analysis and detection of pump and dump cryptocurrency manipulations," *ACM Transaction Internet Technology*, vol. 23, no. 1, Feb. 2023, ISSN: 1533-5399. DOI: [10.1145/3561300](https://doi.org/10.1145/3561300).
- [8] F. Amadini, A. Flor, M. Secondulfo, *et al.*, "Bbt, lot mules 2–3. application of machine learning on tbm parameters for risk prediction tools," in *Expanding Underground-Knowledge and Passion to Make a Positive Impact on the World*, CRC Press, 2022, pp. 2593–2600.
- [9] E. N. Nemmi, F. Sassi, M. La Morgia, C. Testart, A. Mei, and A. Dainotti, "The parallel lives of autonomous systems: Asn allocations vs. bgp," in *Proceedings of the 21st ACM Internet Measurement Conference*, ser. IMC '21, Virtual Event: Association for Computing Machinery, 2021, pp. 593–611, ISBN: 9781450391290. DOI: [10.1145/3487552.3487838](https://doi.org/10.1145/3487552.3487838).
- [10] M. La Morgia, A. Mei, F. Sassi, and J. Stefa, "Pump and dumps in the bitcoin era: Real time detection of cryptocurrency market manipulations," in *2020 29th International Conference on Computer Communications and Networks (ICCCN)*, IEEE, 2020, pp. 1–9. DOI: [10.1109/ICCCN49398.2020.9209660](https://doi.org/10.1109/ICCCN49398.2020.9209660).