

RICCARDO TAIELLO, PH.D.

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ABOUT ME

I work at the intersection of machine learning, collaborative learning, and security & privacy, focusing on developing solutions for real-world challenges, particularly in medical applications. My passion is combining multiple domains to create secure and impactful systems that address practical needs.

EXPERIENCE

Machine Learning Engineer - Privacy Engineer @ Fed-BioMed *Oct 2021 - Sept 2024*

Led the design and deployment of two Secure Aggregation protocols for Federated Learning in hospital settings, enhancing privacy and security measures, resulting in a 2% time increase overhead compared without Secure Aggregation.

Teaching Assistant @ EURECOM *Oct 2022 - Feb 2024*

- Secure Communication 15h & Big Data 15h

AREAS OF EXPERTISE

- **PETs (Expert):** Multi-Party Computation, Homomorphic Encryption, Differential Privacy
- **Python (Expert):** PyTorch, Keras, Flower, PySpark
- **Machine Learning (Expert):** Federated Learning, CNN, RNN, LLM, Transformers
- **DevOPS (Intermediary):** Git, Bash, CI-CD, SQL
- **Programming Languages (Intermediary):** Java, C, C++, Go-lang
- **Languages:** English (Full proficiency), French (Full proficiency), Italian (Native tongue)

EDUCATION

Ph.D. in Privacy-Preserving Machine Learning for Collaborative Healthcare *Oct 2021 - Sept 2024*

INRIA Sophia Antipolis - EURECOM

4 publications published at MICCAI, MeDIA and ARES (See [Google Scholar](#))

MSc in Computer Science *Oct 2019 - Oct 2021*

Sapienza University of Rome

110/110 **with Honors**

Best Computer Science Student 2021

PUBLICATIONS

Privacy Preserving Image Registration - @MICCAI 2022 (Rank A) and @MedIA (I.F. > 15K)
R. Taiello, M. Önen O. Humbert, M. Lorenzi

Let Them Drop: Scalable and Efficient Federated Learning Solutions Agnostic to Client Failures @ ARES 2024 (Rank B)

R. Taiello, M. Önen C. Gritti, M. Lorenzi

Enhancing Privacy in Federated Learning: Secure Aggregation for Real-World Healthcare Applications @ MICCAI 2024 (DeCaf workshop)

R. Taiello et al.

INVITED TALKS

Stragglers in Private Federated Learning, 50th [AlgoCRYPT](#) Seminar (J.P. Morgan)

Aug. 2024