



# ANGELO RODIO

**Ph.D. Student in  
Computer Science**

## PROFESSIONAL PROFILE

Ph.D. student in Information and Communication Engineering at INRIA Sophia-Antipolis, France, under the supervision of Prof. Giovanni Neglia and Prof. Alain Jean-Marie. I received a joint M.Sc. degree in Telecom Engineering from the Polytechnic University of Bari, Italy, and the University of Côte d'Azur, France. I have been awarded with a grant from the French government through the National Research Agency to develop my research on "Sustainable Distributed Machine Learning".

## PERSONAL INFORMATION

- First Name: Angelo
- Last Name: Rodio
- Date of Birth: 06 Jul. 1995
- Place of Birth: Bari, Italy
- Nationality: Italian

## CONTACT DETAILS

- Email: a.rodio@yahoo.com
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- Address: 2004 Rte des Lucioles, 06902 Valbonne, France

## RESEARCH AND TEACHING EXPERIENCE

My research interests include:

- Distributed optimization for Machine Learning
- Resource-awareness in Federated Learning
- Energy and carbon footprint of ML training

My teaching experience includes:

- Optimization for Machine Learning, MSc DSAI, UCA (Jan. - Mar. 2022)
- Federated Learning & Data Privacy, MSc DSAI, UCA (Jan. - Mar. 2023)

## LIST OF SCIENTIFIC PUBLICATIONS AND TALKS

My list of publications includes:

- Rodio, A., Faticanti, F., Marfoq, O., Neglia, G., & Leonardi, E. (2023). Federated Learning under Heterogeneous and Correlated Client Availability. arXiv:2301.04632. To appear at IEEE INFOCOM 2023.

My list of talks includes:

- Sophia Summit 2023, Sophia Antipolis, France (Nov. 2022)
- Workshop on Edge Intelligence, Journée sur la Recherche en Apprentissage Frugal, Grenoble, France (Nov. 2022)

## SKILLS AND ABILITIES

- Mother tongue: Italian
- Proficient in English: First Certificate in English (Level B2) of the Common European Framework of Reference for Languages (CEFR) and courses of Cambridge Advanced (Level C1)
- Other languages: French (Level B2)
- Programming Languages: C, C++, Java, Python, Matlab
- Software: proficient in Python and PyTorch libraries, specialized in Deep Neural Network training on GPU clusters. Experienced with Matlab, Apache Hadoop, Spark, Eclipse, Vagrant, Docker and more.
- Soft Skills: calm, communicative, balanced, flexible, proactive, and effective at time and stress management.

## PROFESSIONAL EXPERIENCE

### **Ph.D. Student at INRIA Sophia-Antipolis**

Valbonne, France (April, 2021 - Present)

- Ph.D thesis on "Sustainable Distributed Machine Learning", advised by Prof. Giovanni Neglia and Prof. Alain Jean-Marie, supported by the French government through the 3IA Cote d'Azur Investments in the Future project by the National Research Agency (ANR) with reference ANR-19-P3IA-0002

### **Cloud Engineer at TIM S.p.A.**

Rome, Italy (Sept. 2020 - April 2021)

- Working as Engineer for Infrastructure Modernization, Telco, and Google Cloud in the group Engineering, Competence Center & Platform Management for Enterprise Market at TIM S.p.A.; active member of TIM Academy

### **Intern at INRIA Sophia-Antipolis**

Valbonne, France (Nov. 2019 - Sept. 2020)

- Working on precise indoor localization in uncalibrated environments in DIANA (Design, Implementation and Analysis of Network Architectures), supervised by Arnaud Legout and Chadi Barakat

## EDUCATION AND TRAINING

### **Master 2 in Informatique Ingenierie UBINET: Ubiquitous Networking**

Université Côte d'Azur, France (Sept. 2019 - Sept. 2020)

Supervisors: Arnaud Legout, Chadi Barakat, Luigi Alfredo Grieco

Thesis in Internet of Things. Design of a Wi-Fi Fingerprint-Based Indoor Positioning System for commercial smartphones.

- Graph Theory and Optimization Methods; Traffic Theory and Queueing Systems
- Java Security, Android Security, IoT Security, Security Applications for ML
- Machine Learning; Algorithm Design for Distributed Systems
- Virtualized Infrastructures and Cloud Computing
- Blockchain and Privacy; Multimedia Systems and Networking

### **Master in Telecommunication Engineering, with honors**

Politecnico di Bari, Italy (Feb. 2018 - Oct. 2020)

- Network Security and Mobile Radio Systems
- Discrete Mathematics and Cryptography
- Data analysis and multidimensional signal processing

### **Visiting Master Student at KNRTU, Russian Federation**

Kazan National Research Technical University (KNRTU-KAI),

Russian Federation (Apr. 2019 - Aug. 2019)

Supervisors: R. Nigmatullin, A. Nasybullin, D. Vedenkin

- Radio-propagation, Antennas and Fiber Optics, Signal Processing

### **Bachelor of Computer and Automation Engineering**

Politecnico di Bari, Italy (Sep. 2014 - Feb. 2018)

Supervisors: Gennaro Boggia, Giuseppe Piro

Thesis in Telecommunications Networks. Study on the performance analysis of nanometric communication systems.

- Mathematical analysis, complex calculus, linear algebra
- Physics: electric field, magnetic field and optics
- Computer science: programming, calculators architecture, operating systems, database systems, software engineering
- Electric circuits, measurement techniques
- Control systems, industrial automation
- Networking, telecommunications networks