



## Francesco Immorlano

**Nationality:** Italian

**Gender:** Male

### WORK EXPERIENCE

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#### Research Assistant

*Euro-Mediterranean Center on Climate Change (CMCC) Foundation* [ 05/2020 – Current ]

City: Lecce

Country: Italy

*Advanced Scientific Computing (ASC) Division*

### EDUCATION AND TRAINING

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#### Ph.D. in Engineering of Complex Systems

*Department of Engineering for Innovation, University of Salento* [ 11/2020 – Current ]

Address: Lecce (Italy)

*Department of Engineering for Innovation*

Ph.D. program focusing on the study of Machine Learning for Climate Change applications.

#### Professional qualification as Licensed Engineer (Information Technology area)

*Department of Engineering for Innovation, University of Salento* [ 07/2020 ]

Address: Lecce (Italy)

#### Master of Science in Computer Engineering

*Department of Engineering for Innovation, University of Salento* [ 2017 – 2020 ]

Address: Lecce (Italy)

Field(s) of study: Information and Communication Technologies

Final grade: **110/110 with honours (Summa cum Laude)**

Master Thesis in **High Performance Computing**

Thesis title: **The use of Machine Learning for detection and tracking of tropical cyclones**

Academic Supervisor: **Giovanni Aloisio (Full Professor)**

#### Bachelor of Science in Information Technology Engineering

*Department of Engineering for Innovation, University of Salento* [ 2014 – 2017 ]

Address: Lecce (Italy)

Field(s) of study: Information and Communication Technologies

Final grade: **110/110**

Thesis in **Computer Networks**

Thesis title: **Design and development of an Android-based application for configuring and monitoring a mini-computer through Bluetooth technology**

Supervisor: **Luigi Patrono (Assistant Professor)**



## High School Diploma

"Enrico Fermi" High School [ 2009 – 2014 ]

Address: Lecce (Italy)

Field(s) of study: Information and Communication Technologies

Final grade: **100/100**

Specialization: **Computer Science – Abacus**

## LANGUAGE SKILLS

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Mother tongue(s): **Italian**

Other language(s):

### English

**LISTENING B2 READING B2 WRITING B2**

**SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2**

## CERTIFICATIONS

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### Academic International English Language Testing System (IELTS) Certification

[ 08/2020 ]

Common European Framework of Reference for Languages (CEFR) level: B2

## PUBLICATIONS

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### Limits of Compartmental Models and New Opportunities for Machine Learning: A Case Study to Forecast the Second Wave of COVID-19 Hospitalizations in Lombardy, Italy

[2021]

DOI: 10.3390/informatics8030057

### MSG-GAN-SD: A Multi-Scale Gradients GAN for Statistical Downscaling of 2-Meter Temperature over the EURO-CORDEX Domain

[2021]

DOI: 10.3390/ai2040036

## COURSES

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### Corso di formazione per lavoratori rischio medio – Parte specifica

[ 09/2019 – 10/2019 ]

*Università del Salento, Lecce, Italy*

- Rischi elettrici generali (1 ora)
- Posture corrette nell'utilizzo di videoterminali (1 ora)
- Cenni di rischio da agenti fisici (radiazioni ottiche artificiali, campi elettromagnetici, rumore) e dispositivi di protezione individuale e collettiva (2 ore)
- Cenni sulla qualità ambientale indoor: microclima, qualità dell'aria, illuminamento e acustica (1 ora)
- Rischi meccanici generali, infortuni mancati, procedure di sicurezza e norme comportamentali nei laboratori (2 ore)
- Rischio incendio, gestione delle emergenze (procedure di esodo e di primo soccorso) e segnaletica di sicurezza (1 ora)



### **Contamination Lab II Edition**

[ 12/2018 – 06/2019 ]

*Università del Salento, Lecce, Italy*

### **Corso di formazione generale sui temi della salute e sicurezza sul lavoro**

[ 05/2019 ]

*Università del Salento, Lecce, Italy*

- Macrosettori ATECO 1-2-3-4-5-6-7-8-9

### **10th INTERNATIONAL MASTERCLASSES 2014 – hands on particle physics**

[ 04/2014 ]

*Department of Mathematics and Physics "E. De Giorgi" – University of Salento, Lecce, Italy*

### **School in company 1**

[ 06/2012 ]

*CLIO spa – Lecce, Italy*

120 hours

- Web Oriented programming
- ICT products, businesses and processes
- Company solutions, strategies and techniques

## **CONFERENCES AND SEMINARS**

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### **HPC Training and Research for Earth Sciences (HPCTRES) — 4th Annual Workshop**

[ ONLINE, 02/12/2021 – 02/12/2021 ]

### **Euro-Mediterranean Center on Climate Change (CMCC) Foundation 2021 Annual Meeting**

[ Castello Carlo V – Lecce, Italy, 02/11/2021 – 03/11/2021 ]

### **HPC Training and Research for Earth Sciences (HPCTRES) — 3rd Annual Workshop**

[ ONLINE, 10/12/2020 – 11/12/2020 ]

### **TriesteNext Academy – Scientific Research Festival**

[ Trieste, Italy, 26/09/2019 – 29/09/2019 ]

### **Galileo Festival Academy – Science and Innovation Week**

[ Padova, Italy, 08/05/2019 – 11/05/2019 ]



## **Green Week – Green Economy Festival**

[ Trento, Italy, 28/02/2019 – 03/03/2019 ]

## **VMUG Meeting**

[ University of Salento, Lecce, Italy, 05/04/2018 ]

## **PROJECTS**

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**Python implementation of a complementary control of the depth of an underwater robot with actuator redundancy**

**Test and processing of the results of ResNet-101-FPN neural network for people detection**

**Design and implementation of a ROS simulation platform for wheeled-robots with path planning in presence of obstacles**

**Java software system for the support and the management of the activities of a university department (courses, lessons, timetables, messages between students and professors)**

It is comprehensive of two web applications and a mobile application.

**Java desktop application for the management of an automate warehouse of office supplies**

## **HONOURS AND AWARDS**

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**"Best Business Plan" award**

Università del Salento [ 06/2019 ]

***Contamination Lab II Edition***

Final grade: **30/30**

## **ORGANISATIONAL SKILLS**

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**Organisational skills**

Excellent organisational skills acquired during education years and improved through university.

## **COMMUNICATION AND INTERPERSONAL SKILLS**

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**Communication and interpersonal skills**

Excellent communication skills and natural aptitude to work in team improved through the participation in different projects carried out in the context of university exams. I think there is a lot to learn from other people: collaboration is crucial to get better results.



## **JOB-RELATED SKILLS**

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### **Job-related skills**

- Advanced knowledge of tools and techniques of Information and Communication Technology for design and management of information systems, computers, computer networks, databases and automatic control systems
- Computer Programming: Java, C, Python, Bash, MATLAB, SQL, HTML, CSS, TypeScript
- Good knowledge of image processing techniques
- Good knowledge of Deep Learning and Machine Learning frameworks
- Good knowledge of LaTeX