



MATTEO FRANCIA

Birthday: February 3, 1992
Genre: Male
Address: Cesena, Italy

Phone: (+39) 333 108 3669
E-mail: [matteo.francia2\[at\]studio.unibo.it](mailto:matteo.francia2[at]studio.unibo.it)
Skype: teeeo_
WWW: <https://github.com/w4bo>

DESIRED OCCUPATION

Placement in a position that allows for research in machine learning with a particular focus on data mining.

SUMMARY

Rotary best graduate award - School of Engineering and Architecture **May 20, 2017**
27th Rotary Award "Guido Paolucci"

Research fellowship **May, 2017 → April, 2018**
Modeling social behaviors from trajectory data *DISI - University Of Bologna, Italy*

Visiting researcher **October, 2016 → December, 2016**
Advancements in the aggregate programming field *University Of Iowa, Iowa City, IA, USA*

Submission to SASO 2017 as first author
11th IEEE International Conference on Self-Adaptive and Self-Organizing Systems

Master's degree **October, 2014 → March, 2017**
110L - Computer Science and Engineering - University of Bologna, Italy

Erasmus+ Universität Bielefeld, Germany **September, 2015 → July, 2016**

EDUCATION

Master's degree **October, 2014 → March, 2017**
Computer Science and Engineering *University of Bologna, Italy*

- Studies in the field of software engineering, programming paradigms and languages.
- 110L/110 - *Magna cum Laude*

Erasmus+ **September, 2015 → July, 2016**
Naturwissenschaftliche Informatik *Universität Bielefeld, Bielefeld, Germany*

- Studies in the field of artificial intelligence, machine learning, neural networks and speech recognition.

Bachelor's degree **September, 2011 → October, 2014**
Electronics, informatics and telecommunications engineering *University of Bologna, Italy*

- Studies in the field of networking, signal processing, software engineering and programming languages.
- 110L/110 - *Magna cum Laude*

High-school diploma **2006 → 2011**
Informatica abacus *I.T.T.S. "Blaise Pascal", Cesena, Italy*

- 100L/100 - *Magna cum Laude*

PUBLICATIONS

Submission to SASO 2017

11th IEEE International Conference on Self-Adaptive and Self-Organizing Systems

- Title: “Towards a Foundational API for Resilient Distributed Systems Design”.
- Authors: Matteo Francia, Danilo Pianini, Jacob Beal, Mirko Viroli.

Master’s degree thesis

March 16, 2017

A Foundational Library for Aggregate Programming

Relator: Prof. Mirko Viroli

- Co-relators: Jacob Beal (University of Iowa), Danilo Pianini (University of Bologna)
- *Deployment of the Protelis-Lang library and Protelis-Test framework for the aggregate programming.* External site: <http://amslaurea.unibo.it/13090/>

Bachelor’s degree thesis

October 9, 2014

Apprendimento Hebbiano in Robotica: Teoria e Applicazione

Relator: Prof. Andrea Roli

- *After the study of Hebbian learning theory, a sequence of steps to build a robot capable to learn is presented exploiting DAC and Value System architectures.* External site: <http://amslaurea.unibo.it/7550/>

AWARDS

Best graduate award

May 20, 2017

Best graduate - School of Engineering and Architecture

27th Rotary Award “Guido Paolucci”

EXPERIENCE

Research fellowship

May, 2017 → April, 2018

Modeling social behaviors from trajectory data

DISI - University Of Bologna, Italy

- User and group profiling based on location data, with a particular focus on big data architectures
- UniBO supervisor: Prof. Matteo Golfarelli

Visiting researcher

October, 2016 → December, 2016

Advancements in the aggregate programming field

University Of Iowa, Iowa City, IA, USA

- Development of the fully-resilient Protelis-Lang library for aggregate computing
- UIowa supervisor: Dr. Jacob Beal, UniBO supervisor: Prof. Mirko Viroli

Internship

October 1, 2013 → March 15, 2014

Raspberry Pi and Linux Kernel

APIce lab, University of Bologna, Cesena, Italy

- *Analysis of Raspberry Pi’s I/O kernel modules to manage GPIOs and external devices on Linux. Project and implementation of Magic Boxes demo.*
- Supervisor: Prof. Alessandro Ricci
- External site: <https://apice.unibo.it/xwiki/bin/view/Tirocini/raspi14Francia>

EffeSicurezza di Francia Luigi

June → August: 2008, 2007, 2006

Apprentice

Cesena, Italy

- Design and installation of security, CCTV and home automation systems

OTHER

Open source contributions

- Protelis: development of the fully-resilient **Protelis-Lang** library for aggregate computing, bug fixes and further enhancements. External site: <https://github.com/Protelis/Protelis>
- Alchemist: enhancements of the Alchemist simulator and bug fixes. External site: <https://github.com/AlchemistSimulator/Alchemist>
- Contributor to ArchWiki and Wikipedia

Exhibition

March 14 and 15, 2014

Magic boxes

MAMbo - Museum Of Modern Art Bologna, Bologna, Italy

- *We built “smart” boxes—with Raspberry Pis and Android tablets—capable of self-organization and coordination. Users can interact with them, creating different compositions and effects.*
- Supervisor: Prof. Alessandro Ricci
- External site: <http://www-db.disi.unibo.it/MAMbo/mambo/i6/en/>

TECHNICAL STRENGTHS

Hardware configuration

Server and Desktop systems assembling

Computer Programming

Object Oriented design, distributed systems, concurrent programming, mobile programming (Android)

Software configuration

Windows and Linux installation and configuration

Programming Languages

Java, Scala, C#, Haskell, Prolog, Java Script, C, Python

Protocols & APIs

TCP, UDP, HTTP, DNS, JSON, SOAP, REST

Databases

SQL, MySQL, PostGres, PostGis

Development techniques

Git; Build systems: Gradle, Maven; CI: drone.io and TravisCI

Markup languages

XML, HTML, Markdown

Tools

Vim

LANGUAGE

	Reading	Listening	Writing	Speaking
Italian	Mother tongue			
English	C1	C1	B2	B2
German	B1	B1	A2	A2

Skills acquired during Erasmus+ in Bielefeld (DE), and research at University Of Iowa, IA (USA)

IELTS, British Council, European level: C1

July, 2015

ADDITIONAL INFORMATION

About me: During both Bachelor's and Master's degrees, I have learned to manage small to medium-sized group projects. My permanences in Bielefeld and Iowa considerably improved my adaptation and independence skills, giving me the opportunities to integrate with multicultural communities.

Field of interests: programming languages and paradigms, machine learning, data analytics, neural networks, open source.

Signature, May 23, 2017