MATTEO FRANCIA

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SUMMARY

PhD Student - Computer Science and Engineering   November, 2017 → Now
University of Bologna, Italy

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*

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

PhD Student   November, 2017 → Now
Computer Science and Engineering   *University of Bologna, Italy*

· Analytics of data coming from wearable and smart devices.

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

[1] Matteo Francia. Apprendimento hebbiano in robotica: teoria e applicazione.

[2] Matteo Francia. A foundational library for aggregate programming.

[3] Matteo Francia, Danilo Pianini, Jacob Beal, and Mirko Viroli. Towards a foundational api for resilient distributed systems design. In *Foundations and Applications of Self* Systems (FAS* W), 2017 IEEE 2nd International Workshops on*, pages 27–32. IEEE, 2017.

AWARDS

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

EXPERIENCE

Teacher   **September, 2017**
Database and data management   *Futura srl, San Giovanni in Persiceto, Bologna, Italy*

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
· `https://apice.unibo.it/xwiki/bin/view/Tirocini/raspi14Francia`

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.