# GIOVANNI CIATTO



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## IN SHORT

PhD student at University of Bologna, attending the "Data Science and Computation" PhD course. Main research activity comprehends the area of distributed systems, with a particular focus on the models, architectures, and infrastructures, there including Distributed Ledger Technologies (e.g., Blockchains), technologies for Big Data management and complex event processing.

## **EDUCATION**

### PhD Student

November, 2017  $\rightarrow$  Now

University of Bologna, Italy

Data Science and Computation

· Studies in the field of Data Science and Big Data, focusing on novel enabling approaches, architectures and technologies

# Master's degree

October, 2014  $\rightarrow$  March, 2017

Computer Science and Engineering

University of Bologna, Italy

- · Studies in the field of programming paradigms, computational models, distributed systems coordination, robotics, machine learning and artificial vision, web applications, business intelligence, model-driven software engineering
- $\cdot$  110/110 cum laude

#### Master's degree thesis

March 16, 2017

Third generation neural networks: formalization as timed automata, validation and learning

Relator: Prof. Gianluigi Zavattaro

- · Co-relators: Elisabetta De Maria, Cinzia Di Giusto (University of Nice)
- · Modeling of spiking neural networks by means of the "timed automata" formalism, validation of the so-achieved model and proposal of a learning approach.
- · External site: https://github.com/gciatto/snn\_as\_ta

# Bachelor's degree

September, 2011  $\rightarrow$  October, 2014

Electronics, informatics and telecommunications engineering

University of Bologna, Italy

- · Studies in the field of networking, signal processing, software engineering and programming languages.
- $\cdot$  110/110 cum laude

# Bachelor's degree thesis

October 9, 2014

Impiego combinato di GPS, BLE e riconoscimento di immagini per individuare entit nella realt aumentata Relator: Prof. Mirko Viroli

- Steering a user perceiving an augmented world by integrating GPS for long distances, bluetooth beacons for indoor localization, and marker recognition for closer objects.
- · External site: http://amslaurea.unibo.it/7658/

## High-school diploma

Scientific curriculum

Liceo Scientifico "C. Caminiti", S. Teresa di Riva (ME), Italy

· Final mark 98/100

#### **EXPERIENCE**

Teaching assistant for the course "Object oriented programming" Sept.  $\rightarrow$  Dec., 2017 School of Engineering and Architecture University of Bologna, Italy

- · Foundations of the object oriented programming paradigm, design patterns, concurrency basics, and GUI development in Java
- · Supervisor: Prof. Mirko Viroli

Teaching assistant for the course "Distributed Systems" School of Engineering and Architecture

 $\mathbf{Sept.} \, \rightarrow \mathbf{Dec.}, \, \mathbf{2017}$ 

 $2006 \rightarrow 2011$ 

University of Bologna, Italy

- · Distributed architectures. Agent-based technologies and middlewares. Computational logic, logic programming and Prolog.
- · Supervisor: Prof. Andrea Omicini

Research Fellow, "Assegnista di ricerca"

 $\mathbf{April},\,\mathbf{2017} \rightarrow \mathbf{October},\,\mathbf{2017}$ 

Department of Informatics - Science and Engineering (DISI)

University of Bologna, Italy

- · Project title: "Language and platform techniques for complex software systems development"
- $\cdot$  Goal: producing a translation framework & runtime aimed at automatically converting COBOL sources into .NET sources
- · Supervisor: Prof. Mirko Viroli Reference: Mr. Andrea Patrignani

Internship

June, 2016  $\rightarrow$  December, 2016

I3S Laboratory

University of Nice-Sophia Antipolis, France

- · Studies in the field of theoretical informatics applied to third generation neural networks
- · Supervisors: Prof. Gianluigi Zavattaro, Prof. Cinzia Di Giusto, Prof. Elisabetta De Maria

Internship

October, 2013  $\rightarrow$  February, 2014

A GUI for the Alchemist Simulator

APICe lab, University of Bologna, Cesena, Italy

- · Design and implementation of a GUI for the Alchemist simulator and its integration with Open-StreetMap
- · Supervisor: Prof. Mirko Viroli

## LIST OF PUBLICATIONS

- [1] Roberta Calegari, Giovanni Ciatto, Stefano Mariani, Enrico Denti, and Omicini Andrea. Logic programming in space-time: The case of situatedness in LPaaS. In 19th Workshop From Objects to Agents (WOA 2018), 2018. (Accepted).
- [2] Roberta Calegari, Giovanni Ciatto, Stefano Mariani, Enrico Denti, and Andrea Omicini. Microintelligence for the IoT: SE challenges and practice in LPaaS. In 2018 IEEE International Conference on Cloud Engineering (IC2E 208), pages 292–297. IEEE Computer Society, 17–20 April 2018.
- [3] Giovani Ciatto, Stefano Mariani, Andrea Omicini, Franco Zambonelli, and Maxime Louvel. Twenty years of coordination technologies: State-of-the-art and perspectives. In Giovanna Di Marzo Serugendo and Michele Loreti, editors, *COORDINATION 2018*, volume 10852 of *Lecture Notes in Computer Science*, pages 1–30. Springer, 2018. (In press).

- [4] Giovanni Ciatto, Roberta Calegari, Stefano Mariani, Enrico Denti, and Omicini Andrea. From the blockchain to logic programming and back: Research perspectives. In 19th Workshop From Objects to Agents (WOA 2018), 2018. (Accepted).
- [5] Giovanni Ciatto, Elisabetta De Maria, and Cinzia Di Giusto. Spiking neural networks as timed automata. *Proceedings of Advances in Systems and Synthetic Biology*, pages 55–68, 2017.
- [6] Giovanni Ciatto, Stefano Mariani, and Andrea Omicini. Programming the interaction space effectively with ReSpecTX. *Intelligent Distributed Computing XI*, 737:89, 2017.
- [7] Giovanni Ciatto, Stefano Mariani, and Andrea Omicini. ReSpecTX: Programming interaction made easy. Computer Science and Information Systems (ComSIS), 2018. (Accepted with revision).
- [8] Stefano Mariani, Giovanni Ciatto, and Omicini Andrea. Novel opportunities for tuple-based coordination: XPath, the Blockchain, and stream processing. In *CEUR WORKSHOP PROCEEDINGS*, volume 1867, pages 61–64. Sun SITE Central Europe, RWTH Aachen University, 2017.

## LANGUAGE SELF-ASSESSMENT

	Listening	Reading	Interaction	Speaking	Writing
Italian	Native language				
English	C1	C1	C1	C1	C1
French	B1	B1	A1	A1	B1

#### TECHNICAL STRENGTHS

Hardware configuration Desktop & notebook PCs assembling Programming Paradigms imperative, object oriented, functional,

logic, constraint programming

Software configuration Windows and Linux installation and configuration Programming Languages Java, Scala, Xtend, C# & VB.Net, Haskell, Prolog,

JavaScript, C, Python, Minizinc, COBOL

Data Analysis ToolsMatlab/Octave, R, Python + Pandas/NumPyNetworkingSocket (TCP & UDP), HTTP, RESTful WebAPI

Databases SQL, PostgreSQL, MySQL, IBM Informix Development tools Git, Mercurial, Maven, Gradle, Swagger, Xtext

Markup languagesXML, HTML, Markdown, LATEXIDEsEclipse, IntelliJ Idea, Visual Studio,

Android Studio, PyCharm

#### ADDITIONAL INFORMATION

**About me**: I am an Software experienced developer and designer. I can both work alone or as a team, with or without my favorite IDEs. I prefer a *model driven* approach when designing software but I can easily switch my mind to some agile approach, like SCRUM, if needed.

Interests: formal models and languages, from both the designer and user point of view; MAS & coordination within distributed systems; logic or other declarative paradigms; artificial intelligence and machine learning; learning as much languages as possible!

Giovanni Ciatto, June 11, 2018