

Europass Curriculum Vitae

Personal information

Surname(s) / First name(s)

Address(es)

Email(s)

Nationality(-ies)

Date of birth

Bianchi Maria Paola

CAB F 13.1, Universitätstrasse 6, CH-8092 Zürich

maria.bianchi@inf.ethz.ch

Italian

05 October, 1984



Education

Dates

01 January, 2010 - 26 February, 2013

Title of qualification awarded

Ph.D. in Computer Science

Subject

Title: "Descriptive complexity of classical and quantum automata";

Supervisor

Prof. Beatrice Palano

Co-supervisor(s)

Prof. Carlo Mereghetti

Name and type of organization
providing education and training

Università degli Studi di Milano

Dates

01 October, 2006 - 23 April, 2009

Title of qualification awarded

Master degree in Computer Science

Subject

Title: "Automati quantistici e linguaggi unari";

Supervisor

Prof. Beatrice Palano

Co-supervisor(s)

Prof. Alberto Bertoni, Prof. Carlo Mereghetti

Name and type of organization
providing education and training

Università degli Studi di Milano

Grade

110/110 cum Laude

Dates

01 October, 2003 - 15 December, 2006

Title of qualification awarded

Bachelor degree in Computer Science

Subject

Title: "Automati quantistici per linguaggi multiperiodici";

Supervisor

Prof. Carlo Mereghetti

Co-supervisor(s)

Prof. Beatrice Palano

Name and type of organization
providing education and training

Università degli Studi di Milano

Grade

110/110 cum Laude

Dates

2003

Title of qualification awarded

High school degree

Name and type of organization
providing education and training

Liceo Scientifico Statale "Leonardo da Vinci"

Grade

82/100

International Schools

Dates

18-22 April, 2011

Name and type of organization
providing education and training

Rovira i Virgili University, Tarragona (Spain)

School name	International School SSFLA 2011 ("2011 International Spring School in Formal Languages and Application")
Dates	21-26 June, 2010
Name and type of organization providing education and training	CRU Bertinoro (Italy)
School name	International School SFM-10:QAPL ("10th International School on Formal Methods for the Design of Computer, Communication and Software Systems: Quantitative Aspects of Programming Languages")

Work experiences

Dates	01 July, 2014 - To date
Occupation	Postdoc
Main activities and responsibilities	Research activity
Name of employer	Eidgenössische Technische Hochschule (ETH) Zürich
Dates	01 June, 2013 - 30 May, 2014
Occupation	Temporary researcher
Main activities and responsibilities	Research on the project "Descriptive complexity of automata and formal systems", under the supervision of Prof. Alberto Bertoni
Name of employer	Università degli Studi di Milano
Dates	01 May, 2013 - 31 May 2013
Occupation	Research assistant
Main activities and responsibilities	Research in advice complexity of online algorithms
Name of employer	Eidgenössische Technische Hochschule (ETH) Zürich
Dates	01 January, 2010 - 31 December 2012
Occupation	Ph.D. student
Main activities and responsibilities	Research and development in the formal languages and automata field
Name of employer	Università degli Studi di Milano
Dates	01 November, 2011 - 29 February 2012
Occupation	Research assistant
Main activities and responsibilities	Research in advice complexity of online algorithms
Name of employer	Eidgenössische Technische Hochschule (ETH) Zürich
Dates	01 June, 2011 - 31 July 2011
Occupation	Visiting student
Main activities and responsibilities	Research in advice complexity of online algorithms
Name of employer	Eidgenössische Technische Hochschule (ETH) Zürich

University teaching activities

Dates	2010-To date
Occupation	Teaching assistant
Main activities and responsibilities	Exercises and examinations

Name of employer Course	Department of Computer Science, Università degli Studi di Milano "Linguaggi formali e automi" Corso di Laurea Triennale in Informatica
Dates	2013-2014
Occupation	Teaching assistant
Main activities and responsibilities	Exercises and examinations
Name of employer Course	Department of Mathematics, Università degli Studi di Milano "Programmazione 1" (Programming), Corso di Laurea Triennale in Matematica
Dates	2012-2013
Occupation	Teaching assistant
Main activities and responsibilities	Exercises and examinations
Name of employer Course	Department of Physics, Università degli Studi di Milano "Informatica" (Programming), Corso di Laurea Triennale in Fisica
Dates	2007-2008
Occupation	Teaching assistant
Main activities and responsibilities	Exercises and examinations
Name of employer Course	Department of Computer Science, Università degli Studi di Milano "Fondamenti di Architetture e Programmazione" (Foundations of computer architecture and programming), Corso di Laurea Triennale in Comunicazione Digitale

Thesis supervision

Dates	April, 2014-July, 2014
Occupation	Co-Supervisor of Bachelor degree theses
Main activities and responsibilities	Supervision for the thesis "Automati a coda a lunghezza costante" ("Queue automata with constant length")
Name of employer	Department of Computer Science, Università degli Studi di Milano
Dates	June, 2010-October, 2010
Occupation	Co-Supervisor of Master degree theses
Main activities and responsibilities	Supervision for the thesis "Automati quantistici e periodicità" ("Quantum automata and periodicity")
Name of employer	Department of Computer Science, Università degli Studi di Milano
Dates	December, 2007-February, 2008
Occupation	Co-Supervisor of Bachelor degree theses
Main activities and responsibilities	Supervision for the thesis "#-rewriting system con regole libere dal contesto" ("#-rewriting system with context-free rules")
Name of employer	Department of Computer Science, Università degli Studi di Milano

Research Projects

Dates	2011-2012
Name and type of organization providing the funding	CRUI-DAAD (German-Italian University Centre)

Project title	Vigoni programme: Descriptive Complexity of Non-Classical Computational Model
Dates	2010-2011
Name and type of organization providing the funding	PRIN
Project title	Automati e Linguaggi Formali: Aspetti Matematici e Applicativi
Dates	2007-2008
Name and type of organization providing the funding	CRUI-DAAD (German-Italian University Centre)
Project title	Vigoni programme: Reducing complexity by introducing structure

Prizes and awards

Date	31 July, 2014
Award	Sheng Yu-Award for Best Paper: On the Power of One-Way Automata with Quantum and Classical States
Event	19th International Conference on Implementation and Application of Automata (CIAA 2014)

Other Scientific Activity

Dates	18-19 July, 2011
Activity type	Member of the organizing committee in the international conference "Non-Classical Models of Automata and Applications (NCMA11)"
Location	Milan, Italy

Personal skills and competences

Mother tongue(s) **Italian**

Other language(s) English

*Self-assessment
European level^(*)*

English

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user

^(*) Common European Framework of Reference (CEF) level

Journal Publications

2014	Maria Paola Bianchi, Hans-Joachim Böckenhauer, Juraj Hromkovic, Sacha Krug, and Björn Steffen. On the advice complexity of the online $l(2, 1)$ -coloring problem on paths and cycles. <i>Theoretical Computer Science</i> , 554:22–39, 2014
2014	Maria Paola Bianchi, Carlo Mereghetti, and Beatrice Palano. Size lower bounds for quantum automata. <i>Theoretical Computer Science</i> , 551:102–115, 2014
2014	Maria Paola Bianchi, Hans-Joachim Böckenhauer, Juraj Hromkovic, and Lucia Keller. Online coloring of bipartite graphs with and without advice. <i>Algorithmica</i> , 70(1):92–111, 2014

**International Conference
and Workshop
Publications**

- 2012 Maria Paola Bianchi, Markus Holzer, Sebastian Jakobi, Carlo Mereghetti, Beatrice Palano, and Giovanni Pighizzini.
On inverse operations and their descriptonal complexity.
Journal of Automata, Languages and Combinatorics, 17(2-4):61–81, 2012
- 2012 Alberto Bertoni, Maria Paola Bianchi, and Flavio D'Alessandro.
Regularity of languages defined by formal series with isolated cut point.
RAIRO - Theor. Inf. and Applic., 46(4):479–493, 2012
- 2012 Maria Paola Bianchi and Giovanni Pighizzini.
Normal forms for unary probabilistic automata.
RAIRO - Theor. Inf. and Applic., 46(4):495–510, 2012
- 2011 Maria Paola Bianchi, Carlo Mereghetti, Beatrice Palano, and Giovanni Pighizzini.
On the size of unary probabilistic and nondeterministic automata.
Fundamenta Informaticae, 112(2-3):119–135, 2011
- 2010 Maria Paola Bianchi and Beatrice Palano.
Behaviours of unary quantum automata.
Fundamenta Informaticae, 104(1-2):1–15, 2010
- 2014 Maria Paola Bianchi, Carlo Mereghetti, and Beatrice Palano.
On the power of one-way automata with quantum and classical states.
In Markus Holzer and Martin Kutrib, editors, *CIAA*, volume 8587 of *Lecture Notes in Computer Science*, pages 84–97. Springer, 2014
- 2013 Maria Paola Bianchi, Carlo Mereghetti, and Beatrice Palano.
Size lower bounds for quantum automata.
In Giancarlo Mauri, Alberto Dennunzio, Luca Manzoni, and Antonio E. Porreca, editors, *UCNC*, volume 7956 of *Lecture Notes in Computer Science*, pages 19–30. Springer, 2013
- 2013 Maria Paola Bianchi, Hans-Joachim Böckenhauer, Juraj Hromkovic, Sacha Krug, and Björn Steffen.
On the advice complexity of the online $l(2, 1)$ -coloring problem on paths and cycles.
In Ding-Zhu Du and Guochuan Zhang, editors, *COCOON*, volume 7936 of *Lecture Notes in Computer Science*, pages 53–64. Springer, 2013
- 2012 Maria Paola Bianchi, Hans-Joachim Böckenhauer, Juraj Hromkovic, and Lucia Keller.
Online coloring of bipartite graphs with and without advice.
In Joachim Gudmundsson, Julián Mestre, and Taso Viglas, editors, *COCOON*, volume 7434 of *Lecture Notes in Computer Science*, pages 519–530. Springer, 2012
- 2012 Maria Paola Bianchi, Markus Holzer, Sebastian Jakobi, and Giovanni Pighizzini.
On inverse operations and their descriptonal complexity.
In Martin Kutrib, Nelma Moreira, and Rogério Reis, editors, *DCFS*, volume 7386 of *Lecture Notes in Computer Science*, pages 89–102. Springer, 2012
- 2011 Maria Paola Bianchi and Giovanni Pighizzini.
Normal forms for unary probabilistic automata.
In Rudolf Freund, Markus Holzer, Carlo Mereghetti, Friedrich Otto, and Beatrice Palano, editors, *NCMA*, volume 282 of *books@ocg.at*, pages 89–102. Austrian Computer Society, 2011
- 2011 Alberto Bertoni, Maria Paola Bianchi, and Flavio D'Alessandro.
Regularity of languages defined by formal series with isolated cut point.
In Rudolf Freund, Markus Holzer, Carlo Mereghetti, Friedrich Otto, and Beatrice Palano, editors, *NCMA*, volume 282 of *books@ocg.at*, pages 73–87. Austrian Computer Society, 2011
- 2010 Maria Paola Bianchi, Carlo Mereghetti, Beatrice Palano, and Giovanni Pighizzini.
Probabilistic vs. nondeterministic unary automata.
In Henning Bordihn, Rudolf Freund, Markus Holzer, Thomas Hinze, Martin Kutrib, and Friedrich Otto, editors, *NCMA*, volume 263 of *books@ocg.at*, pages 33–44. Austrian Computer Society, 2010

- 2009 Maria Paola Bianchi and Beatrice Palano.
Events and languages on unary quantum automata.
In Henning Bordihn, Rudolf Freund, Markus Holzer, Martin Kutrib, and Friedrich Otto,
editors, *NCMA*, volume 256 of *books@ocg.at*, pages 61–76. Austrian Computer So-
ciety, 2009
- 2008 Maria Paola Bianchi and Beatrice Palano.
On leftmost #-rewriting systems.
In Cezar Câmpeanu and Giovanni Pighizzini, editors, *DCFS*, pages 61–72. University
of Prince Edward Island, 2008

Italian Conference Publications

- 2012 Carlo Comin and Maria Paola Bianchi.
Algebraic characterization of the class of languages recognized by measure only
quantum automata.
In *ICTCS*, pages 90–93, 2012

More details

Web site <http://homes.di.unimi.it/~bianchi/>