Emilio COPPA

Personal details

PLACE AND DATE OF BIRTH:	Rome, Italy | 20 March 1988 – Age 28
HOME ADDRESS:	Via Val D'Ossola 14, 00141, Rome, Italy
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Education

Jan 2016 – Present	**POSTDOC** at Department of Computer, Control, and Management Engineering "Antonio Ruberti" (DIAG), Sapienza University of Rome. Supervisor: Prof. Camil DEMETRESCU (demetres@dis.uniroma1.it)
Nov 2012 – Dec 2015	**PH.D. IN COMPUTER SCIENCE**, Sapienza University of Rome Advisor: Prof. Irene FINOCCHI (finocchi@di.uniroma1.it)
Apr 2015 – Jul 2015	**VISITOR AT TU DARMSTADT**. Prof. Patrick EUGSTER (peugster@cs.purdue.edu)
Nov 2010 – Oct 2012	**M.Sc. IN ENGINEERING IN COMPUTER SCIENCE**, Sapienza University of Rome | Taught in English Final grade: 110/110 summa cum laude | GPA: 29.6/30 Dissertation title: Input-Sensitive Profiling Advisor: Prof. Camil DEMETRESCU (demetres@dis.uniroma1.it)
Oct 2007 – Oct 2010	**B.Sc. IN ENGINEERING IN COMPUTER SCIENCE**, Sapienza University of Rome | Final grade: 110/110 | GPA: 26.7/30 Dissertation title: Adaptive Allocators Advisor: Prof. Camil DEMETRESCU (demetres@dis.uniroma1.it)

Research interests

Program analysis, performance profiling, performance prediction, distributed computing platforms, programming languages, software engineering.

Publications

2015   **Emilio Coppa** and Irene Finocchi. **On data skewness, stragglers, and MapReduce progress indicators.** 2015 ACM Symposium on Cloud Computing (SoCC'15), pp 139-152, 2015.

2014   **Emilio Coppa**, Camil Demetrescu, and Irene Finocchi. **Input-Sensitive Profiling.** IEEE Transactional on Software Engineering (**IEEE TSE'14**), 40(12), pp 1185-1205, 2014.

2014   **Emilio Coppa**. **An interactive visualization framework for performance analysis.** 8th International Conference on Performance Evaluation Methodologies and Tools (**VALUETOOLS'14**), pp 159-164, 2014.

2014   **Emilio Coppa**, Camil Demetrescu, Irene Finocchi, and Romolo Marotta. **Estimating the Empirical Cost Function of Routines with Dynamic Workloads.** 12th IEEE/ACM International Symposium on Code Generation and Optimization (**CGO'14**), pp 230-239, 2014.

2012   **Emilio Coppa**, Camil Demetrescu, and Irene Finocchi. **Input-Sensitive Profiling**. 33nd ACM SIGPLAN conference on Programming Language Design and Implementation (**PLDI'12**), pp 89-98, 2012.

Program committees and conference organization

2016   **ECOOP 2016** - European Conference on Object-Oriented Programming. **Publicity Chair**.

2015   **ECOOP 2015** - European Conference on Object-Oriented Programming. **Member of the Artifact Evaluation Committee**.

2014   **ECOOP 2014** - European Conference on Object-Oriented Programming. **Member of the Artifact Evaluation Committee**.

Honors and awards

2015   **Grant *Avvio alla Ricerca 2015***
Grant from Sapienza University of Rome.

2015   **Scholarship award by ACM to attend SoCC 2015**
Grant to attend the 2015 ACM Symposium on Cloud Computing as a student co-author of an accepted paper.

2014   **Scholarship award by ACM/IEEE to attend CGO 2014**
Grant to attend the 12th IEEE/ACM International Symposium on Code Generation and Optimization as a student co-author of an accepted paper.

2013   **Excellent graduate student award**
Award from the Alumni Noi Sapienza Association, accorded to students with outstanding performances in academic activities.

2013   **Scholarship award by ACM to attend POPL 2013**
Grant to attend the ACM SIGPLAN Programming Languages Mentoring Workshop and POPL 2013.

2012   **Scholarship award by Sapienza University of Rome**
Grant awarded to students enrolled in the Excellence Path Program in order to support their research activities.

2012   **ACM SIGPLAN PAC Award to attend PLDI 2012**
Grant by the SIGPLAN Professional Activities Committee (PAC) to attend PLDI 2012 as a student co-author of an accepted paper.

2011 – 2012   **Enrolled in the Excellence Path Program of the M.Sc. in Engineering in Compute Science**
Research program for students with outstanding academic performance at Sapienza University of Rome.

2011   **Scholarship award by Sapienza University of Rome to attend ADS 2011**
Grant to attend the 5th Bertinoro Workshop on Algorithms and Data Structures, awarded to students with outstanding academic performance.

Reviewing activity

2015   JEA - ACM Journal of Experimental Algorithmics.

2015   ECOOP 2015 - European Conference on Object-Oriented Programming (subreviewer).

2014   ALENEX 2015 - Algorithm Engineering and Experimentation.

2014   ECOOP 2014 - European Conference on Object-Oriented Programming (subreviewer).

2013   ALENEX 2014 - Algorithm Engineering and Experimentation.

2012   ALENEX 2013 - Algorithm Engineering and Experimentation.

Conference attendances

Aug 2015   SoCC 2015 - 2015 ACM Symposium on Cloud Computing, Hawaii, USA.

Dec 2014   VALUETOOLS 2014 - 8th International Conference on Performance Evaluation Methodologies and Tools, Bratislava, Slovakia.

Jan 2014   CGO 2014 - 12th IEEE/ACM International Symposium on Code Generation and Optimization, Orlando, USA.

Jan 2013   ADS 2013 - 6th Bertinoro Workshop on Algorithms and Data Structures. Workshop co-organized by Giuseppe F. Italiano, Andrew V. Goldberg, Valerie King, and Robert E. Tarjan.

Jan 2013   POPL 2013 - 40th ACM SIGPLAN-SIGACT Symposium on Principles on Programming Languages, Rome, Italy.

Jan 2013   PLMW 2013, 2nd ACM SIGPLAN Programming Languages Mentoring Workshop, Rome, Italy.

Jun 2012   PLDI 2012 - 33nd ACM SIGPLAN conference on Programming Language Design and Implementation. Beijing, China.

Jun 2011   ADS 2011 - 5th Bertinoro Workshop on Algorithms and Data Structures. Workshop co-organized by Camil Demetrescu, Andrew V. Goldberg, Valerie King, and Robert E. Tarjan.

Additional training

Jul 2014 | ECOOP Summer School 2014. Uppsala University, Sweden.
Lecturers: Joe G. Politz, Shriram Krishnamurthi, Anil Madhavapeddy, Richard Mortier, Laurence Tratt, Tomas Kalibera, and Cristina V. Lopes.

Jul 2014 | UPMARK Multicore Computing Summer School 2014.
Uppsala University, Sweden. Lecturers: Cormac Flanagan, Stephen Freund, Viktor Klang, Simon M. Smith, and Viktor Vafeiadis.

Sep 2013 - Nov 2013 | C++ For C Programmers, Coursera.
Prof. Ira Pohl, University of California, Santa Cruz.

Aug 2013 | MADALGO PhD Summer School 2013, Summer school on Data Structures.
Aarhus University, Denmark. Lecturers: Valerie King, Ian Munro, Rasmus Pagh, and the Turing Award recipient Robert E. Tarjan.

Nov 2012 | Advanced course on GPU computing
Cineca/Caspur Research Center, Rome.

Seminars

AUg 2015	*On data skewness, stragglers, and MapReduce progress indicators* Presentation at SoCC 2015, Hawaii, USA.
Apr 2015	*Performance analysis at scale* Invited talk at TU Darmstadt, Germany.
Dec 2014	*An interactive visualization framework for performance analysis* Presentation at VALUETOOLS 2014.
Jan 2014	*Estimating the Empirical Cost Function of Routines with Dynamic Workloads* Presentation at CGO 2014.
Apr 2013	*From asymptotics to performance profiling (and back)* Invited talk, Department of Informatics, University of Bergen, Norway.
Jan 2013	*One Minute Madness presentation* at the SIGPLAN Programming Languages Mentoring Workshop (PLMW 2013).
Jun 2012	*Input Sensitive Profiling* Presentation at PLDI 2012.

Main software projects

2011–2014	Aprof: Asymptotic Profiler A Valgrind tool for performance profiling designed to help developers discover hidden asymptotic inefficiencies in the code. **Chief developer**. Project website: code.google.com/p/aprof/.
2010–2011	BSA++: an adaptive segregated fit memory allocator The allocator is now integrated in the DC dataflow constraint programming framework available at code.google.com/p/dc-lib and described in the paper "Reactive imperative programming with dataflow constraints" by C. Demetrescu, I. Finocchi, and A. Ribichini, OOPSLA 2011.
2008	Gemini Project: detecting P2P filters on an ADSL connection An Ubuntu-based live distro for revealing if an ISP is throttling BitTorrent traffic on an ADSL connection. The approach used for detecting anti-p2p filters was partly described in a detailed article on the Electronic Frontier Foundation (EFF) official site.
2006–2008	Contributor to linux@p2pforum.it An online collection of how-to and tutorials designed for helping inexperienced GNU/Linux italian users.

Course lectures

Mar 2014	*Hadoop: design and implementation* Lecture in the *Big data computing* course, Department of Computer Science, Sapienza University of Rome.
May 2012, May 2013	*Introduction to dynamic program analysis and performance profiling* Lecture in the *Algorithm engineering* course, Department of Computer and System Sciences, Sapienza University of Rome.
May 2012	*Performance profiling: classical and novel techniques* Lecture in the *Algorithm engineering* course, Department of Computer Science, Sapienza University of Rome.

Computer skills

Algorithms	Advanced knowledge of algorithms and data structures and their mathematical analysis.
Programming	Advanced knowledge of C and Java. Good experience with C++, Python, and PHP.
Operating systems	Very good experience with GNU/Linux (especially Gentoo-based and Debian-based) and Microsoft Windows.
Other	Apache Hadoop (hadoop.apache.org/). Apache Spark (spark.apache.org/). Apache Flink (flink.apache.org/). Intel PIN (software.intel.com/en-us/articles/pintool/). Valgrind (valgrind.org/).

Languages

English:	Fluent
Italian:	Mothertongue

Other information

I like to spend my spare time watching some of the most famous American and British television series. Ever since my childhood I always practiced a lot of sports (like soccer and basket) and currently I get fit with daily activity at gym. In the past years, I have collaborated with some Italian online communities, especially helping and creating useful resources for new GNU/Linux users.