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Curriculum vitae

PERSONAL INFORMATION

Emilio Coppa

- Rome (Italy)
- ercoppa@gmail.com
- http://ecoppa.github.io/

Sex Male | Date of birth 20/03/1988 | Nationality Italian

STUDIES APPLIED FOR

Dottorato di ricerca in Informatica (Sapienza Università di Roma) - Laurea Magistrale in Ingegneria Informatica (Sapienza Università di Roma)

WORK EXPERIENCE

01/2016–Present
Assegnista di ricerca post-dottorale

Dipartimento di Ingegneria informatica automatica e gestionale Antonio Ruberti della Sapienza Università di Roma, Roma (Italy)

Argomento di ricerca: program analysis, dynamic analysis, static analysis, symbolic execution, distributed systems.

Contesto applicativo: big data systems, security, performance.

11/2012–10/2015
Dottorato di Ricerca in Informatica

Dipartimento di Informatica, Sapienza Università di Roma, Roma (Italy)

- Advisor: Prof. Irene Finocchi (finocchi@di.uniroma1.it)
- Votazione: Ottimo
- Titolo della tesi: Input-sensitive performance analysis of software systems
- Data conseguimento titolo: 14/12/2015

02/2016–Present
Assistente alla didattica universitaria

Sapienza Università di Roma, Roma (Italy)

Tutor del corso Fondamenti di Informatica II da 12 CFU. Esame diviso in due moduli: Algoritmi e struttura dati (Prof. Fabrizio D'Amore), Progettazione Software (Giuseppe De Giacomo).

07/2016
Docente presso il Master Universitario di II livello in Data Intelligence e Strategie Decisionali

Dipartimento di Statistica, Sapienza Università di Roma, Roma (Italy)

Docente per il corso sui Big Data Systems

04/2015–08/2015
Visitatore del gruppo di ricerca del Prof. Patrick Eugster

TU Darmstadt, Darmstadt (Germany)

EDUCATION AND TRAINING

| 10/2010–08/2012 | **Laurea Magistrale in Ingegneria Informatica** |

Sapienza Università di Roma, Roma (Italy)

- Corsi erogati in lingua inglese
- Votazione: 110 e lode / 110
- Percorso di Eccellenza
- Media voti: 29.60 / 30
- Titolo della tesi: Input-Sensitive Profiling
- Relatore: Prof. Camil Demetrescu (demetres@dis.uniroma1.it)
- Data conseguimento: 18/10/2012

| 10/2007–09/2010 | **Laurea Triennale in Ingegneria Informatica** |

Sapienza Università di Roma, Roma (Italy)

- Media voti: 26.7 / 30
- Votazione: 110 / 110
- Titolo della tesi: Adaptive Allocators
- Relatore: Camil Demetrescu (demetres@dis.uniroma1.it)
- Data conseguimento: 24/09/2010

| 06/2012 | **Esame di Stato per l'Abilitazione all'esercizio della professione di Ingegnere dell'informazione** |

Sapienza Università di Roma, Roma (Italy)

| 06/2007 | **Maturità Scientifica** |

Liceo scientifico Plinio Seniore, Roma (Italy)

PERSONAL SKILLS

Mother tongue(s)   Italian

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English				
B2	C1	B2	B2	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills   Ottime competenze comunicative acquisite durante gli anni di dottorato di ricerca e le esperienze di didattica all'università

Job-related skills
- **Algorithms**: Advanced knowledge of algorithms and data structures and their mathematical analysis.
- **Programming**: Advanced knowledge of C, Python, and Java. Good experience with x86 assembly, C++, Scala, and PHP.
- **Operating systems**: Very good experience with GNU/Linux (especially Gentoo-based and Debian-based), Mac OS, Microsoft Windows.
- **Frameworks**: 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/), angr (https://github.com/angr/angr).

- **Other**: Advanced experience with Microsoft Office suite, Open/LibreOffice suite, LATEX e Adobe Creative Suite.

Driving licence	B

ADDITIONAL INFORMATION

Publications
- H-index: 3 (Scopus), 3 (Google Scholar)
- 2015. **Emilio Coppa**, Irene Finocchi. On data skewness, stragglers, and MapReduceprogress indicators. 2015 ACM Symposium on Cloud Computing (SoCC'15), pp 139-152. DOI: 10.1145/2806777.2806843
- 2015. **Emilio Coppa**. An interactive visualization framework for performance analysis. EAI Endorsed Transactions on Ubiquitous Environments, 15(7), pp e5.
- 2014. **Emilio Coppa**, Camil Demetrescu, and Irene Finocchi. Input-Sensitive Profiling. IEEE Transactional on Software Engineering (IEEE TSE'14), 40(12), pp 1185-1205. DOI: 10.1109/tse.2014.2339825
- 2014. **Emilio Coppa**. An interactive visualization framework for performanceanalysis. 8th International Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS'14), pp 159-164. DOI: 10.4108/icst.valuetools.2014.258172
- 2014. **Emilio Coppa**, Camil Demetrescu, Irene Finocchi, and Romolo Marotta. Estimating theEmpirical Cost Function of Routines with Dynamic Workloads. 12th IEEE/ACM International Symposium on Code Generation and Optimization (CGO'14), pp 230-239. DOI: 10.1145/2544137.2544143
- 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. DOI: 10.1145/2254064.2254076

Presentazioni e seminari
- 2016. Hadoop internals. Lecture in the Big data computing course, Department of Computer Science, Sapienza University of Rome.
- 2016. Amazon Web Services, S3 and Elastic MapReduce. Lecture in the Big data computing course, Department of Computer Science, Sapienza University of Rome.
- 2015. On data skewness, stragglers, and MapReduce progress indicators. Presentation at ACM SoCC 2015, Hawaii, USA.
- 2015. Performance analysis at scale. Invited talk at TU Darmstadt, Germany.
- 2014. An interactive visualization framework for performance analysis. Presentation at VALUETOOLS 2014.
- 2014. Hadoop: design and implementation. Lecture in the Big data computing course, Department of Computer Science, Sapienza University of Rome.
- 2014. Estimating the Empirical Cost Function of Routines with Dynamic Workloads. Presentation at CGO 2014.
- 2013. Introduction to dynamic program analysis and performance profiling. Lecture in the Algorithm engineering course, Department of Computer andSystem Sciences, Sapienza University of Rome.
- 2013. From asymptotics to performance profiling (and back). Invited talk, Department of Informatics, University of Bergen, Norway.
- 2013. One Minute Madness presentation at the SIGPLAN Programming Languages MentoringWorkshop (PLMW 2013).
- 2012. Input Sensitive Profiling. Presentation at PLDI 2012.
- 2012. Performance profiling: classical and novel techniques. Lecture in the Algorithm engineering course, Department of Computer Science, Sapienza University of Rome.

Corsi post-laurea
- 2016. ECOOP Summer School 2016. Rome, Italy. Lecturers: Matthias Felleisen, Carl Friedrich

Bolz, Laurence Tratt, Shriram Krishnamurthi, Tomas Kalibera, Jan Vitek, Jeremy Siek, and Jade Alglave.

- 2014. ECOOP Summer School 2014. Uppsala University, Sweden. Lecturers: Joe G. Politz, Shriram Krishnamurthi, Anil Madhavapeddy, RichardMortier, Laurence Tratt, Tomas Kalibera, and Cristina V. Lopes.
- 2014. UPMARK Multicore Computing Summer School 2014. Uppsala University, Sweden. Lecturers: Cormac Flanagan, Stephen Freund, ViktorKlang, Simon M. Smith, and Viktor Vafeiadis.
- 2013. C++ For C Programmers, Coursera. Prof. Ira Pohl, University of California, Santa Cruz.
- 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.
- 2012. Advanced course on GPU computingCineca/Caspur Research Center, Rome.

Conferences

- 2016. European Conference on Object-Oriented Programming (ECOOP'16), Rome, Italy.
- 2016. Dagstuhl Seminar 16111 "Rethinking Experimental Methods in Computing", Dagstuhl, Germany.
- 2015. ACM Symposium on Cloud Computing (SoCC'15), Hawaii, USA.
- 2014. European Conference on Object-Oriented Programming (ECOOP'14), Uppsala, Sweden.
- 2014. International Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS'14), Bratislava, Slovakia.
- 2014. IEEE/ACM International Symposium on Code Generation and Optimization (CGO'14), Orlando, USA.
- 2013. Bertinoro Workshop on Algorithms and Data Structures. Workshop (ADS'13) co-organized by Giuseppe F. Italiano, Andrew V. Goldberg, Valerie King, and Robert E.Tarjan.
- 2013. ACM SIGPLAN-SIGACT Symposium on Principles on Programming Languages (POPL'13), Rome, Italy.
- 2012. ACM SIGPLAN conference on Programming Language Design and Implementation (PLDI'12), Beijing, China.
- 2011. Bertinoro Workshop on Algorithms and Data Structures. Workshop (ADS'11) co-organized by Camil Demetrescu, Andrew V. Goldberg, Valerie King, and Robert E.Tarjan.

Attività di referaggio

- 2015. JEA - ACM Journal of Experimental Algorithmics.
- 2015. ECOOP - European Conference on Object-Oriented Programming (subreviewer).
- 2014. ALENEX - Algorithm Engineering and Experimentation.
- 2014. ECOOP - European Conference on Object-Oriented Programming (subreviewer).
- 2013. ALENEX - Algorithm Engineering and Experimentation.
- 2012. ALENEX - Algorithm Engineering and Experimentation.

Organizzazione conferenze

- 2016. ECOOP - European Conference on Object-Oriented Programming. Publicity Chair.
- 2016. ECOOP - European Conference on Object-Oriented Programming. Member of Poster Session Committee.
- 2015. ECOOP - European Conference on Object-Oriented Programming. Member of the Artifact Evaluation Committee.
- 2014. ECOOP - European Conference on Object-Oriented Programming. Member of the Artifact Evaluation Committee.

Honours and awards

- 2016. My thesis was one of the five PhD dissertations considered for the SPEC Kaivalya Dixit Distinguished Dissertation Award 2016.
- 2015. Best PhD Student Paper Award. Department of Computer Science, Sapienza University of Rome.

- 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 Workshopand 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.
- 2010 - 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.

Software
- 2011 - 2015. Aprof: Asymptotic Profiler. A Valgrind tool for performance profiling designed to help developers discover hidden asymptotic inefficiencies in the code. Chief developer. Project website: https://github.com/ercoppa/aprof
- 2014. Documentation of Hadoop 2.3.0 internals. Project website: http://ercoppa.github.io/HadoopInternals/
- 2011. BSA++, an adaptive segregated fit memory allocator. The allocator has been integrated in the DC dataflow constraint programming framework available at https://code.google.com/archive/p/dc-lib/ and described in the paper "Reactive imperativeprogramming with dataflow constraints" by C. Demetrescu, I. Finocchi, and A. Ribichini, OOPSLA 2011.

Progetti finanziati

Progetto per avvio ricerca dottorandi 2016
- Titolo progetto: Performance prediction of big data analytics applications
- Ente/Istituzione finanziatrice: Sapienza Università di roma/Ministry of Education, Universities and Research (MIUR)
- N. protocollo: 0054907 del 26/07/2016, 190549
- Periodo attività: 07/2016-07/2017
- Nominativo coordinatore del progetto: Emilio Coppa

Progetto per avvio ricerca dottorandi 2015
- Titolo progetto: Progress analysis and performance prediction for big data analytics applications
- Ente/Istituzione finanziatrice: Sapienza Università di roma/Ministry of Education, Universities and Research (MIUR)
- N. protocollo: 0051276 del 30/07/2015, C26N15T29Z
- Periodo attività: 07/2015-07/2016
- Nominativo coordinatore del progetto: Emilio Coppa

Trattamento dei dati personali

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali.