Massimo Canonico

Curriculum Vitae

Computer Science Institute
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Education

February, 2006	**Ph.D. in Computer Science**, *University of Torino*, Italy.
April, 2002	**"Laurea" degree (Summa Cum Laude) in Computer Science**, *University of Piemonte Orientale*, Italy.

Extended study/research visits

February, 2005 – September, 2005	**Visiting scholar**, *Department of Computer Science, University of California (S. Barbara)*, CA, USA.
September, 2000 – December, 2000	**Erasmus exchange student**, *University of Aberdeen*, Scotland, UK.

Professional employment

September, 2006 – present	**Assistant professor**, *Computer Science Department*, Univ. of Piemonte Orientale.
January, 2006 – August, 2006	**Short-term researcher**, *Computer Science Department*, Univ. of Piemonte Orientale.

Research interests

Massimo Canonico's research interests lie in the area of distributed computing systems. His current research activity is focused on Cloud Computing with emphasis on performance and energy efficient resource management. He has also worked on fault-tolerant scheduling algorithms and efficient overlay-based data transfer techniques on various families of distributed systems (in particular, Grid computing systems). Massimo is a member of the Distributed Computing System (DCS) group (*http://www.dcs.di.unipmn.it/*) and he is also member of the Center for studies on Cybercrime (*http://www.csici.unipmn.it/*)

Awards and research fellowships

June, 2018	**Best Paper Award**, *A Game-Theoretic Approach to Coalition Formation in Fog Provider Federations. Proc. of the 3rd IEEE International Conference on Fog and Mobile Edge Computing (FMEC).*

December, 2005 – August, 2006	**Post-doc fellowship**, *in Resource management policies and techniques in large distributed systems*, University of Piemonte Orientale, Italy.
June, 2004	**Best Paper Award**, *International Workshop on Emerging Technologies for Next Generation GRID (ETNG04)*.
November, 2002 – November, 2005	**Ph.D. Fellowship**, *Computer Science Department*, University of Turin, Italy.
April, 2002 – October, 2002	**Research fellowship**, *in "Open Cluster Computing"*, Italian "Information Society Technologies innovation and research center" (C.S.P.), Italy.
July, 2001 – December, 2001	**Graduate fellowship**, *in "Study and implementation of techniques to manage Data and Computational Grids"*, Italian "National Institute of Nuclear Physics" (I.N.F.N), Italy.

Scientific manager in research projects

October, 2017 – December, 2017	**BlueReader: a smart web reader**, *best project award during disability hackathon funded by IBM*, https://multiblog.uniupo.it/news/scienza-e-ricerca/lupo-si-aggiudica-il-primo-hackathon-su-tecnologia-e-disabilità.
Jaury, 2016 – May, 2016	**SPIA: Segnalazione Pericolo Investimento Animali**, *mobile app funded by the provincia di Cuneo*, SPIA Cuneo facebook page.
September, 2015 – September, 2016	**GuidApp: l'audio guida per disabili visivi**, *mobie app funded by the camera di commercio di Alessandria*, http://www.guidapp.it.

Participation in research projects

September, 2013 – September, 2015	**The Smart FASI project: Financial Advisor Smart Services Infrastructure**, *funded by the Piedmont Region via the Polo ICT consortium*, http://www-sop.inria.fr/mymed.
September, 2010 – December, 2013	**The MyMed project**, *funded by the EU under the ALCOTRA initiative*, http://www-sop.inria.fr/mymed.
April, 2007 – December, 2010	**The ShareGrid project**, *funded by the Piedmont Region via the TOPIX Consortium*, http://dcs.di.unipmn.it/sharegrid.
November, 2002 – November, 2005	**Wide-scalE Broadband MIddleware for Network Distributed Services, WebMINDS**, *funded by the Italian MIUR under the FIRB initiative*, http://web-minds.consorzio-cini.it/.
October, 2002 – December, 2004	**Grid Computing: Enabling Technologies for eScience**, *funded by the Italian CNR*.

Other professional activities

Member of technical program committees

The 10th NSF/TCPP Workshop on Parallel and Distributed Computing Education, *EduPar-20*, 2020.

From 23rd **to** 28th **Euromicro International Conference on Parallel, Distributed, and Network-Based Processing** , *PDP 2015-2020*.

InfQ'17 and InfQ'18 New Frontiers in Quantitative Methods in Informatics, *InfQ 2017-2018*.

InfQ 2016 - New frontiers in Quantitative Methods in Informatics, *in conjunction with Valuetools 2016*.

The 14th **and** 15th **IEEE International Conference on Ubiquitous Computing and Communications**, *IUCC 2015, 2016*.

The 3rd**,** 5th **and** 7th **International Conference on Cloud Computing, GRIDs, and Virtualization**, *CLOUD COMPUTING 2012, 2014 and 2016*.

The 1st**,** 2nd **and** 3rd **International Conference on Smart Grids and Green IT Systems**, *SMARTGREENS 2012, 2013 and 2014*.

The 8th **International Conference on P2P, Parallel, Grid, Cloud and Internet Computing**, *3PGCIC 2013*.

The IEEE International Conference on Internet of Things, *2011*.

The 3rd **Grid Experience workshop - Desktop Grid Applications for eScience and eBusiness**, *2010*.

The 3rd *and* 4th **Workshop on Desktop Grids and Volunteer Computing Systems**, *PCGrid 2009, 2010*.

The 3rd **Grid Experience workshop - Desktop Grid Applications for eScience and eBusiness**, *2010*.

Professional services

Reviewer for several international journals and conferences in the area of distributed systems.

Member of inter-university national consortium for telecommunication, *CNIT*, Italy.

Member of inter-university national consortium for computer science, *CINI*, Italy.

Teaching

a.y. 2015/2016–present	**Computer networks**, *Computer Science curricula*, Univ. of Piemonte Orientale, Italy.
a.y. 2013/2014–present	**Programming Mobile Applications for Android Handheld Systems**, *Computer Science curricula*, Univ. of Piemonte Orientale, Italy.
a.y. 2007/2008–present	**Distributed Computing Systems**, *Computer Science curricula*, Univ. of Piemonte Orientale, Italy.
a.y. 2007/2008–2014/2015	**Computer networks programming**, *Computer Science curricula*, Univ. of Piemonte Orientale, Italy.
a.y. 2010/2011–2013/14	**Fundamentals of Computer Science**, *Computer Forensics curricula*, Univ. of Piemonte Orientale, Italy.

a.y. 2006/2007–2012/2013	**Fundamentals of Computer Networks**, *distance-learning Master of science in Medicine*, involving eleven Italian universities, led by the University of Rome "La Sapienza" http://www.matam.it/news.php, Italy.
a.y. 2006/2007–2010/2011	**Fundamentals of Computer Science**, *Biological curricula*, Univ. of Piemonte Orientale, Italy.
a.y. 2006–2007	**Programming Languages**, *Physics curricula*, Univ. of Piemonte Orientale, Italy.

Publications

Serena Quattrocolo, Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Technical solutions for legal challenges: Equality of arms in criminal proceedings. *Global Jurist*, 2020. In Press.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. The Android Forensics Automator (AnForA): A tool for the automated forensic analysis of Android applications. *Computers & Security*, 88:101650, 2020.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Online user-driven task scheduling for femtoclouds. In *2019 Fourth International Conference on Fog and Mobile Edge Computig (FMEC)*, 2019.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. WQR-UD: An online scheduling algorithm for FemtoClouds. In *Proceedings of the 12th EAI International Conference on Performance Evaluation Methodologies and Tools*, 2019.

Cosimo Anglano, Massimo Canonico, Paolo Castagno, Marco Guazzone, and Matteo Sereno. Profit-aware coalition formation in fog computing providers: A game-theoretic approach. *Concurrency and Computation: Practice and Experience*, 2019.

Cosimo Anglano, Massimo Canonico, Paolo Castagno, Marco Guazzone, and Matteo Sereno. A game-theoretic approach to coalition formation in fog provider federations. In *2018 Third International Conference on Fog and Mobile Edge Computing (FMEC)*, 2018. Best Paper Award.

Massimo Canonico and Luigi De Russis. A comparison and critique ofnatural language understanding tool. In *Proceedings of Cloud Computing 2018*, 2018.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Prometheus: A flexible toolkit for the experimentation with virtualized infrastructures. *Concurrency and Computation: Practice and Experience*, 30(11), 2018.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Profit-aware Resource Management for Edge Computing Systems. In *Proceedings of the 1st International Workshop on Edge Systems, Analytics and Networking*, 2018.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Forensic analysis of the chatsecure instant messaging application on android smartphones. *Digital Investigation*, 19:44–59, 2016.

Massimo Canonico, Stefania Montani, and Manuel Striani. Teem: a mobile app for technology-enhance emergency management. In *Proocedings of Proc. EAI International Conference on IoT Technologies for Healthcare*, 2016.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. FCMS: A fuzzy controller for cpu and memory consolidation under sla constraints. *Concurrency and Computation: Practice and Experience*, 2015.

Massimo Canonico and Davide Monfrecola. Cloudtui-fts: a user-friendly and powerful tool to manage cloud computing platforms. In *Proocedings of the 9th International conference on Perfomance Evaluation Methodologies and Tools, ValueTools*, 2015.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. FC2Q: Exploiting fuzzy control in server consolidation for cloud applications with SLA constraints. *Concurrency and Computation: Practice and Experience*, 2014.

Massimo Canonico, Andrea Lombardo, and Irene Lovotti. Cloudtui: a multi cloud platform text user interface. In *Proocedings of the 7th International conference on Perfomance Evaluation Methodologies and Tools, ValueTools*, 2013.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Fuzzy-q&e: Achieving qos guarantees and energy savings for cloud applications with fuzzy control. In *CGC*, pages 159–166, 2013.

Massimo Canonico et all. Futuregrid education: Using case studies to develop a curriculum for communicating parallel and distributed computing concepts. In *XSEDE*, 2012.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Exploiting vm migration for the automated power and performance management of green cloud computing systems. In *E2DC*, pages 81–92, 2012.

Cosimo Anglano, Massimo Canonico, and Marco Guazzone. Energy-efficient resource management for cloud computing infrastructures. In *CloudCom*, pages 424–431, 2011.

Cosimo Anglano, Massimo Canonico, and Guazzone Marco. The sharegrid peer-to-peer desktop grid: Infrastructure, applications, and performance evaluation. *Journal of Grid Computing*, 4(8):543–570, 2010.

Cosimo Anglano and Massimo Canonico. The file mover: high-performance data transfer for the grid. *Concurr. Comput. : Pract. Exper.*, 20(1):99–123, 2008.

Cosimo Anglano, Massimo Canonico, Marco Guazzone, Marco Botta, Sergio Rabellino, Simone Arena, and Guglielmo Girardi. Peer-to-peer desktop grids in the real world: The sharegrid project. In *CCGRID '08: Proceedings of the 2008 Eighth IEEE International Symposium on Cluster Computing and the Grid*, pages 609–614, Washington, DC, USA, 2008. IEEE Computer Society.

Cosimo Anglano and Massimo Canonico. Scheduling algorithms for multiple bag-of-task applications on desktop grids: A knowledge-free approach. In *22nd IEEE International Symposium on Parallel and Distributed Processing, IPDPS 2008, Miami, Florida USA, April 14-18*, pages 1–8, 2008.

Cosimo Anglano and Massimo Canonico. Improving the performance of fault-aware scheduling policies for desktop grids (be lazy, be cool). In *WET-ICE '07: Proceedings of the 16th IEEE International Workshops on Enabling Technologies: Infrastructure for Collaborative Enterprises*, pages 235–240, Washington, DC, USA, 2007. IEEE Computer Society.

Cosimo Anglano and Massimo Canonico. Exploiting overlay networks features to enhance the performance of the file mover. In *Proceedings of*

2nd International Workshop on Distributed Cooperative Laboratories: Instrumenting the GRID (INGRID 2007), S.Margherita Ligure Portofino, Italy, April 2007.

Cosimo Anglano, John Brevik, Massimo Canonico, Dan Nurmi, and Rich Wolski. Fault-aware scheduling for bag-of-tasks applications on desktop grids. In *GRID '06: Proceedings of the 7th IEEE/ACM International Conference on Grid Computing*, pages 56–63, Washington, DC, USA, 2006. IEEE Computer Society.

Cosimo Anglano and Massimo Canonico. Performance analysis of high-performance file-transfer systems for grid applications: Research articles. *Concurr. Comput. : Pract. Exper.*, 18(8):807–816, 2006.

Cosimo Anglano and Massimo Canonico. Fault-tolerant scheduling for bag-of-task grid applications. In *Advances in Grid Computing – EGC 2005*, volume 3470 of *Lecture Notes in Computer Science*, pages 630–639. Springer–Verlag GmbH, 2005.

Cosimo Anglano and Massimo Canonico. A comparative evaluation of high-performance file transfer systems for data-intensive grid applications. In *WETICE '04: Proceedings of the 13th IEEE International Workshops on Enabling Technologies: Infrastructure for Collaborative Enterprises*, pages 283–288, Washington, DC, USA, 2004. IEEE Computer Society.

C. Anglano and M. Canonico. The file mover: an efficient data transfer system for grid applications. In *CCGRID '04: Proceedings of the 2004 IEEE International Symposium on Cluster Computing and the Grid*, pages 625–632, Washington, DC, USA, 2004. IEEE Computer Society.

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