



Europass Curriculum Vitae



Personal Information

First name / Surname

Claudio Scordino

E-mail

claudio.scordino@gmail.com

Nationality

Italian

Date of birth

Pisa, August 8th 1977

Desired employment / Occupational field

Project/Product manager

Work experience

Dates

September 2016 – today

Occupation or position held

Project Manager – International research projects

Main activities and responsibilities

Submission, technical management, coordination with the other partners and official reviews of national and international research projects:

- Work Package leader in the P-SOCRATES (FP7), HERCULES (H2020) and RETINA (EUROSTARS) European projects
- Various R&D activities in the ENABLE-S3 (ECSEL), I-MECH (ECSEL) and SECREDAS (ECSEL) European projects.

Research activities about multi-core scheduling especially within the Linux kernel.

Contributions to the source code of the Linux kernel and the Jailhouse hypervisor.

Name and address of employer

Evidence Srl - Italy

Dates

January 2016 – August 2016

Occupation or position held

System architect

Main activities and responsibilities

R&D activity for designing the architecture of the next generation systems.

Name and address of employer

List S.p.A. - Italy.

Dates	January 2009 – December 2015
Occupation or position held	Project Manager - Manager of the “ <i>Operating Systems and Applications</i> ” company division
Main activities and responsibilities	<ul style="list-style-type: none"> • Responsible for the activities of more than 10 developers • Management of projects with teams up to 8 developers, length up to 4 man/year, budget up to 600.000 € • Effort estimation, break-down and coordination of the single activities • Supervision of the whole development cycle of software projects (i.e., requirements, architectural design, development, testing) according to ISO9001 standards. • Submission, supervision and management of European research projects of FP7 and H2020 framework programmes: ACTORS (task leader), ERA (task leader), P-SOCRATES(WP leader), AXIOM (WP-leader), HERCULES (WP-leader). • Staff recruitment. Technical and motivational interviews for new hires. • Periodic evaluation interviews to employees • Study and selection of new technologies (e.g., standards, libraries, tools) to be adopted by the company • Research activity on innovative systems and infrastructures (Software DSM, many-core processors, Multi-OS)
Name and address of employer	Evidence Srl – Italy
Dates	September 2006 – December 2008
Occupation or position held	Computer Engineer
Main activities and responsibilities	<ul style="list-style-type: none"> • Design/development of an embedded Linux distribution and of the related development tools • Development/change of Linux kernel drivers • Architectural design and development of C/C++ applications on Linux platforms. • Training to customers (e.g., Siemens, Korg, Atmel, Carel, Altran) about Linux user-space and kernel-space programming • Writing and maintenance of technical documentation.
Name and address of employer	Evidence Srl – Italy
Dates	June 2006 – August 2006
Occupation or position held	Computer Engineer
Main activities and responsibilities	Consulting for: <ul style="list-style-type: none"> • Documentation of software for Ansaldo • Porting of TCP/IP libraries to an embedded real-time operating system
Name and address of employer	Intecs S.p.A. - Italy
Dates	2006 – 2007
Occupation or position held	Teacher at the “Open-source software management” class
Main activities and responsibilities	Teaching of the Linux kernel internals
Name and address of employer	University of Pisa – Italy
Dates	February 2005 – June 2006
Occupation or position held	Teaching assistant
Main activities and responsibilities	Contract for two years as teaching assistant at the “ <i>Concurrent and system programming laboratory</i> ” (i.e., concurrent programming on POSIX systems using the C language)
Name and address of employer	University of Pisa - Italy
Dates	October 2003 – December 2003
Occupation or position held	Computer Engineer
Main activities and responsibilities	Contract for software development within the European project OCERA. <ul style="list-style-type: none"> • Implementation of the real-time scheduling algorithm on an ARM PXA250 microcontroller by changing the Linux kernel. • Writing scientific publications • Talks at international conferences
Name and address of employer	Scuola Superiore Sant’Anna

Dates	July 2001 – August 2001
Occupation or position held	Stage
Main activities and responsibilities	Paid stage for 2 months at the <i>Information Technology Division</i> . Development of Perl scripts and MySQL database to help the management of the configuration of the computing center.
Name and address of employer	CERN (European Organization for Nuclear Research) - Switzerland

Education and training

Dates	January 2004 – December 2007
Title of qualification awarded	Ph.D.
Principal subjects/occupational skills covered	PhD. with study grant in collaboration with Scuola Superiore Sant'Anna. The title of the thesis was " <i>Dynamic Voltage Scaling for Energy-Constrained Real-Time Systems</i> ". The thesis had been defended on December 11th 2007. The thesis proposed innovative real-time scheduling algorithms with energy-saving features.
Name and type of organisation providing education and training	University of Pisa - Italy
Dates	August 2005 – January 2006
Title of qualification awarded	Research activity
Principal subjects/occupational skills covered	Research activity and programming for 5 months on power-aware real-time clusters.
Name and type of organisation providing education and training	<i>Computer Science Department</i> of the <i>University of Pittsburgh (US)</i>
Dates	March 2004
Title of qualification awarded	Certificate of attendance
Name and type of organisation providing education and training	Bertinoro International Spring School for Graduate Studies in Computer Science.
Dates	September 1996 – July 2003
Title of qualification awarded	Master degree in Computer Engineering
Principal subjects/occupational skills covered	Master degree in Computer Engineering, curriculum " <i>Informatic Systems and Applications</i> " obtained on July 24 th 2003. The topic of the thesis was " <i>Study and implementation of a real-time scheduling algorithm for energy-saving on a Linux system</i> ". The thesis has been developed at the Scuola Superiore Sant'Anna. The thesis was part of the OCERA (" <i>Open Components for Embedded real-Time Applications</i> ") project, financially supported by the European commission. The thesis was related to the development of a real-time scheduling algorithm with energy-saving features for the Linux kernel.
Name and type of organisation providing education and training	University of Pisa - Italy
Dates	September 1991 – July 1996
Title of qualification awarded	Scientific High School degree.
Name and type of organisation providing education and training	Liceo Scientifico statale F.Buonarroti in Pisa - Italy

Certificates and awards

Dates	March 2011
Title of qualification awarded	ScrumMaster certificate
Name and type of organisation providing education and training	Certificate number #137924 released by the Scrum Alliance on March 30 th 2011.
Dates	December 2008 – today
Activity	Collaboration with the Linux kernel community
Principal subjects/occupational skills covered	Several patches already merged in the official Linux kernel (full list of contributions available at http://git.kernel.org/cgit/linux/kernel/git/torvalds/linux.git/log/?qt=author&q=Scordino). Proposal, requirements specification and supervision of the original version of the SCHED_DEADLINE real-time scheduler merged in the official Linux kernel since release 3.14. Development and testing of the extensions merged in the kernel releases 4.13 and 4.16.
Dates	2008
Title of qualification awarded	Courses about relationship with the customer
Name and type of organisation providing education and training	Periodic training courses at “Camera di Commercio di Pisa” and at “Scuola Internazionale di Alta Formazione” (SIAF)
Dates	2006
Title	IEEE member
Dates	2005
Activity	Sporadic substitute for the “Operating Systems” class at the Computer Science department of the University of Pisa.
Dates	2002
Title of qualification awarded	Cisco certificate
Name and type of organisation providing education and training	“Networking Academy Program” certificate (#201584-570823-750624)

Personal skills and competences

Mother tongue	Italian									
Other language	English									
Self-assessment	Understanding					Speaking			Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production		Written production	
English	B2	Independent user	B2	Independent user	C1	Proficient user	B2	Independent user	C1	Proficient user

English

(*) [Common European Framework of Reference for Languages](#)

Management skills and competences	<ul style="list-style-type: none"> • Effort estimation, break down and coordination of complex activities • Traditional software development methodologies: <ul style="list-style-type: none"> ◦ Classic waterfall ◦ V-Model • Agile software development methodologies: <ul style="list-style-type: none"> ◦ Extreme Programming ◦ SCRUM • Decision making and self-organization skills. • Financial accounting rules for projects funded by national or European calls. • Very good skills of inter-personal relationship, tutoring and motivation of employees. • Technical and motivational interviews for recruiting.
Previous technical experience	<ul style="list-style-type: none"> • Programming languages: <ul style="list-style-type: none"> ◦ Excellent knowledge: C, C++ ◦ Good knowledge: Bash ◦ Basic knowledge: Assembler (x86), Java • Knowledge of HTML, LaTeX, Markdown and UML languages. • Procedural, object-oriented, concurrent and real-time programming. • Several years of research in the following fields: operating systems, real-time scheduling algorithms, energy saving, embedded devices, hypervisors. • Knowledge of the main Design Patterns of the GoF. • Detailed knowledge of the internal architecture of x86 computer and ARM Cortex-A microcontrollers. • Know-how about the internal structure of an operating system and detailed knowledge about the infrastructure of Linux systems (i.e., bootloader, kernel, drivers, filesystem, libraries). • Linux kernel drivers programming. • Knowledge and usage of the POSIX standard. • Usage of both software (gdb) and hardware (Lauterbach Trace32 JTAG) debuggers. • Unit test tools (i.e., cppunit, googletest) • Development tools: gcc, make, ctags, Doxygen • Editors: vim, Eclipse, QtCreator • Software versioning tools: subversion, git • Basic knowledge of Qt libraries and the C++11 standard. • Tools for creating embedded Linux systems (e.g., buildroot, scratchbox, Qemu, bootloader U-Boot, Busybox, crosstool-ng, Yocto) • Basic knowledge of network protocols • Active contribution to the following open-source projects: Linux kernel, Jailhouse hypervisor, RTSim. • Knowledge of legal aspects of the main open-source licenses (e.g., GPL/LGPLv2, GPL/LGPLv3, BSD, MIT, etc.)
Further skills and interests	<ul style="list-style-type: none"> • Very good knowledge of English language, thanks to the 5 months worked at the University of Pittsburgh and the continuous work within international projects. • Collaboration and own initiative. • Hobbies: books, computer science, trips, music, guitar, movies, photography.

Appendix: list of selected international scientific publications

Scientific journals

- 2018** C. Scordino, L. Abeni, J. Lelli, *Real-Time and Energy Efficiency in Linux: Theory and Practice*, ACM SIGAPP Applied Computing Review Vol. 18, issue 4, December 2018
- 2017** P. Burgio, M. Bertogna, N. Capodieci, R. Cavicchioli, M. Sojka, P. Houdek, A. Marongiu, P. Gai, C. Scordino, B. Morelli, *A software stack for next-generation automotive systems on many-core heterogeneous platforms*, Microprocessors and Microsystems, 52:299-311, Elsevier, July 2017.
- 2016** C. Álvarez, E. Ayguadé, J. Bosch, J. Bueno, A. Cherkashin, A. Filgueras, D.J. González, X. Martorell, N. Navarro, M. Vidal, D. Theodoropoulos, D.N. Pnevmatikatos, D. Catani, D. Oro, C. Fernández, C. Segura, J. Rodríguez, J. Hernando, C. Scordino, *The AXIOM software layers*, Microprocessors and Microsystems, 2016, ISSN: 0141-9331.
- 2015** L.M. Pinho, V. Nélis, P.M. Yomsi, E. Quiñones, M. Bertogna, P. Burgio, A. Marongiu, C. Scordino, P. Gai, M. Ramponi, M. Madiak, *P-SOCRATES: A parallel software framework for time-critical many-core systems*, Microprocessors and Microsystems, 39(8): 1190-1203, November 2015.
- 2015** J. Lelli, C. Scordino, L. Abeni, D. Faggioli, *Deadline scheduling in the Linux kernel*, Software: Practice and Experience, 46(6): 821-839, June 2016.
- 2011** E. Bini, G. Buttazzo, J. Eker, S. Schorr, R. Guerra, G. Fohler, K. Arzen, V. R. Segovia, C. Scordino, *Resource Management on Multicore Systems: The ACTORS Approach*, IEEE Micro, vol. 31, no. 3, pp. 72-81, May/June 2011.
- 2009** E. Bini, C. Scordino, *Optimal Two-Level Speed Assignment for Real-Time Systems*, International Journal of Embedded Systems (IJES), Vol.4, No. 2, Pages 101-111, 2009.
- 2009** L. Abeni, L. Paolopoli, C. Scordino, G. Lipari, *Resource Reservations for General Purpose Applications*, IEEE Transactions on Industrial Informatics, Volume 5:1, Pages 12-21, February 2009.
- 2006** C. Scordino, G. Lipari, *A Resource Reservation Algorithm for Power-Aware Scheduling of Periodic and Aperiodic Real-Time Tasks*, IEEE Transactions on Computers, December 2006.

Conferences and workshops

- 2018** C. Scordino, L. Abeni, J. Lelli, *Energy-Aware Real-Time Scheduling in the Linux Kernel*, 33rd ACP SIGAPP Symposium on Applied Computing (SAC 2018), Pau, France, April 2018.
- 2015** D. Theodoropoulos, D. Pnevmatikatos, C. Alvarez, E. Ayguade, J. Bueno, A. Filgueras, D. Jimenez-Gonzalez, X. Martorell, N. Navarro, C. Segura, C. Fernandez, D. Oro, J. Saeta, P. Gai, C. Scordino, A. Rizzo, R. Giorgi, *The AXIOM project (Agile, eXtensible, fast I/O Module)*, IEEE Proc. 15th Int'l Conf. on Embedded Computer Systems: Architecture, MOdeling and Simulation, July 2015.
- 2015** C. Alvarez, E. Ayguade, J. Bueno, A. Filgueras, D. Jimenez-Gonzalez, X. Martorell, N. Navarro, D. Theodoropoulos, D. Pnevmatikatos, C. Scordino, P. Gai, C. Segura, C. Fernandez, D. Oro, J. Saeta, P. Passera, A. Pomella, A. Rizzo, R. Giorgi, *The AXIOM Software Layers*, IEEE Proc. 18th EUROMICRO-DSD, Aug. 2015, pp. 117-124, ISBN: 978-1-4673-8035-5, DOI: 0.1109/DSD.2015.52
- 2015** V. Nelis, P. M. Yomsi, L. M. Pinho, E. Quinones, M. Bertogna, A. Marongiu, P. Gai, C. Scordino, *A system model and stack for the parallelization of time-critical applications on many-core architectures*, Proceedings of 3rd High-performance and Real-time Embedded Systems (HiRES'15) workshop, in conjunction with 10th International Conference on High-Performance and Embedded Architectures and Compilers (HiPEAC'15), Amsterdam, Netherlands, January 2015.
- 2014** L. Abeni, J. Lelli, C. Scordino, L. Paolopoli, *Greedy CPU reclaiming for SCHED_DEADLINE*, Proceedings of 16th Real-Time Linux Workshop (RTLWS), Dusseldorf, Germany, October 2014.
- 2014** L. M. Pinho, E. Quinones, M. Bertogna, L. Benini, J. P. Carlos, C. Scordino, M. Ramponi, *P-SOCRATES: a Parallel Software Framework for Time-Critical Many-Core Systems*, Proceedings of 17th Euromicro Conference on Digital System Design (DSD 2014), Verona, Italy, August 2014.
- 2014** L. M. Pinho, E. Quinones, M. Bertogna, L. Benini, J. P. Carlos, C. Scordino, M. Ramponi, *Time Criticality Challenge in the Presence of Parallelised Execution*, Proceedings of 2nd Workshop on High-Performance and Real-Time Embedded Systems

(HiRES 2014), held in conjunction with the 9th International Conference on High-Performance and Embedded Architectures and Compilers (HiPEAC 2014), Vienna, Austria, January 2014.

- 2013** B. Morelli, R. Schiavi, C. Scordino, P. Gai, M. Di Natale, *Automatic generation of controls code from models for real-time Linux platforms*, Proceedings of the 15th Real-Time Linux Workshop (RTLWS), Lugano-Manno, Switzerland, October 2013.
- 2013** G. Keramidas, S. Wong, F. Anjam, A. Brandon, R. Seedorf, C. Scordino, L. Carro, D. Matos, R. Giorgi, S. Kavvadias, S. McKee, B. Goel, V. Spiliopoulos, *Embedded Reconfigurable Computing: the ERA Approach*, Proc. 11th IEEE Int'l Conf. on Industrial Informatics, pp. 827-832, Bochum, Germany, July 2013.
- 2012** C. Kang, S. Kavvadias, A. Scionti, C. Scordino, P. Gai, R. Giorgi, *Dynamically Reconfiguring through Phase Detection on FPGA*, HiPEAC ACACES-2012, pp. 149-152, Fuggi, Italy, July 2012.
- 2010** N. Manica, L. Abeni, L. Palopoli, D. Faggioli, C. Scordino, *Schedulable Device Drivers: Implementation and Experimental Results*, International Workshop on Operating Systems Platforms for Embedded Real-Time Applications (OSPRT), Brussels, Belgium, July 2010.
- 2009** D. Faggioli, F. Checconi, M. Trimarchi, C. Scordino, *An EDF scheduling class for the Linux kernel*, 11th Real-Time Linux Workshop (RTLWS), pages 197-204, Dresden, Germany, September 2009.
- 2007** L. Abeni, C. Scordino, G. Lipari, L. Palopoli, *Serving Non Real-Time Tasks in a Reservation Environment*, 9th Real-Time Linux Workshop (RTLWS), Linz, November 2007.
- 2006** G. Lipari, C. Scordino, *Linux and Real-Time: Current Approaches and Future Opportunities*, International Congress ANIPLA, Rome, Italy, November 2006.
- 2006** C. Rusu, A. Ferreira, C. Scordino, A. Watson, R. Melhem and D. Mosse, *Energy-Efficient Real-Time Heterogeneous Server Clusters*, 12th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS'06), San Jose, California, United States, April 2006.
- 2005** C. Scordino and E. Bini, *Optimal Speed Assignment for Probabilistic Execution Times*, 2nd Power-Aware Real-Time Workshop (PARC'05), Jersey City, NJ, September 2005.
- 2004** C. Scordino and G. Lipari, *Using Resource Reservation Techniques for Power-Aware Scheduling*, Proceedings of the 4th ACM International Conference on Embedded Software (EMSOFT'04), Pisa, Italy, September 2004.
- 2003** C. Scordino and G. Lipari, *Energy Saving Scheduling for Embedded Real-Time Linux Applications*, 5th Real-Time Linux Workshop (RTLWS), Valencia, Spain, November 2003.