

## PERSONAL INFORMATION

## Luigi Mantellini



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 <https://www.comio.it>

 <https://github.com/comio>

 <https://www.linkedin.com/in/comio>

Gender Male | Date of birth 30 June 1979 | Nationality Italian

## CURRENT JOB

2018 – Present

## Senior Software Engineer - Team Leader

SM-Optics s.r.l. - SIAE Microelettronica Group - Bari, Italy

- Nokia 1830 Optical Network Extender (ONE) Product Line
- Team Leader, Software Design and Development of PTP solution for the Nokia 1830-ONE product. I handled a SW/System/HW mixed team that implemented a full working PTP stack for the 1830-ONE appliance in a short time frame.
- Board member of cryptographic components design and development (quantum backend), alarm manager development, spread contributions over the whole code base.
- Involved Software and Hardware technologies: C/C++ (gcc suite), C++Std Library, Boost Library, Linux Kernel, LinuxPtp, Yang, Containers, Renesas Timing devices and custom FPGA (developed from another internal team), ETSI GS QKD 014, Interested to Rust Language.
- Involved Standards: PTP IEEE 1588-2019 (and amendments), G.8275, G.8275.1, G.8275.2 and related.
- VSCode and Git user.

## PREVIOUS WORK EXPERIENCES

2012 – 2018

## Senior Software Engineer

MerMec S.p.A. - Monopoli (BA), Italy

- Modular and Unified Acquisition software
- Software Design of a Vision and Inspection software (VCube™)
- Linux development and user.
- Microsoft Windows/MFC based Environment (Mainly C++ code)
- Main Customers: RFI S.p.A. (Italian Railways Infrastructure Operator), SNCF (French Railways Operator), SŽDC (Czech Railways Operator), RailCorp New South Wales (Australian Railway Operator), London Underground, RATP (French Underground Operator), SBB CFF FFS (Swiss Railways Operator)

2011 – 2012

## Senior Software Engineer - Team Leader

ADB Broadband S.p.A. - Formerly Pirelli Broadband Solutions S.p.A. - Milan, Italy

- Leader of Telekom Austria (A1) dedicated team
- Das U-Boot, Linux Kernel and OpenWRT specialist (Mainly on MIPS-based CPUs)
- Networking on Broadcom SoCs-based Linux Platforms
- Low-level device drivers development and debug, NAPI-based network drivers development and debug
- ADSL/VDSL2 CPE class of products
- Main Customers: Telekom Austria / A1

**2011 – 2011 Senior FW Developer**

Skytechnology s.r.l. - Milan, Italy

Alcatel-Lucent WTD R&amp;D Labs - Vimercate, Italy

- Microwave-based Backhauling solutions (MPR9500 product line)
- Lauterbach Trace32 Debugger
- Bridging (IEEE 802.1Q, IEEE 802.1ad), IP Routing
- ENEA OSE Operating System (Proprietary)

**2007 – 2011 Senior R&D and Network devices software – Team Leader**

Industrie Dial-Face S.p.A. - Peschiera Borromeo (MI), Italy

Leader of GPON and DSLAM Development Team

- Das U-Boot, Linux Kernel and OpenWRT developer (Mainly on MIPS-based CPUs, Coldfire and MPC)
- Porting and bug fixing Linux Kernel on Coldfire SoCs (see <https://github.com/comio/linux-2.6.25-cf547x>)
- Lauterbach Trace32 Debugger
- Next Generation Network 2 (NGN2) and Next Generation Access
- NAPI-based Network drivers, development and bug fixing.
- L2 and L3+ (Routing, NAT) switching on Fulcrum Micro SoCs
- VDSL2 and GPON based Backhauling solutions

**2007 – 2007 Researcher**

STMicroelectronics s.r.l. @ AST Lab R&amp;I - Agrate Brianza (MI), Italy

Research activity on UML2 modeling of Multithread application (Posix Thread based)

- Publication E. Riccobene, P. Scandurra, S. Bocchio, A. Rosti, L. Lavazza, L. Mantellini: *"SystemC/C-based model-driven design for embedded systems"*. ACM Trans. Embedded Comput. Syst. 8(4): (2009)

**2005 – 2006 Senior Consultant**

Deloitte ERS s.r.l. - Turin, Italy

Formerly Arthur Andersen S.p.A.

Sarbanes Oxley law compliance and Security assessment

Data analysis and data-mining specialist (support to Fraud Group)

**2004 – 2005 Teacher Assistant and Researcher**

Politecnico di Torino - Turin, Italy

- Database courses
- Oracle Optimizer
- Data Mining and Knowledge Retrieval research activities

- Publication E. Baralis, S. Chiusano, R. Dutto, L. Mantellini: *"Compact Representations of Sequential Classification Rules"*. Data Mining: Foundations and Practice 2008. Studies in Computational Intelligence Vol. 118 Springer 2008

**2002 – 2004 Network and Systems Administrator**

Collegio Universitario "R. Einaudi" di Torino - Turin, Italy

- Linux/Microsoft Windows integration
- Network design and deploying (Cisco-based)

## 2000 – 2003 Scholarship Teacher Assistant

Politecnico di Torino - Turin, Italy

Courses:

- Advanced C programming
- Development techniques and Languages
- Software Engineering and Object Oriented Programming
- Databases

## EDUCATION

### 2006 – 2007 “Information and Communication Technologies”

Executive Master

CEFRIEL Politecnico di Milano - Milan, Italy

Score Graduated with Honours, score 110 cum Laude

Thesis “A UML2 Profile for Posix Thread application support”

Endorsement Letter from Prof. Mauro Santomauro (Scientific Director at CEFRIEL srl, Politecnico di Milano)

Scholarships Apulia Regional Administration (Regione Puglia)

STMicroelectronics s.r.l.

### 1998 – 2003 Computer Science Engineer

Master

Politecnico di Torino - Turin, Italy

Score Graduated with Honors, score 110 cum Laude

Thesis “Sequential data analysis”

Awards “Best Computer Engineering Student” from Politecnico di Torino Alumni Association (“Associazione Ingegneri e Architetti Ex Allievi del Politecnico di Torino”) - May 31st, 2004

“Optime” from Unione Industriale Torino (Industrials Union of Turin) - September 21st, 2004

Scholarships Ente Morale Collegio Universitario “R. Einaudi” di Torino - from 1998 to 2004

“Ente Diritto allo Studio Universitario del Piemonte” (EDiSU) – from 1998 to 2004

Qualified Engineer in 2004 at Register of Engineers of Province of Turin

### 1993 – 1998 Technical IT diploma

High School Diploma

I.T.I.S. “Ettore Majorana” - Martina Franca (TA), Italy

Score Italian High School Diploma “Perito Capotecnico Informatico Abacus”

Graduated with Honors, score 60/60 cum Encomium

## TECHNICAL SKILLS

- Embedded application for telecommunication devices.
- MIPS, PowerPC, and Coldfire/m68k architectures
- Programming languages: C/C++/Java, SQL, VHDL, LaTeX, UML2.1
- Development under \*X operating systems (Users-space and Kernel-space)
- Microsoft Windows and MFC programming.
- TCP/IP, Routing, NAT, optimization on various SoCs
- Networking and bridging (IEEE 802 Standards Family), GPON technologies (ITU-T G.984), DSL technologies (ITU-T G.992, ITU-T G.993)
- Devices: Cisco Systems (Switch, Router, L3 Switch, PIX), ATE Agilent

## Digital competences

## SELF-ASSESSMENT

Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

[Digital competences - Self-assessment grid](#)

## LANGUAGES

Mother tongue Italian

## Other languages

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B1	B2	B1	B1	B1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user  
[Common European Framework of Reference for Languages](#)

## OTHER INTERESTS

- MTB Cross-country / Marathon
- Classical Music
- OpenSource-First Philosophy