Paolo Angelelli – Curriculum Vitae

Personal Data

FULL NAME Paolo Angelelli

BORN 1981

NATIONALITY Italian

WORKING STATUS Software Engineer, The Qt Company

E-MAIL paolo.angelelli@gmail.com

ONLINE PROFESSIONAL PROFILE **LinkedIn**

Education

- **AUGUST 2008 - JUNE 2012** Ph.D. in Computer Science (Medical Visualization) from the University of Bergen. Thesis: Visual Exploration of Human Physiology: Visualizing Perfusion, Blood Flow and Aging.
Focus on the data processing, scientific visualization and interactive visual analysis of medical data, imaging selected physiological aspects, perfusion, blood flow and aging among the others. Supervisor: Prof. H.Hauser

- **MARCH 2008** MSc in Computer Science at the University of Bologna. Grade 110/110, cum Laude. Thesis: Enterprise computing and integration: a case-study - slides - Developed for Wincor-Nixdorf Italy. Supervisor: Prof. F.Panzieri

- **AUGUST 2005 - AUGUST 2006** Scolarship for one exchange year at the University of Bergen (Norway , Computer Science department) with the Erasmus program.

- **MARCH 2005** BS in Computer Science at University of Bologna. Grade 109/110.Thesis: Design, Implementation and Analisys of TimeWarp synchronization algorithm for parallel and distributed Simulation (as a part of the ARTIS project)
Supervisors: Prof. L. Donatiello, Prof. G. D'Angelo

- **JUNE 2000** High School diploma - Classical Lyceum

Independent Coursework

- Introduction to Data Science (University of Washington, Coursera)

- Functional Programming Principles in Scala (EPFL, Coursera)

- Simulation Methods in Ultrasound Imaging (NTNU)

Professional experience

- **Nov 2015 – Present** Software engineer at The Qt Company, doing management, maintenance and development of the Positioning and Location Qt module. blog

- **February 2013 – May 2016** PostDoc in realtime 4D cardiac ultrasound rendering – UiB/GE Vingmed Ultrasound
Project related to realtime acquisition, processing (despeckling, feature extraction, segmentation, registration, etc.) and visualization of 4D volumetric medical ultrasound.

- **January 2013 - February 2013** Graphics engineer - GE Vingmed Ultrasound
Project related to incorporating 4D doppler rendering in the current GE cardiac rendering solution

- **November 2012 - January 2013** Visualization engineer - UiB
Project related to the visual analytics of medical cohort study data, with the aim of easing interactive multivariate statistical analysis and hypotheses generation.

- **August 2012 - October 2012** Graphics engineer - UiB
Project related to creating a VR solution embedding 4D ultrasound rendering into a live reconstruction of a 3D scene (RGBD data used for the reconstruction obtained using Microsoft Kinect technology).

- **2008 - 2008** Software and system engineer for Wincor-Nixdorf Italy on Java2EE enterprise applications and WebServices field

- **2007 - 2008** Thesis work at Wincor-Nixdorf Italy on EAI, SOA, batch execution and BPM.

Unpaid

- **2002 - 2004** Linux Workstations cluster administration in the student lab of computer science department at University of Bologna

- **2000 - Now** (Personal) Linux server and services administration (hosting this page)

Languages

Italian: Mother tongue.
English: Fluent - TOEFL certificated in 2004
Norwegian: Intermediate. (trinn 2)
French,Spanish: Basic.

Computer Science knowledge

Operating Systems
GNU/Linux, Microsoft Windows (good), MacOS X (basic)
Programming and Scripting languages
Bash, C/C++, Java, Scala, Pascal, PHP, JavaScript, Awk, LaTeX, Scheme, Lua, R, Matlab, Python, Assembly MIPS, ++

POSIX, JavaEE, Play2, Twisted, Qt/QtQuick, OpenGL, OpenCL, ++

DATABASES
PostgreSQL, IBM DB2, MySQL, SQLite, other NoSQL dbs (couchdb etc.)

COMPUTER NETWORKS
Configuration experience of TCP/IP networks (routing, DHCP, etc.), packet filtering/VPN/QoS, services (HTTP, VoIP, FTP, SSH, SMTP, POP3/IMAP, SAMBA/NFS, JavaEE AS etc.) in the context of private LANs

Skills

Computer Science, Computer Graphics, Data Visualization, Real-Time 3D Graphics, Data Analysis, Statistics, HPC, Scientific Computing, Image Analysis and Processing, Data Science, Physics, Computational and Differential Geometry, Discrete Event Simulation, Distributed Systems, Parallel Programming, GPU Computing, Database Programming, Machine Learning, Medical Ultrasound Acoustics.

Selected Software created

- MIPS R3000 CPU emulator - C
- TimeWarp synchronization algorithm in the ArTIS simulation middleware - C
- Web application for technical reports publication and searching with adobe xMP metadata support in the pdf documents - J2EE + JBossAS
- Fully functional FAT12 / FAT16 / FAT32 filesystem driver for FUSE - as a part of the ViewOS project - C
- Berlekamp-Massey attack implementation for LFSRs - C++
- Volume ray caster w. transfer function editor and slicing capability - C++ / Qt
- Batch processing subsystem and enterprise service bus adapter (JavaEE) for integration with ActiveBPEL BPM engine
- Some software I've created for the Nokia N9 platform (MeeGo Harmattan) - meeTrainer ranked first in the Location & Navigation category of the maemo coding competition 2012
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Publications

ARTICLES AS FIRST AUTHOR
2010 - Guided Visualization of Ultrasound Image Sequences -- VCBM (Video)
2011 - Interactive visual analysis of contrast-enhanced ultrasound data based on small neighborhood statistics -- C&G (Video)
2011 - Straightening tubular flow for side-by-side visualization -- TVCG (Video)
2014 - Interactive Visual Analysis of Heterogeneous Cohort Study Data -- CG&A (Video)
2014 - Live ultrasound-based particle visualization of blood flow in the heart -- SCCG (incorporated into cSound 2.0 as BSI)

ALSO ON

UIB   DBLP   GOOGLE SCHOLAR

International Conferences, Talks and Research Stays

- **2008** Visual Computing for Biology and Medicine (VCBM) 2008 EG Workshop at TU Delft (Delft, Netherlands).

- **2009** 2 Weeks research stay with the Visualization Group at WWU University (Muenster, Germany). Attendance of the IEEE 2009 VisWeek conference (Atlantic City, NJ, USA).

- **2010** Presentation at the VCBM 2010 EG Workshop at University of Leipzig (Leipzig, Germany). Attendance of the IEEE 2010 VisWeek conference (Salt Lake City, UT, USA).

- **2011** 2 Months research stay with the Medical Visualization group at the Otto von Guericke University (Magdeburg, Germany). Presentation at the VCBM Fachgruppe (Magdeburg, Germany). Presentation at the IEEE 2011 VisWeek conference (Providence, RI, USA).

- **2012** Attendance of the IEEE 2012 VisWeek conference (Seattle, WA, USA).

- **2014** Presentation at the Spring Conference in Computer Graphics (SCCG) (Smolenice, Slovakia). Attendance of the ACM 2014 SIGGRAPH (Vancouver, BC, Canada).

Academic Duties Fullfilled

- **2009** Teaching assistant for the courses of Computer Graphics and Mathematical Programming.

- **2010** Teaching assistant for the courses of Computer Graphics and Visualization. Supervision of student projects in the study course of visualization.

- **2011** Teaching assistant for the courses of Computer Graphics and Visualization.
Supervision of student projects in the study course of visualization.

- **2013** Supervision of student projects in the study course of visualization. Co-supervision of PhD projects.

- **2014** Supervision of student projects and master theses in the study course of visualization. Co-supervision of PhD projects.

Interests

Visualization, data analysis and visual analytics, software engineering, scientific and gpgpu computing, data science, computer graphics, image and signal processing, pattern recognition, digital and computational photography, domotics, automation and remote sensing, GIS, mobile solutions, system and network administration, traveling, cycling, hiking, cross-country skiing, tennis, e-learning.