Salvatore Tomaselli

Curriculum Vitae

Education

2011–2013 **Msc Computer Systems and Networks**, *Chalmers tekniska högskola*, Göteborg, Sweden, *GPA 4.2/5*.

2007–2011 **B.S. Computer science**, *Università degli studi di Catania*, Catania, Italy, *GPA 110/110* with honors.

Publications

Title Towards Lightweight Logging and Replay of Embedded, Distributed Systems

Authors Salvatore Tomaselli, Olaf Landsiedel

Description In this paper we introduce MILD; providing Minimal Intrusive Logging and Deterministic replay.

In proceedings ASCoMS 2013

Title LibReplay: Deterministic Replay for Bug Hunting in Sensor Networks

Authors Olaf Landsiedel, Salvatore Tomaselli, Elad Schiller

In proceedings EWSN'15

Masters Thesis

Title Debugging Wireless Sensor Networks with Incremental Snapshots

Supervisor Professor Olaf Landsiedel

Description This thesis intoduced a tool to capture event from a wireless sensor network, where nodes use TinyOS, and allow deterministic replay of the network inside a simulator.

Bachelor Thesis

Title Sviluppo di server web e sistema di caching per contenuti dinamici

Supervisor Professor Giuseppe Pappalardo

Description	This thesis was focused on the implementation of an HTTP/DAV server that can cache and invalidate server-generated responses, leading to greatly reduced IO and CPU loads.

Skills

Languages	In order of experience: Python, C, C++, nesC, Java, JavaScript, Haskell, PHP
Databases	PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch
Frameworks	Django, Qt5, Flask
Software	Debian, GNU Autotools, Git, SaltStack, Jenkins, unittest
Technical	Experience in making C code work on various POSIX platforms; using pthreads, atomic operations, networking. Programming on embedded systems, asynchronous or event-based.

Notable projects

Relational	Relational, a relational algebra parser/compiler/optimizer, used in academia and as educational tool. Implemented in Python Can compile relational algebra to Python, and perform some optimizations on the parse tree. It provides a GUI for ease of use. http://ltworf.github.io/relational/
lapdog	C++ daemon that uses ICMP+ARP to generate events upon appearing/disappearing of network devices. https://github.com/ltworf/lapdog
weborf	A HTTP/DAV server, implemented in C. http://ltworf.github.io/weborf/
Canary	Dynamic library to monitor for heap overflows, implemented in C. https://github.com/ltworf/canary

Experience

2014-2016	**C++ Software Engineer**, *Minerva Networks*, S. G. La Punta, Italy. The company, US based, sells software and hardware solutions to content providers, to provide live programs or download on demand. The C++ team provides a scalable and geolocated version of the backend API. My role included the integration of Elasticsearch within the API, to provide the devices with full text search and filtering. I also contributed to solutions to deploy and manage clusters.
2013-2014	**Backend Python Developer**, *Duego*, Göteborg, Sweden. The position involved writing and maintaining a REST API in Python for the clients to use, and managing the servers (production and staging). The API code was based upon different technologies: Flask, Redis, Elasticsearch, Mongodb. For the staging and production environment I had to work with AWS, autoscaling, Jenkins, Saltstack, graphite, New Relic and several tools that were developed in house. I changed position because the company was a startup and was shut down by the board.

2007-2012	**Student's server system administrator**, *Università degli studi di Catania*, Catania, Italy.

Maintain the Student server, install/configure services and implement web interfaces in PHP to use them.
Manage PostgreSQL database, mail service (Postfix+Dovecot) and webserver (Apache 2). Implement a web interface to provide the users means to register projects, with git/svn access and a wiki.

2006	**Developer**, *Tau Marmi S.r.l.*, Catania, Italy.

Develop a tool to connect with industrial machines and periodically store the log. Implement a client to connect and reproduce the GUI of the machine, showing the last known status.

Contributed to

Subsurface The only divelog available on Linux systems.
I wrote a functionality to export the logs on a website I made and some other contributions and translations to Italian.

Debian At the present time I am a Debian Maintainer (DM).
I maintain mostly packages in C and Python; the most used of them is xinetd.

Languages

Italian	**Mothertongue**
English	**Fluent**
French	**Basic**

Interests

- Bass guitar
- SCUBA diving
- Electric guitar
- Board games
- Literature

Other

I am physically disabled, and I am mentioning it because some countries have specific legislation.