# 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, PHP, Javascript

Databases — PostgreSQL, administration experience as well
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.
Familiar with the concepts of functional programming
Programming on embedded systems, asynchronous or event-based.

## Notable projects

Relational — Relational, a relational algebra parser/compiler/optimizer, used as educational tool in a few universities. Implemented in Python
Internally can parse and compile queries to Python, and perform some optimizations on the parse tree.
It provides a GUI for ease of use.
`http://ltworf.github.io/ltworf/`

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.
`https://github.com/ltworf/weborf`

Canary — Dynamic library to monitor for heap overflows, implemented in C.
`https://github.com/ltworf/canary`

## Experience

2014– — **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 version of the backend API.
My role includes the integration of Elasticsearch within the API, to provide the devices with full text search and filtering.

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.

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| 2007-2012 | **Student's server system administrator**, *Università degli studi di Catania*, Catania, Italy. |
| | Maintain the Student server, install/configure services and develop 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. |

## Social skills

I am an easy going person, passionate about software and about making things right.

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

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|---|---|
| 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 regarding it.