Gerard Salvatella

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Embedded SW Developer / Physicist

ZUG, SWITZERLAND · CATALAN, SWISS C-PERMIT

Embedded software developer and physicist (PhD, ETH Zurich). Focus on Yocto/embedded Linux, hardware-in-the-loop testing and CI/CD, plus hardware-near software in C/C++ and Python.

WORK EXPERIENCE

Software Engineer CCP · Siemens Schweiz — July 2020 – present

- Yocto/OpenEmbedded operating system of the Common Controller Platform (CCP) for the System ONE, Desigo, Climatix and FS20/FS40 product lines: BSPs, eSDK, monthly releases and support for the product teams
- Hardware-in-the-loop test infrastructure with LAVA and labgrid: deploy, boot and test jobs, DUT management, infrastructure as code with Ansible
- GitLab CI/CD for build, test and release; containerised services (Podman), artefact and sstate mirrors
- SecDevOps: signed firmware updates, certificates and keys, CVE and licence reporting (OpenChain)

Linux Software Engineer · Toradex — May 2018 – June 2020

- U-Boot/Linux BSP images (Yocto/Bitbake) for ARM SoMs, plus Qt5 tools and validation of SoMs and carrier boards through hardware interfaces

Hardware & Software Engineer · rqmicro — September 2017 – March 2018

- Development of a flow cytometer: laser detector, PID actuators and data analysis in Python

Researcher Terahertz & Microwave · Universitat de Barcelona — September 2009 – September 2011

- Research project on microwave-guided stent scanners and terahertz spectroscopy

EDUCATION

PhD Physics · ETH Zürich — November 2011 – December 2016

- Doctoral thesis on ultrafast magnetism: femtosecond laser, board design and data analysis at the free-electron laser FLASH (DESY)

MSc Photonics · Universitat Politècnica de Catalunya — September 2009 – June 2010

- Nanophotonics, quantum optics, medical imaging and laser physics; final project in the UB magnetism group

SOFTWARE SKILLS

Yocto & Embedded Linux

Yocto/Bitbake, Linux kernel, U-Boot, BSP

Code

C, C++, Python, shell

Test & CI/CD

GitLab CI, LAVA, labgrid, Ansible, Podman

Hardware

schematics, GPIO/SPI/I2C/UART, oscilloscope, logic analyser

LANGUAGES

Catalan & Spanish (Native) · English (C2) · German (C1) · French (B1) · Chinese (A2)