

# Rami Baddour

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## PROFILE STATEMENT

I am a self-motivated and proficient Computer and Embedded Systems engineer, with superior educational profile, four years' team-leading experience in telecommunication field within ISO 9001:2008 certified company, over 8 years of experience in embedded systems, sensors and software engineering with comprehensive familiarity with variety of communication protocols. Complemented with excellent communication skills and wide knowledge of IT and IoT know-hows.

## EXPERIENCE

**Universita della Svizzera Italiana**, Researcher & Instructure ..... Mar 2012 - Present  
*Lugano – Switzerland*

- Handled all Embedded Systems lab's activities on various HW and IoT environments.
- Instructed and assisted master-level courses: Intelligence for Cyber Physical Systems (CPS), Real-Time Operating Systems (RTOS), Wireless Communications, C++ for Embedded systems, Matlab
- Directly supervised 8 master students with their graduation projects.
- Created and managed two institutional projects (Miniatured smart house and Smart balance board) that were demonstrated in national and international exhibitions (CeBIT 2016-17, SporTECH 2016).

**Ericsson Research**, Embedded Systems Developer (Intern).....Sep 2016 – Dec 2016  
*Lund - Sweden*

- As a member of an Agile cross-functional IoT and cloud technologies team, developed a new release of Calvin® framework (based on C, C+, Python), targeting resource constrained devices. The release was successfully loaded on nRF52832 (ARM Cortex-M4F architecture)
- Optimized and engineered the code. Minimized footprint (by 55%) and memory usage (by 20%).

**Saphyrion Sagl**, Embedded Systems Engineer ..... Nov 2014 – May 2015  
*Lugano – Switzerland*

- Programmed in C++ and systemized an extended Kalman filter fusion algorithms coupling Global Navigation Satellite System (GNSS) raw data with inertial/MEM sensors' acquisition.
- Deployed and tested the firmware on the VR-Brain autopilot (STM32F4-based).
- Continuous integration of the code with Ardupilot platform and Nuttx RTOS code bases with comprehensive firmware experiments and documentation.

**Universita della Svizzera Italiana**, Researcher/Project Management .....Sep 2011 – Feb 2015  
*Lugano – Switzerland (WiBRATE FP7 EU-funded Project)*

- Executed all assigned R&D tasks, particularly: Documentation, System lifecycle, Requirements modeling, Model-Based Systems Engineering (MBSE) using SysML and IBM Rational Rhapsody.
- Developed System-of-Systems (SoS) verification and validation tool, using C++ and SystemC.
- Managed to implement a system-level simulation tool to verify Wireless Sensor Network (WSN) deployment based on state-chart representation of ISA100.10a and DECT RF standards.

**IMEC**, Wireless Communication Engineer (Intern).....Sep 2011 – Feb 2012  
*Leuven – Belgium*

- Development of a complete system-level software simulator in Matlab to assess the advantage in energy consumption with femtocells' deployment in LTE and LTE-Advanced standards' networks.

**Syriatel Telecom**, BSS and Transmission Core Team leader ..... Jan 2005 – Jan 2009  
*Latakia – Syria (ISO9001 certified company)*

- Supervised a team of three engineers and five technicians, covering the whole Syrian coastal region.
- Managed installation, commissioning, operation and troubleshooting of Base Station Subsystem (BSS) and Transmission Core network (Electrical, Electronics, Micro-links and Fiber optics connections and equipment).
- Successfully concluded a 300-in-1 site swap plan (300 site swap procedures from Siemens BTS to Ericsson RBS in 1 month) three days before the planned time.
- Successfully resolved major BSC power-down with less than ten minutes' coverage blackout.
- Restructured core-network E1 connections resulting in 30% link-rental costs reduction with the same network efficiency and redundancy guarantees.

**Ultaria Co.**, Co-founder, Operational officer and Project Manager ..... Feb 2005 – Mar 2009  
*Latakia – Syria*

- Contributed to the initial company's structuring, construction, strategy forming and customer-base classification.
- Governed the operation flow, task assignments and communication of 25+ staff and 10+ customers.
- Maintained warehouse, procurements, product forecasts and technical project management.

## **EDUCATION**

**PhD in Computer Science** ..... Mar.2012 - Feb 2018 (Expected)  
*Universita della Svizzera Italiana (USI) Lugano – Switzerland*

- **Research:** Mobility management, localization and address assignment in the Internet-of-things (IoT)

**MSc in Embedded Systems Design** .....Sep.2009 - Feb.2012  
*Universita della Svizzera Italiana (USI), in collaboration with ETH Zurich and Politecnico di Milano  
Advanced learning and Research Institute (ALaRI) Lugano – Switzerland*

- **GPA** (9.07/10)
- **Awards:** USImpresa award (top student of the class)
- **Relevant Technical courses:** RTOS and scheduling, Low-power design, Hardware/Software co-design, Specification languages, Microelectronics, Digital Signal Processing (DSP)
- **Relevant Business courses:** Finance & accounting, Management strategy & organization, Marketing & purchasing, Business planning project

**BSc in Information Engineering** .....Sep 1999 - Sep.2004  
*Tishreen University Latakia - Syria*

- **GPA** (81.88/100)
- **Awards:** Four superiority awards (top three students of the class)

## VOLUNTEER EXPERIENCE

**Fondazione Scienza e gioventù**, Project mentor .....Sep.2014, Sep.2015  
*Lugano – Switzerland*

- Mentored mixed groups of high school students from across Switzerland to conduct research and demonstrate ideas in Embedded Systems.

**Liceo Lugano 2 - Lavori di Maturita**, Student advisor ..... Feb.2014 – Present  
*Lugano – Switzerland*

- Supervised groups of high school students to conduct research and practical coding and prototyping experience in embedded systems, special interest to smart living and IoT applications.

**Syrian Computer Society (SCS)**, Supervisor and Project Manager .....Jan.2000 -Aug.2009  
*Latakia – Syria*

- Supervised International Computer Driving License (ICDL) tests, certification and evaluation.
- Lectured various MS Office courses in the scope of Computer Literacy campaign.
- Managed procurements, contractors, installation and acceptance tests for the new society headquarter in Latakia 2008.
- Organized the sixth Syrian Science informatics Olympiad in Latakia 2009.

## CERTIFICATES

• Ericsson Training	APG40 troubleshooting	Feb.2006
• Ericsson Training	APG40 Recovery Procedur	Feb.2006
• Ericsson Training	APG40 Installation and configuration	Mar.2006
• Ericsson Training	RBS 2206 / RBS 2000 Operation & Maintenance	Mar.2006
• Ericsson Training	OMS1664 / OMS12xx System Introduction	Feb.2008
• Ericsson Training	WCDMA RAN Operations	May.2008
• Ericsson Training	WCDMA RAN Configuration	Jun.2008

## SKILLS

**Languages:** Arabic: Mother tongue      English: Fluent      Italian: beginner  
**Office:** Windows, Linux Ubuntu, MS Excel, MS Word, MS Project, Latex, Git, redmine  
**Software:** Agile development processes, **C**, **C++**, **Matlab**, Python, MakeFile, **Communication Protocols**, Requirements engineering, Software Debugging, Version control, RTOS, GNSS  
**Hardware:** Electronics, Electrical engineering, PCB and Hardware design, **ARM Cortex**, **Arduino**, Raspberry PI, STM, MEMS, CAN, **I2C**, **SPI**, **BT**, **BLE**  
**Soft skills:** Innovative thinker, Analytical Skills, training and coaching, multitasking, excellent conversational and written communication skills, willing to travel, .

## PERSONAL

**Birthday:** September 7th, 1981

**Nationality:** Syrian

**Driving License:** Swiss

**Marital Status:** Married (with two kids)

**Residency:** Switzerland (B-Permit since 2009)