

## **Mohammad Alawieh**

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### **EDUCATION**

2014 - 2016      **MS in Computer and Communication Engineering**

Lebanese International University, Beirut

GPA 3.58 – Rank: 6/29

**Courses:** Mobile Communication, Wireless Communication, Communication Networks, Communication Systems, Digital Signal Processing, Digital systems and Microprocessor architecture, Cryptography and Advanced Computer Security, Java (Beginner, Intermediate, Network programming), Operating systems, Database development and management, Web programming (HTML, CSS, JavaScript, and PHP), Mobile Application Development (Android)

2011 - 2012      **BS in Communication and Computer Engineering**

Lebanese International University, Beirut

GPA 3.27

**Senior Project:** Design, build and program a robot qualified for participating in the VEX Robotics competition.

2010      High school Diploma General Science, Jobran Twaini Official School, Beirut

### **RESEARCH EXPERIENCE**

April 20-Nov. 30, 2018  
INSA, Rennes, France

**Spatial modulation technique at the reception on Massive MIMO test bench (NI-USRP 2952R).**

**Supervisors: Prof M. H  lard, Dr. Ali Mokh**

- Modify NI Massive MIMO Framework to implement a proof of concept for Extended Receive Antenna Shift Keying (ERASK)

Fall 2017-2018:  
LIU, Beirut, Lebanon

**Master Thesis: Design and FPGA Implementation of Packet Router for Wireless Applications**

**Supervisors: Dr Ali Al Ghouwayel, Dr Hussein Hijazi**

- Ethernet-Wireless packet transmission, Local memory transactions processing
- Optimization for highest throughput
- Point-to-point packet router implementation and testing on FPGA using Xilinx Vivado Design Suite

Fall 2017-2018:  
LIU, Beirut, Lebanon

**Design and Implementation of LabVIEW FPGA-based prototype of a pruned FFT.**  
**Supervisors: Dr Ali Al Ghouwayel, Dr Hussein Hijazi**

## **AWARDS AND KEY ACHEIVMENTS**

- Graduated masters with rank 6/29.
- Earned a place on the School of engineering Dean's Honor list for honorable academic performance, Lebanese International University.
- Achieved the Robot skills champion award in the VEX Robotics Competition, Lebanon 2014.
- Participated in the 2'nd annual engineering projects exhibition at the Lebanese International University, Beirut.

## **PUBLICATIONS**

- M. Saad, **M. Alawieh**, A. Al Ghouwayel, and H. Hijazi," On the Hardware Implementation of a Reduced Complexity UPMC Chain," in International Conference on Computer and Applications (ICCA), Beirut, Lebanon, July 2018 (Published)
- Ali Mokh, **Mohammad Alawieh**, Maryline Helard and Matthieu Crussiere "Practical implementation of Zero Forcing Extended RAKE on MIMO USRP RIO" INSA Rennes, CNRS, IETR (To be submitted)

## **TRAINING**

- NI Massive MIMO Framework, INSA Rennes
- LabVIEW Core 1. NI Online Training, 2017
- CCNA Routing & Switching, ROOT SARL
- CCNA Security, ROOT SARL
- Penetration Testing & Ethical Hacking, Cybrary.it
- Industrial Training:
  - Toshiba, Dubai - Training on Toshiba's Multi-Function Printers for hardware and software, including network setup and configuration. Jan 19 till Jan 22, 2015
  - YSoft, Dubai - Training on YSoft 3D Printer and Print Management Solution (Features, Setup and Configuration)

## **TECHNICAL AND PROGRAMMING SKILLS**

- Object Oriented Programming (Java, C#, C++)
- Android Development.
- Design Patterns.
- Android Architecture Components, RxJava.
- Web Development (HTML, CSS, JavaScript, JQuery, PHP, ASP.NET, C#, MVC)
- Experience in Unity3d Game Development.
- FPGA programming (VHDL, Vivado, LabVIEW FPGA)
- MATLAB and simulations software (Proteus, Pspice)

- LabVIEW Communications Suite
- PIC Microcontrollers programming in MPLAB (C, Assembly)
- Documentation & Presentation: LaTeX, Microsoft Office (Word, Excel, PowerPoint, Outlook and Explorer)
- Database development using Microsoft SQL Server 2008 R2 and Navicat for MySQL
- Good command over all the operating systems

## **OTHER WORK EXPERIENCE**

Nov 2014 – Jan 2018

### **Technical and Pre-Sales Engineer Advanced Technology Solutions (ATS) member of ICC Holding**

- Setup network connection and configure IT features such as SMTP to enable e-maintenance and scan-to-email, Network/USB Print, Local/Server Scan
- Install, configure and troubleshoot Toshiba MFPs (Multi-Function Printers) and its related IT features
- Install software solutions (e-bridge, Ysoft, PaperCut, etc.)
- Perform site Survey and customer requirements analysis
- Customers' training on MFP

## **PROJECTS**

- Development of android application called Hi Nearby available on Google play store: <https://play.google.com/store/apps/details?id=com.HiNearby.HiNearby>
- Development of android application called WhatsUpX available on Google play store: <https://play.google.com/store/apps/details?id=com.WhatsAppX.WhatsAppX>
- Development of arcade game called Pumpkin Attack available on Google play store: <https://play.google.com/store/apps/details?id=com.remindme.remindme>
- Development of arcade game called Pumpkin Attack available on Google play store: <https://play.google.com/store/apps/details?id=com.AIGames.PumpkinAttack>
- Java based E-mail system (Alternative to known email services as Outlook and Gmail) project for computer interface and android for mobile interface and SQL Server for database development.
- Individual project in communication networks on designing a functional WAN using cisco packet tracer tool with complete configuration of routers, switches, access points, hosts and servers.
- Cryptanalysis project for steganography techniques, a java-based application to detect image steganography (Hiding data in images) and measure its detection efficiency on various techniques.

## **QUALIFICATIONS**

- Ability to work independently
- Ability to work under pressure
- Problem solving with high attention to details
- Ability to quickly adapt and adjust to complex corporate environment with a desire for growth and learning
- Well-developed analytical and numerical ability
- Written and verbal communication skills
- Enthusiastic team player & Leadership Skill
- Responsible and trustworthy
- Organizational, time management, and motivational skills

- Ability to manage multiple priorities and demonstrate flexibility
- Ability to establish and maintain professional relationships

## **LANGUAGES**

- Native Arabic
- Fluent English
- French starter level

## **REFERENCES**

Prof. Maryline H  lard  
Department of Electronics  
Communication Systems  
INSA University  
Rennes, 3500  
Email: [mhelard@insa-rennes.fr](mailto:mhelard@insa-rennes.fr)

Dr. Ali Al Ghouwayel  
Department of Computer and  
Communication Engineering  
Lebanese International University  
Beirut  
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