Rida EL CHALL

Ph.D. in Telecommunications, Network and Computer Engineering

Rue Abdel Fattah Hamadeh – Zokak El Blat – Beirut, Lebanon

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March 1,1989, Single – Nationality: French, Lebanese

Objective : Working in research and development (R&D) engineering for 5 years in France, I have acquired solid knowledge in telecommunication, network, software, programming and database systems. Seeking a challenging position in Lebanon with a reputed organization applying innovative technologies, where my skills will be utilized towards continued growth and contribution to the organization success.

Education

2012–2015 **Ph.D. degree in Electronics and Telecommunications**, *Institut National des Sciences Appliquées (INSA) de Rennes*, France, ***Grade : Very honorable.***

2011–2012 **Master of Science (M.Sc) and Technology**, *INSA Rennes*, France, ***Grade : Very good,*** 1st ***degree.***
- **Specialty : Micro-technologies, Architecture, Network and communication systems.**

2007–2012 **B.E. Degree in Electrical, Electronics and communications Engineering**, *Lebanese University, Faculty of Engineering*, Beirut, Lebanon, ***Grade : Very good,*** $1^{st}/2^{nd}$ ***degree.***
- **Specialty : Telecommunications and Informatics.**

2006–2007 **Bac 2**, *Beirut, Lebanon*, Option General Science (GS), ***Grade : Very good.***

Professional Experiences

Apr.-Aug. 2018 **Research Assistant**, *University of Saint Joseph (USJ), ESIB, Beirut*, Lebanon.
Topic : Wireless Communications for the Internet of Things (IoTs).
- Study of the coverage and performance of LoRaWAN network deployment in various environments.
- Devising propagation models fitting the experimental data for LoRaWAN network.

2015–2017 **R&D Engineer**, *CEA-Leti, Grenoble*, France.
Topic : Smart medium access for 5G heterogeneous wireless systems.
- Analysis of the characteristics of FBMC modulation to optimize the medium access in 5G heterogeneous network.
- Design and evaluation of a new multi-channel medium access (MAC) protocol for 5G small cell for massive IoT and mobile broadband systems operating in unlicensed bands.

2012–2015 **Ph.D. Researcher**, *IETR, INSA Rennes*, France.
Topic : Iterative receiver for MIMO-OFDM systems combining MIMO detection and channel decoding (Turbo, LDPC) : Convergence, performance and complexity trade-offs.
- Study of the performance and the complexity of iterative receivers combining MIMO detection and channel decoding (Turbo, LDPC) for MIMO-OFDM systems. Proposal of a low complexity LC-K-Best decoder for the sake of low computational complexity.
- Investigation of convergence behavior of the iterative receivers using extrinsic information transfer (EXIT) charts.
- Proposition of an efficient fixed-point arithmetic of iterative receiver based on low complexity K-Best decoder, and analysis of the impact of imperfect channel estimation and synchronization on the performance.

2013–2015 **Teaching Assistant**, *INSA Rennes*, France.
Teaching hours 152 h, Qualified as a senior lecturer *(maître de conférences section 61 & 63 in France)*
Courses carried out : Electricity, Electrodynamics (1st year Engineering) - Electronic, Electromagnetism/waves (2nd year Engineering) - Sequential Logic, C/C++ Language (3rd year Engineering) - Digital Communication (4th year Engineering).

Mar.–Aug. 2012	**Master 2 Internship**, *Orange Lab, France Télécom*, Rennes, France. Topic : Study of new Wi-Fi generations and their adaptation for cellular offloading.
July 2011 Aug.–Sept. 2011	**4th year Engineering Internship**, Lebanon. - Beirut airport : Electronic theoretical of airport maintenance : Radar, Landing systems, Voice communication systems (VCS) and others. - Ministry of telecommunication, Ogero : Study of synchronous digital hierarchy (SDH) transmission systems using optical fiber cables.

Computer & Technical Skills

- **Programming** : C, C++, Java, JavaScript, Python, HTML, CSS, XML, Assembly, VHDL.

- **Databases** : MySQL, Oracle, Access.

- **Software/Tools** : Matlab, Eclipse, Visual studio, NS2, Wsnet, MultiSim, Git, LabView.

- **Operating systems** : UNIX, Linux, Windows.

- **Telecom** : Signal processing, Analog and digital communications, Channel coding (Turbo, LDPC), Multi-carrier modulations (OFDM, FBMC), MIMO, Radio Channel modeling, Optical fibers.

- **Network** : Cellular networks (GSM, UMTS, LTE, 5G), WiFi networks (WLANs), LoRaWAN, TCP/IPv4 &IPv6 protocols, Ethernet, VLANs, Routing protocols (RIP, OSPF).

- **Miscellaneous** : Latex, Microsoft Office (Word, Excel, Powerpoint), Adobe Photoshop, Open Office.

- **Certifications** :
  - Cisco Certified Network Associate (CCNA) Certificate, Cisco Networking Academy, 2011.
  - Certified LabVIEW Associate Developer (CLAD) Certificate, National Instruments, 2013.

Publications and Contributions

Journal Publications

- **R. El Chall**, F. Nouvel, M. Hélard, and M. Liu, Iterative receivers combining MIMO detection with turbo decoding : performance-complexity trade-offs, in *EURASIP Journal on Wireless Communications and Networking*, Vol. 2015, Issue 1, Mar. 2015.

- **R. El Chall**, F. Nouvel, M. Hélard, and M. Liu, Performance and Complexity Evaluation of Iterative Receiver for Coded MIMO-OFDM systems, in *Mobile Information Systems*, Vol. 2016, Feb. 2016.

- **R. El Chall**, B. Miscopein and D. Kténas, UNII-MAC protocol : Design and evaluation for 5G ultra-dense small cell networks operating in 5GHz unlicensed spectrum, in *Elsevier Journal on Computer Communications*, 2018.

Conference Proceedings

- **R. El Chall**, F. Nouvel, M. Hélard, and M. Liu, Low Complexity K-Best based Iterative Receiver for MIMO Systems, in *Proc. International Congress on Ultra Modern Telecommunications and Control Systems*, Oct. 2014.

- **R. El Chall**, F. Nouvel, M. Hélard, and M. Liu, Towards efficient design of fixed-point iterative receiver for coded MIMO-OFDM systems, in *Proc. International Conference on Telecommunications (ICT)*, May 2016.

- **R. El Chall**, B. Miscopein and D. Kténas, MAC design for 5G dense networks based on FBMC modulation, in *Proc. International Conference on Cognitive Radio Oriented Wireless Networks*, Sep. 2017.

Deliverables & Scientific Activities

- D5.1 and D5.2 : MAC approaches with FBMC, https ://speed-5g.eu/publications/public-deliverables.

- Several seminars, scientific meetings and conferences. Peer reviews for conference and journal papers.

Languages

Arabic : Native, **French** : Fluent, **English** : Fluent.