HASSAN HAMAD

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EDUCATION

University of Southern California (USC), USA *August 2019 - Present*
Pursuing PhD in Electrical and Computer Engineering Current GPA: 4.0/4.0

Technical University of Munich (TUM), Germany *September 2016 - May 2019*
M.S. in Communications Engineering GPA: 1.2/1.0 (German Grading System)

Notre Dame University-Louaize (NDU), Lebanon *September 2012 - June 2016*
B.E. in Computer and Communications Engineering, With Honors. GPA: 3.90/4.0

RESEARCH INTERESTS

I previously worked in the general area of digital communications and was focused on information theory. My focus has shifted since staring my PhD. I work now in the general area of Machine Learning and specifically Deep Learning. My most recent finished project is on using the Logarithmic Number System (LNS) for training Convolutional Neural Networks. A publication is expected to be submitted soon. Right now, I'm working on an NLP problem called Relation Extraction.

PUBLICATIONS

Joint State Sensing and Communication over Memoryless Multiple Access Channels
2019 IEEE International Symposium on Information Theory (ISIT).

Performance Analysis of Convolutional Codes over the Bernoulli-Gaussian Impulsive Noise Channel
2017 15th Canadian Workshop on Information Theory (CWIT).

Small-signal analysis of ultra-high-speed 30 GHz VCSELs using an advanced multi-mode approach
Proceedings of the Integrated Optics: Physics and Simulations III conference.

TECHNICAL STRENGTHS

Programming Languages	Python, C, C++, VHDL
Software Basic Knowledge	Linux, HFSS, Cadence
Software Intermediate Knowledge	Matlab, LATEX, MS office, CCSTUDIO, Xilinx ISE

WORK EXPERIENCE

Intel Germany, Munich May 2017 - May 2018
LTE physical layer system engineer

· As a working student at Intel, I took the following tasks:

- Work on a physical layer concept to implement the V2X feature defined in 3GPP

- Work on Interface between Protocol Stack and Physical Layer

- Develop a Matlab GUI to produce visualizations from LTE trace files

- Support in writing a Python post-processing script for traces from timing simulations

Ericsson, Lebanon Summer 2015
Internship

· Entered the Mobile Broadband department (MBB) at Ericsson Communications Lebanon.I was introduced to the 3GPP mobile standards (GSM/UMTS/LTE) and the different software tools used by Ericsson for network monitoring

TEACHING EXPERIENCE

Lab Assistant for Communications Lab Winter 2018
Technical University of Munich (TUM), Germany

· Introduction to communication systems based on experiments and computer simulations

ACADEMIC ACHIEVEMENTS

Annenberg Fellowship recipient at USC *August 2019 - August 2020*

EXTRA-CURRICULAR

2012- Member of the Institute of Electrical and Electronics Engineers (IEEE)

2014- Worked as a private tutor for university and high school students

Hobbies : Football, Table Tennis, Reading

LANGUAGES

Arabic	Mother tongue
English	Fluent
German	Basic