Khalid Mahmoud Mohamed Ahmed

Personal Data

Date of Birth:	23.07.1992
Nationality:	Egyptian
Marital Status:	Married
Address:	Markweg 9, 91056 Erlangen, Germany
Phone:	+4917669463160
email:	engkhalid.mahmoud92@gmail.com

Education

Oct. 2014 - June 2017	Masters of Science in Communication and Multimedia Engineering at the **Friedrich-Alexander-University**, Erlangen, Germany (GPA 1.6/1.0).
July 2014	Bachelor of Science in Information Engineering and Technology with High Honours at the **German University in Cairo**, Egypt (GPA 1.08/0.7)
Sept. 2007 - July 2009	**Dr.Mahmoud Omar Secondary School**, Egypt

Work Experience

June 2017 - still running	Research engineer at **Fraunhofer IIS**. Implementing an LTE/5G uplink system level simulator using MATLAB object oriented programming. The simulator is used to test new multiple access schemes to reduce the latency for URLLC users in the uplink. LTE/5G protocol stack development. Implementing short Transmission Time Interval (sTTI) feature in LTE release 15 to reduce latency. The development is done using Open Air Interface (OAI) platform.
January 2015 - April 2016	Student research assistant (Hiwi) in RFID Project at LIKE, **Friedrich-Alexander-University**. Implementing a maximum likelihood (ML) receiver for RFID tag reader using multiple receive antennas using MATLAB. Validating the performance of ML receiver in a multiple input-multiple output (MIMO) double rayleigh backscatter channel.

Research

Oct. 2016 - May. 2017	Master Thesis at the **Friedrich-Alexander-University**, Erlangen, Germany in collaboration with **Fraunhofer-Institut für Integrierte Schaltungen IIS**. "Uplink Multiple Access Schemes for Ultra-Low Latency Transmission", A system-level simulator is implemented using MATLAB object oriented programming simulation environment to test different proposals to guarantee fast access and high reliability to low latency users in LTE.
March 2013 - Sept. 2013	Bachelor Project at the **Technical University in Ilmenau**, Germany. "Wireless Health Monitoring System Based on Fiber-Optic Sensors", a wireless portable system to measure the respiratory rate using a fiber Bragg grating (FBG) optical sensor is established. Analyzing and filtering the output data is explained and compared with the output data of a commercial piezoelectric sensor.

Internships

May 2016 – Oct. 2016	Internship at **Fraunhofer IIS**. The task was to develop and enhance the OAI simulation environment to allow for shorter TTI in the current LTE protocol stack on the physical layer in the downlink using **C** programming language. The task was a step towards development of 5G cellular stack. A 7-OFDM symbol downlink TTI was developed and tested using OAI simulation environment.
Oct. 2012 – Jan. 2013	Junior teaching assistant at the **German university in Cairo** teaching CSIS104 for pharmacy students and CSEN102 for engineering students.
August 2012	Wireless internship at the **German University in Cairo** learning to work on tinyos to program mib510 motes using **nesC** programing language, then making a simple application about indoor localization using Finger Printing algorithm.
July 2012	Radio Frequency (RF) intern at the **German University in Cairo**, designing and simulating couplers, filters and phase shifter using Computer Simulation Technology (CST), then working on paper "wide band 180 hybrid coupler" and modifying its design to give better results.
July 2011	Summer Internship at the **Biomedical Institute, Technical University in Ilmenau**, Germany, designing a flash control system by programming Texas micro controller using **C** language.
July 2010	Summer Internship at the **Biomedical Institute, Technical University in Ilmenau**, Germany, designing and fabricating simple printed circuit boards (PCBs).

Languages

Arabic:	Mother Tongue
English:	Fluent
German:	B1.2

Computer Skills

Very Good Knowledge:	MATLAB
Intermediate Knowledge:	CST - Computer Simulation Technology, java and LaTeX
Basic Knowledge:	C, GIT and Mathematica

Interests and Activities

Research Interests

Digital Modulation, MIMO, Digital Signal Proccessing, LTE/NR and Information Theory.