Khalid Mahmoud Mohamed Ahmed

Personal Data

Date of Birth:	23.07.1992
Nationality:	Egyptian
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Education

Oct. 2014 - June 2017	Masters of Science student in Communication and Multimedia Engineering at the **Friedrich-Alexander-University**, Erlangen, Germany (GPA 1.6/1.0).
Oct. 2009 - July 2014	Bachelor of Science in Information Engineering and Technology with High Honors 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 für Integrierte Schaltungen IIS**. Implementing Physical Uplink Shared Channel (PUSCH) for NR release 15 on openairinterface (OAI) platform. Implementing a New Radio/5G (NR) uplink system level simulator with a focus on Ultra Reliable Low Latency Communication (URLLC) use case. The implementation is done using MATLAB object oriented programming.
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.
Oct. 2012 – Jan. 2013	Junior teaching assistant at the **German university in Cairo** teaching CSIS104 for pharmacy students and CSEN102 for engineering students.

Internships

May 2016 – Oct. 2016	Internship at **Fraunhofer IIS**. The task was to develop and enhance the OAI simulation environment to allow for shorter transmission time intervals (TTI) in LTE release 15 on the physical layer in the downlink using **C** programming language. The task was a step towards development of 5G NR. A 7-OFDM symbol downlink sTTI was developed and tested using OAI simulation environment.
August 2012	"Wireless communication" internship at the **German University in Cairo** learning to work on tinyos to program mib510 motes using **nesC** programing language on ubuntu then implementing a simple application about indoor localization using Finger Printing algorithm.
July 2012	"Radio Frequency" (RF) internship at the **German University in Cairo**, designing and simulating RF couplers ,filters and phase shifter using Computer Simulation Technology (CST).
July 2011	Summer Internship at the **Biomedical Inistitute, Technical University in Ilmenua**, Germany, designing a flash-light control system by programming Texas micro controller using **C** language.
July 2010	Summer Internship at the **Biomedical Inistitute, Technical University in Ilmenua**, Germany, designing and fabricating simple printed circuit boards (PCBs).

Research

March 2018 - Sept. 2018	Supervision of a bachelor thesis student at **Fraunhofer-Institut IIS**. "Uplink grant free transmission for reliable communications", New features were added to the system level simulator which was implemented during my master thesis, to evaluate collision probability and blind detection in NR grant free scheme.
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.

Languages

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

Computer Skills

Very Good Knowledge:	MATLAB
Intermediate Knowledge:	C and Version Control Systems: git
Basic Knowledge:	Linux, java, CST - Computer Simulation Technology and Mathematica

Interests and Activities

Interests

Wireless communications , cellular networks and software development.

Activities

Football, Tennis and Cycling