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 in Communication and Multimedia Engineering at **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 **German University in Cairo**, Cairo, Egypt (GPA 1.08/0.7).

Work Experience

June 2017 - present	Research engineer at **Fraunhofer-Institut für Integrierte Schaltungen (IIS)**, Erlangen. 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 Dept., **Friedrich-Alexander-University**, Erlangen. Implementing a Maximum Likelihood (ML) receiver for RFID tag reader using multiple receive antennas using MATLAB and validating the performance of ML receiver in a MIMO double rayleigh backscatter channel.
Oct. 2012 – Jan. 2013	Junior teaching assistant at **German university in Cairo** teaching basics of computer science for undergraduate engineering students.

Internships

May 2016 – Oct. 2016	Internship at **Fraunhofer IIS**. We developed and enhanced 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. A 7-OFDM symbol downlink sTTI was developed and tested using OAI simulation environment.
August 2012 - Sept. 2012	"Wireless communication" internship at **German University in Cairo** programing mib510 motes using **nesC** programing language on ubuntu then implementing a simple application about indoor localization using Finger Printing algorithm.
July 2012 - August 2012	"Radio Frequency" (RF) internship at **German University in Cairo**, designing and simulating RF couplers ,filters and phase shifter using Computer Simulation Technology (CST).

Research

March 2018 - Sept. 2018	Supervision of a bachelor thesis at **Fraunhofer IIS** titled "Uplink grant free transmission for reliable communications". The research highlighted the evaluation of collision probability and blind detection in NR grant free scheme.
Oct. 2016 - May 2017	Master Thesis at **Friedrich-Alexander-University**, Erlangen, Germany in collaboration with **Fraunhofer IIS**, titled "Uplink Multiple Access Schemes for Ultra-Low Latency Transmission". A system-level simulator was implemented using MATLAB to test different proposals to guarantee fast access and high reliability to low latency users in LTE.
March 2013 - Sept. 2013	Bachelor Project at **Technical University in Ilmenau**, Germany, titled "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 was established. Analyzing and filtering the output data was explained and compared with the output data of a commercial piezoelectric sensor.

Languages

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

Computer Skills

Good:	MATLAB
Intermediate:	C and Version Control Systems: git
Basic:	Linux, JAVA, CST and Mathematica

Interests and Activities

Interests

Wireless communications , cellular networks, digital signal processing and software development.

Activities

Football, Tennis and Cycling