

# MOHAMED ISMAIL MOHAMED AHMAD

**Associate Professor, Head of RF wireless and Mobile Systems Lab.**

**IEEE Senior Member**

**h-index 12**

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<https://scholar.google.co.uk/citations?user=fUIFCUgAAAAJ&hl=en>

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## ▼ Objective

I am seeking a position that will give me the opportunity to enhance my personality and career growth as well as to provide benefits commensurate with my abilities.

## ▼ Education

**Ph.D.** Ain Shams University, Faculty of Engineering, "EBG-based Wideband Antenna Arrays"

**M.Sc.** Al-Azhar University, Faculty of Engineering, "Fractal Microstrip Antenna Design, Sim., Fab. And Meas."

**B.Sc.** Zagazig University, Faculty of Engineering, Very good with Honor degree.

## ▼ Experience

### RESEARCH Experience (Full Time)

- (2023- now)** : Associate Professor at Microstrip Department, Electronics Research Institute, Cairo, Egypt.
- (2015- 2022)** : Researcher at Microstrip Department, Electronics Research Institute, Cairo, Egypt.
- (2010- 2012)** : Researcher at Prince Sultan Advanced Technology Research Institute, King Saud University, Riyadh, Saudi Arabia.
- (2007- 2010)** : Assistant Researcher at Microstrip Department, Electronics Research Institute, Cairo, Egypt.
- (1999- 2007)** : Research Assistant at Microstrip Department, Electronics Research Institute, Cairo, Egypt.

### TEACHING Experience (Part Time)

- (2023- 2024)** : Associate Professor at Electronics and Communication Dep., Egypt Informatics University, (Electromagnetics Wave, Fundamentals II).
- (2020- 2021)** : Assistant Professor at Electronics and Communication Dep., MIU University, (Electromagnetics Wave).
- (2017- 2020)** : Assistant Professor at Electronics and Communication Dep., MSA University, (Antenna Theory and Design, Electromagnetics I and II).
- (2016- 2017)** : Assistant Professor at Electronics and Communication Dep., Akhbar Elyoum Academy (Electronic Devices).
- (2015- 2016)** : Assistant Professor at Electronics and Communication Dep., Pyramids Higher Institute for Engineering and Technology (PHI) (All Electronics Levels).
- (2005- 2010)** : Teaching Assistant at Communication and Electronics Dept., Akhbar El Yom Academy, (Analog Communication – Antenna - Microwave).
- (1998- 2005)** : Teaching Assistant at Communication and Electronics Dept., Faculty of Engineering, Zagazig University (Digital Communication – Measurement).
- (1998- 2005)** : Teaching Assistant at Computer and Control Dept., Faculty of Engineering, Zagazig University (Programming using Fortran, C, and C++ language – Logic Circuits – Computer Organization).

## TECHNICAL Experience

- RF Passive Circuit Design (Antennas, Arrays, Power dividers and Filters ).
- Software Package Simulators ( Zeland 14, HFSS ,CST, ADS, Feko, and Antenna Magus ).
- Fabrication of Microstrip Circuits ( Hybrid Integrated Circuits ) using :
  - Thin Film Technology and Photolithographic Technique.
  - LDKF ProtoMat S100 ( PCB Prototypes and Small Batches ).
  - LDKF ProtoLaser S ( Laser Structuring Circuit Boards ).
  - LDKF ProtoLaser U4 ( UV-laser for innovative micromachining of materials ).
- Measurement of Radiation Patterns using:
  - Anechoic chamber planar and spherical Nearfield System Inc. (NSI)
- Measurement of Hybrid Integrated Circuits using :
  - **Agilent (Keysight) :**
    - Vector Network Analyzer (8719ES, 8361C), PNA-X Network Analyzer (N5242A), P-series Power Meter in W-band (N1911A), Vector Signal Generator (PSG E8267D, ESG E4438C), Spectrum Analyzer (E4440A PSA series, N9344C Handheld).
  - **Tektronix :**
    - Mixed Signal Oscilloscope (MSO 72004, MSO 4104), Real-Time Spectrum Analyzer (RSA 6120A), Four Channel, Digital Storage Oscilloscope (TDS 2024B), Single Channel, Digital Arbitrary/Function Generator (AFG 3021B), Handheld Spectrum Analyzer (H600 RFHawk).
  - **Anritsu :**
    - Vector Network Analyzer (37297D), Signal Generator (MG3697C), Power Meter (ML2496A).
  - **Rohde & Schwarz :**
    - Vector Network Analyzer (ZNA67), Wideband Radio Communication Tester (CMW500), Microwave Signal Generator (SMF100A)

## ▼ Professional Training

- Sep. 2021 :** Training “**User Training on EPS150**” by FormFactor GmbH at Electronics Research Institute, Cairo, Egypt.
- Sep. 2021 :** Training “**CMW500 Operational Training**” by Rohde & Schwarz Emirates LLC at Electronics Research Institute, Cairo, Egypt.
- Feb. 2020 :” The Entrepreneurial Mindset”** in The Business Principles and Entrepreneurial Thought XSeries. Online course offered by Babson College.
- May 2020 :” Financial Accounting Made Fun: Eliminating Your Fears”** in The Business Principles and Entrepreneurial Thought XSeries. Online course offered by Babson College.
- June 2020 :” Marketing Fundamentals: Who Is Your Customer?”** in The Business Principles and Entrepreneurial Thought XSeries. Online course offered by Babson College.
- June 2020 :” Analytics for Decision Making”** in The Business Principles and Entrepreneurial Thought XSeries. Online course offered by Babson College.
- July 2020 :” Financial Analysis for Decision Making: Funding Your Business”** in The Business Principles and Entrepreneurial Thought XSeries. Online course offered by Babson College.
- July 2020 :” Digital Strategy and Action”** in The Business Principles and Entrepreneurial Thought XSeries. Online course offered by Babson College.
- Aug. 2019 :** “**The Belt and Road Science and Technology Park**” International Workshop, in Beijing, **China**.
- Dec. 2018 :** “**Introduction to the Internet of Things and Embedded Systems**” online course authorized by University of California, Irvine.
- Aug 2016 :** “**The German Egyptian Scientific Certificates Remote Teaching (GESCR)**”, in Duisburg-Essen, **Germany**.

- July 2016** : European School of Antenna (ESOA) Course of “**Millimeter Wave Antennas Design and Technologies**” in IETR, Beaulieu Campus, Rennes, France.
- May 2012** : The three days kick-off training course of **CST MICROWAVE STUDIO 2012**, Egypt.
- Nov. 2011** : LDKF **ProtoLaserS/U** and **ProtoMatS100** incl. software, accessories, and applications in King Saud University, Riyadh, Saudi Arabia.
- June 2011** : Training “**FBGA Processing with 4DSP Hardware Tools and Architecture**” at King Saud University, Riyadh, Saudi Arabia.
- April 2011** : A recognized course for the **ANRITSU 37000 Series** Lightning VNA Basic User Training in King Saud University, Riyadh, Saudi Arabia.
- Feb. 2011** : Nearfield System Inc. (NSI) System **Operating Training Near Field Antenna Measurement System** in PSATRI, Riyadh, Saudi Arabia.
- Aug. 1996** : **C Programming** with Excellent Degree in CompuSIT Center, Egypt.

#### ▼ Research Projects

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- (2021-2022)** : Cube Sat Antenna.
- (2021-2022)** : Ground Penetration Radar (GPR).
- (April- Oct. 2021)** : Strategic Plan of STPERI for Egypt.
- (2019-2021)** : Corona Virus Biosensor Rapid Detection.
- (2017-2018)** : IOT Patient Monitoring System.
- (2016-2019)** : Mobile Micro-sensor Cavity Resonator System for Detection of Infectious Diseases.
- (2011-2014)** : Ultra-Wideband Ground Penetrating Radar for Water Detection in Egypt.
- (2010-2011)** : Antenna-coupled Diodes for detection at 94GHz.
- (2010-2011)** : Phased Array Antenna.

#### ▼ Patents

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1. Patent no. 30509, Title “**Novel eagle shape Microstrip Patch Antenna**”, Egyptian Innovation Center. **Granted** 12-2021.
  2. Patent no. 1213/2019 , Title “ **A mobile device for the detection of bacteria and viruses in biological samples**”, Egyptian Innovation Center.

#### ¥▼ Awards

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1. **Scientific Excellence Award** at Electronics Research Institute for the Best Research Performance in **2017, 2018, 2019, 2020, 2021 and 2022**, respectively.
  2. **Entrepreneurship-club ERI Award** on “Smart Cultivation of rooftops” Project Idea (**2021**).

#### ▼ Publications

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**2 Books, 4 CHAPTERS, 30 International Journals, and 26 International Conferences**

<https://docs.google.com/document/d/1TgpRjmPyFhUheONKgbluc4v829nps4A3/edit?usp=sharing&oid=116210034732126040517&rtopf=true&sd=true>



#### ▼ M.Sc. and Ph.D. Thesis Supervision

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1. Islam Gomaa, **Ph.D., Novel Applications of Millimeter Wave Antenna Arrays in Communications**, Benha University. (**2024**)
  2. Allam Ameen, **Ph.D., Microstrip Antenna Design for Vehicles Communications in Intelligent Transportation Systems**, Ain Shams University. (**2022**)

3. Bassant El-sweify, **M.Sc., Conformal Antennas for Internet of Things (IOT) and Radio Frequency Identification Detection (RFID) Applications**, Ain Shams University. (2021)
4. Hala Marzouk, **M.Sc., Millimeter Wave Antenna for 5G Mobile Communications**, Zagazig University. (2019)
5. Mai Fouad, **Ph.D., A Novel Wearable Antenna for Wireless Applications**, Zagazig University. (2018)

#### ▼ International Visits

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**June 2012** : “Centre national d'études spatiales” (CNES), Toulouse, France.

**April 2014**: “King Abdulaziz City for Science and Technology” (KACST), Riyadh, Saudi Arabia.

**July 2016** : “Institute of Electronics and Telecommunications of Rennes” (IETR), Rennes University, Reens, France.

**Sep. 2016** : “American University of Beirut” (AUB), Beirut, Lebanon.

**Dec. 2016** : “Universität Duisburg-Essen” Duisburg, Germany.

**Dec. 2016** : “Forschungszentrum Jülich” (Jülich Research Centre), Jülich, Kreis Düren, Germany.

**Dec. 2016** : “European Space Agency” (ESA), Darmstadt, Germany.

**May 2018** : “Astrogeodynamic Observatory of Space Research Center”, Polish Academy of Sciences in Borówiec, Poland.

**July 2019** : “Georgia Institute of Technology”, in Atlanta, Georgia, USA.

**Aug. 2019** : “Chinese Academy of Science and Technology for Development”, in Beijing, China.

**Aug. 2019** : “Peking University Science Park”, in Beijing, China.

**Aug. 2019** : “China-ASEAN Technology Transfer Center (CATTTC)”, in Nanning, Guangxi, China.

**Aug. 2019** : “Guangxi Research Institute of Mechanical Industry “, in Guangxi, China.

**Feb. 2024** : “King Abdallah University of Science and Technology” (KAUST), Jeddah, Saudi Arabia.

**Feb. 2024** : “World Defense Show 2024” (WDS), Riyadh, Saudi Arabia.

#### ▼ Languages

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**Arabic** : Mother Language. **English** : Fluent. **German** : Basic. **French** : Basic.

#### ▼ Computer & Other Skills

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- Very good communication skills, MS-Windows (Win 11), MS-Office (2019), Internet, HTML, Network, and TCP/IP principles, Assembly ( 80X86 Intel microprocessors ), Basic, Pascal, Fortran, C, C++, and Visual Basic, Matlab, Labview, HFSS, CST, Pspice, PCB, Protel, proteus, Origin 9.0, and Autocad.

#### ▼ Activities

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- Judge in Intel Bibliotheca Alexandrina Science & Engineering Fair (Intel BASEF) (2016- 2019).
- Executive manager and Judge in Autonomous Electric Vehicles Hackathon, August 2020.
- Judge in NASA’s International Space Apps Challenge, October 2021.
- Reviewer of International Journals (2014 – till now):
  - IEEE Access, IJMWT, ETRI, PIER, ACES, JESIT, IJAP, Sensors , Electronics, (MDPI publisher)
- Member in:
  - Member in the Science and Technology Park for Electronics Research and Industry (STPERI).
  - Chair of the laboratories and scientific instruments Committee in ERI (2019-2022).
  - The European Association on Antennas and Propagation EurAAP Membership no. 2017 / 004948.
  - Member in The Applied Computational Electromagnetics Society (ACES) 2021
  - IEEE Member No. 92297239 (1998 – until now).
  - Egyptian Engineers Syndicate (1998 - until now).

▼ References

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- **Prof. Saleh A. Alshebeili**, Professor in Electrical Engineering Department, **King Saud University** and My supervisor : dsaleh@ksu.edu.sa
- **Prof. Esmat Abdel-Fattah Abdallah**, Microstrip Dept., **Electronics Research Institute**. Former Head of Electronics Research Institute and My supervisor: esmataa2@hotmail.com
- **Prof. Abdelrazik Abdelmgeed Sebak**, Professor in Electrical and Computer Engineering, **Concordia University** and My supervisor : abdo@ece.concordia.ca
- **Prof. Hala El-Sadek**, Microstrip Dept., **Electronics Research Institute**. Head of Microstrip Department and My supervisor : helsadek@mcit.gov.eg
- **Prof. Hadia Mohamed Said El Hennawy**, Professor in Electronics and Communication Department, **Ain Shams University**. Former Dean of Faculty of Engineering, and My Ph.D. supervisor: helhennawy@ieee.org