

Address :
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NAME: Mohamed Abdelkarim Aboulhassan Mohamed
Languages spoken: Arabic (mother tongue), English(fluent), French(good), German (fair)
Date of birth: April 05, 1981
Place of birth: Alexandria, Egypt
Nationality: Egyptian
Marital status: Married
h-index: 6 (Google scholar) , 6 (scopus)

Academic experience

Current position

- **Associate Professor**, Electrical Engineering department, communication specialization, faculty of engineering, Alamein International university **2022-present**
- **Executive manager**, AIU entrepreneurship and career development center **2022-present**

Previous academic and administrative experiences

- **Teaching Assistant**, Basic science department, faculty of engineering, Alexandria university **2004-2005**
- **Rollout area manager**, Huawei technologies (**Industry**) **2005-2010**
- **Assistant lecturer**, electrical engineering department communication specialization, faculty of engineering, Pharos university **2010-2014**
- Part time Instructor in field of mobile communications (IS95, CDMA2000, GSM, GPRS, UMTS, HSDPA, HSUPA, LTE) for different multinational companies, domestic companies, universities and several institutes **2005-2012**
- **Instructor** at career development and entrepreneurship center, Pharos university **2016-2020**
- **Assistant Professor**, Electrical Engineering department, communication specialization, faculty of engineering, Pharos university **2014-2021**
- **Executive manager**, career development and entrepreneurship center, Pharos University **2020-2022**
- **Associate Professor**, Electrical Engineering department, communication specialization, faculty of engineering, Pharos university **2021-2022**

Misc. Tasks related to the academic position

- Obtained the following prizes as a graduation project supervisor
 - o 3rd position in Microsoft imagine cup (annual competition organized by Microsoft Egypt)
 - o 3rd position in JAC-ECC 2018: International Japan-Africa Conference on Electronics, Communications and Computations 2018 (graduation projects section)
 - o Obtain funds dedicated for graduation projects from
 - Egyptian engineers Syndicate
 - Information Technology Industry Development Agency (ITIDA)

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▪ Academy of Scientific Research and Technology (ASRT)

- **Reviewer in the following journals**

- Computer networks (Elsevier)
- Physical communications (Elsevier)
- IEEE survey & tutorials
- IEEE wireless communication letters
- IEEE comm. Magazine
- IEEE systems Journal

- Responsible for the following administrative tasks

- Coordinator of faculty of engineering timetables committee
- Coordinator of faculty of engineering international relations committee
- Responsible for academic advising in electrical engineering department
- Participated in designing new ICT curriculum and related lab specifications
- Participated in obtaining faculty accreditation from National Authority for Quality Assurance and Accreditation of Education (NAQAAE)
- Participated in designing advanced teaching methods in electrical engineering department

Publications

1. **M. A. Aboulhassan**, A. H. A. El-Malek, A. M. Salhab and S. A. Zummo, "Performance Analysis and Path-Planning for Self-Energized UAV-Assisted Relay Networks," in *IEEE Transactions on Aerospace and Electronic Systems*, vol. 60, no. 1, pp. 907-917, Feb. 2024
2. A. H. A. El-Malek, **M. A. Aboulhassan**, A. M. Salhab and S. A. Zummo, "Performance Analysis and Optimization of UAV-Assisted Networks: Single UAV With Multiple Antennas Versus Multiple UAVs With Single Antenna," in *IEEE Systems Journal*, vol. 17, no. 3, pp. 3468-3479, Sept. 2023,.
3. **M. A. Aboulhassan**, A. H. A. El-Malek "Energy-Aware Node Selection Scheme with Friendly Jamming Technique for Enhancing the Secrecy of Wireless Powered Sensor Networks", *Ad Hoc Networks* , Volume 116, 2021.
4. A. H. A. El-Malek, **M. A. Aboulhassan** and M. A. Abdou, " Evolutionary computation technique enhancing the performance of cognitive radio networks with energy harvesting," *Ad Hoc Networks*, Volume 107, 2020,
5. A. Elsaadany and **M. Aboulhassan**, "Hybrid Energy-Efficient Protocol in Delay Tolerant Networks for IoT Systems," *2019 10th IFIP International Conference on New Technologies, Mobility and Security (NTMS)*, CANARY ISLANDS, Spain, 2019, pp. 1-6.
6. A. H. A. El-Malek, **M. A. Aboulhassan**, A. M. Salhab and S. A. Zummo, "Performance Analysis and Power Optimization for Spectrum-Sharing Mixed RF/FSO Relay Networks With Energy Harvesting," in *IEEE Photonics Journal*, vol. 11, no. 2, pp. 1-17, April 2019, Art no. 7901417.
7. A. H. A. El-Malek, **M. A. Aboulhassan** and M. A. Abdou, "Power Allocation Scheme and Performance Analysis for Multiuser Underlay Full-Duplex Cognitive Radio Networks With Energy Harvesting," in *IEEE Access*, vol. 6, pp. 59031-59042, 2018
8. A. H. A. El-Malek, **M. A. Aboulhassan** and M. A. Abdou, "Power Allocation for Full-Duplex MISO Underlay Cognitive Radio Networks with Energy Harvesting," *2018 IEEE International Conference on Communications (ICC)*, Kansas City, MO, 2018, pp. 1-6.
9. M. Yassin , **M. Aboulhassan**, S. Lahoud, M. Ibrahim, D. Mezher, B. Cousin, and E. Sourour,,"Survey of ICIC Techniques in LTE Networks under Various Mobile Environment Parameters", *Wireless Networks*, Springer, February 2017, Volume 23, Issue 2, pp 403–418

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10. M. Saleh, M. A. Abdou and **M. Aboulhassan**, "Assessing the use of IP network management protocols in smart grids," 2016 IEEE/ACS 13th International Conference of Computer Systems and Applications (AICCSA), Agadir, Morocco, 2017, pp. 1-6.
11. **M. Aboulhassan**, M. Yassin, S. Lahoud, M. Ibrahim, D. Mezher, B. Cousin, and E. Sourour, "Classification and Comparative Analysis of Inter-Cell Interference Coordination Techniques in LTE Networks," in 7th IFIP Int. Conf. New Technologies, Mobility and Security, Paris, 2015.
12. **Aboulhassan, M.A.** ; Sourour, E.A. ; Shaaban, S.E."Novel cell selection algorithm for improving average user's effective data rate in LTE HetNets" ,Computers and Communication (ISCC), 2014 IEEE Symposium on , Page(s): 1 – 6
13. **Aboulhassan, M.A.** ; Sourour, E.A. ; Shaaban, S.E., "Novel resource allocation algorithm for improving reuse one scheme performance in LTE networks" ,Telecommunications (ICT), 2014 21st International Conference on, Page(s): 166 – 170
14. **Mohamed A. Aboulhassan**; Essam A. Sourour; Shawki Shaaban, "Novel Cell Selection Procedure of LTE Hetnets Based on Mathematical Modelling of Proportional Fair Scheduling". International Journal of Wireless & Mobile Networks (IJWMN), Dec 2013, Vol 5. No 6

Academic Qualifications:

- **PhD degree in field of wireless communications, Faculty of Engineering, Alexandria University, Egypt (October 2014)**

Thesis Title "NOVEL ALGORITHMS FOR IMPROVING RESOURCE ALLOCATION PROCEDURE IN REUSE ONE LTE NETWORKS)"

- **Master of Science of Communications/ Electronics Engineering (March 2009), Faculty of Engineering, Alexandria University, Egypt**

Thesis Title "Using Orthogonal Complementary Codes to Improve Bit Error Rate in UMTS mobile Systems"

- **Bachelor of Science of Communications/ Electronics Engineering (July 2003,) Faculty of Engineering, Alexandria University, Egypt. (Overall Grade: Extinction with honor of degree)**

Corporate Experience

Huawei Technologies -

Since June 2005 till August 2010

Clients Etisalat Misr-Vodafone-Telecom Egypt-Lacom-Algeria telecom-Sudatel
Products **expert in :**CDMA2000 BSC6600& BSC 6610 (same Platform as RNC 6800) ,
BSC6000(same platform as 6810) & BTS (BTS3012 & BTS3012E & BTS3002C &
BTS3002C & 3002E NodeB (BTS3812A & 3812AE & DBS3800 & iDBS3800,
BTS3900, DBS3900) ,PCU6000 , M2000,RNC 6800 & 6810, BSC6900
Good Idea : microwave equipment (NEC V4, NEO & RTN), Huawei LAN switch
(S3000,S3500)

Position: **Alexandria Area UTRAN manager**

REDTELECOM CO.

2012-2018

Clients Etisalat Misr-Vodafone-Telecom Egypt
Role Business development consultant

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Internships and trainings

- One month- staff mobility (funded by Erasmus+ project) at KTH, Stockholm, Sweden for– Spring 2016 and 2019
- 10 weeks staff mobility program (funded by Fulbright) at University of Texas (UT at Austin), Texas, **USA** - Summer 2019
- IBM-approved Expert in Data Science – (June 2021)
- TOT career development training workshops ((Entrepreneurship workshops, time management, team leadership, personal communications, cv writing and interview skills), 2016 given by Prof. George Marquis, AUC, Cairo
- Advanced teaching methods, University of Texas, Austin, US, 2019

Courses taught

- | | |
|--|-------------------------------------|
| - Analog communications | |
| - Digital communications | -Signals and systems |
| - Information theory | - Acoustic wave theory |
| - Electromagnetic waves and transmission media | - Probability and random variables |
| - Antenna theory and design | - Error correcting codes |
| - Mobile communication systems | - Intro. To Artificial intelligence |

Research Area interests

- Advanced wireless communications topics (OFDM,MIMO, channel estimation)
- Internet of Things (IoT).
- Energy harvesting.
- Smart cities.
- Mixed free space optical networks.
- Simultaneous wireless power and energy transfer (SWIPT) techniques
- Advanced technologies in L1 and L2 in 6G networks
- UAV performance analysis.
- AI technologies for cellular networks