



Noura Baccar Mathlouthi
Ph.D. in Telecommunication Systems
Assistant Professor,
Electrical and Telecommunications
Engineering
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EDUCATION

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| 2016 | Ph.D. in Telecommunication Systems, National Engineering School of Tunis, University of Tunis El Manar, Tunisia |
| 2011 | Master in research in Intelligent and Communicating Systems, National Engineering School of Sousse, University of Sousse, Tunisia |
| 2010 | Engineering degree in Mechatronics, National Engineering School of Sousse, University of Sousse, Tunisia |

RESEARCH INTERESTS

Localization in Wireless Networks, Artificial Intelligence, Machine learning, Fuzzy Logic, Wireless Sensor Networks, Internet-of-Things (IoT), Smart communicating systems

EMPLOYMENT EXPERIENCE

ACADEMIC:

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| 2016 - Present | Assistant Professor, the Mediterranean Institute of Technology (Medtech), Tunis, Tunisia. |
| 2010 - Present | Researcher, Innov'Com laboratory, higher school of communication of Tunis, Tunisia. |
| 2011 - 2016 | Ph.D. Researcher, National Engineering School of Tunis, University Tunis El Manar, Tunisia. |

PROFESSIONAL:

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| 2012 - 2016 | Telecommunication researcher, R&D department, Cynapsys IT, Elghazala Technoparc, Tunisia.
Responsible of Indoor Geo-localization research project Within Cynapsys IT |
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CONSULTING EXPERIENCE OR PROFESSIONAL CERTIFICATION

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| 2016 | Technical Consultant in the Internet of Things (IoT) project: « Smart Parking », Cynapsys IT, Tunisia. |
| 2016 | Certificate from the International School on advanced Waveforms for 5G networks (ISW-5G)", Innov'Com laboratory |
| 2015 | Certificate from the spring school "Probability and Statistics which apply", Institute Pasteur of Tunis, Tunisia. |
| 2014 | Certificate in "Fundamental in Project management" |
| 2014 | Certificate from the spring school "Electromagnetic compatibility" (EPCM), Innov'Com laboratory |
| 2013 | Certificate from the winter school "the emergent wireless technologies for green communications", GresCOM laboratory |
| 2010 | TOEIC certificate with a score 805/990 |

COURSES TAUGHT

- ECE 143: Introduction to digital systems; Medtech, SMU
ECE 251: Introduction to electronic circuits, Medtech, SMU
ECE 357: Electronic devices and circuits, Medtech, SMU
- Speaker in the conference "The 23rd International Conference on Software, Telecommunications and Computer Networks" (SoftCOM 2015) in Split-Bol (Island of Brac), Croatia
Speaker in the conference "10th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications" (WiMob 2014) in Larnaca, Cyprus.
Speaker in the conference ISIVC 2016 in Tunis, Tunisia
Speaker in "Elghazala Innovation Days" (EID'15), Talk untitled: "Innovation on Indoor Geolocalization Applications based on Artificial Intelligence", Mai 2015
Speaker in the "International Innovation Summit", Talk untitled: « Indoor Geo-localization based on Fuzzy Location Indicator (FLI)" at Hammamet" at 19-20 september 2014 organized by I.T.GRAPES SUARL,in partnership with Société La Paix, Hammamet, Tunisia.

INTELLECTUAL CONTRIBUTIONS

Papers in refereed journals

Published

- Baccar, N; Bouallegue, R.** (2016). Interval type 2 fuzzy localization for wireless sensor networks. *EURASIP Journal on Advances in Signal Processing*. **42**.1.1.
- Elkamel, R; Baccar, N; Cherif, A.** (2015) Improvements in LEACH based on K-means and Gauss algorithms." *Procedia Computer Science*.**73**. 460-467.

Communications in refereed conferences

International

- Baccar, N ; Jridi, M; Bouallegue, R.** (2016) Neuro-fuzzy localization in wireless sensor networks. 8th International Symposium on signal, Image, Video and Communications (ISIVC 2016), Tunis, Tunisia.
- Baccar, N ; Bouallegue, R.** (2015) Intelligent type 2 fuzzy-based mobile application for indoor geolocalization, in Software, Telecommunications and Computer Networks (SoftCOM), 23rd International Conference proceedings Split, Croatia.
- Baccar, N ; Bouallegue, R.** (2015) A new fuzzy location indicator for Interval Type-2 indoor Fuzzy Localization System," in 11th IEEE Wireless Communications and Mobile Computing Conference (IWCMC), 2015 International proceedings, Dubrovnik, Croatia.
- Elkamel, R ; Baccar, N ; Cherif, A; Bouallegue, R.** (2016) Efficient" MultiKG" Routing Protocol Based on Multi-Hop Transmission. In 30th International Conference on Advanced Information Networking and Applications Workshops (WAINA), Crans-Montana, Switzerland.
- Baccar, N ; Bouallegue, R.** (2014) A new web-based e-health platform, in Wireless and Mobile Computing, Networking and Communications (WiMob), IEEE 10th International Conference on proceeding. Larnaca, Cyprus.

Papers under review

- Baccar, N. Bouallegue, R.** (2016). Adaptive Neuro-Fuzzy Location Indicator in Wireless Sensor Networks. *WPC Journal*.

SCIENTIFIC PRIZES AND AWARDS / GRANTS

2012-2016: Thesis made within a MOBIDOC research grant, financed by the European Union (EU) within the framework of the PASRI program of ANPR and partially supported by Cynapsys IT Enterprise. (Reference : Mobidoc-2012-36)

May 2015: "Best research paper" (2015) Innovation on Indoor Geolocalization Applications based on Artificial Intelligence » in the conference «Elghazala Innovation Days» EID'15 Doctoral Consortium; Technopole Elghazala, Ariana, Tunisia.

September 2014: Third best price for the project «Mobile Application for indoor localization and navigation» in the ceremony « Lauréats PFE 2014 » organized by Cynapsys IT Enterprise.

EDITORIAL ACTIVITY

2014-2016 Reviewer in the International Conference on Control, Decision and Information Technologies (CoDIT)

INSTITUTIONAL SERVICE

Supervision of Ph.D. Thesis

2014-2016 Co-supervisor, "Optimizing energy consumption in wireless sensor networks"

Supervision of Final study projects (PFE) and internships

2015 Cynapsys Company supervisor, "Test and experiment of the fingerprinting algorithm for locating in a "WiFi "wireless network" within ENIG

2015 Cynapsys Company supervisor, "Implementation and installation of an indoor geolocalization" within INSAT

2015 Cynapsys Company supervisor, "Optimization of a mobile application for indoor geolocalization" within ENSI

2014 Cynapsys Company supervisor, "implementation and installation of a Zigbee bench for indoor location" within Sesame

2014 Cynapsys Company supervisor, "Design and Development of an indoor location application of a Smartphone" within ENSI

2014 Cynapsys Company supervisor, "Implementing an e -Health communication platform" within ENIT

2013 Cynapsys Company supervisor, "Analysis of conventional localization protocols in the presence of sources of interference in a wireless sensor network" within EPT

2013 Cynapsys Company supervisor, "Comparative study between routing protocols for wireless sensor networks" within Sup'Com

2013 Cynapsys Company supervisor, "Development of a wireless sensor network simulator for an e -Health system" within ENSI

2013 Cynapsys Company supervisor, "Comparative study and simulation of distributed localization algorithms in wireless sensor network" within Sup'COM

Supervisory Committee Member

2015 Industrial supervisor, "Implementation and installation of an indoor geolocalization" within INSAT

2015 Cynapsys Company supervisor, "Optimization of a mobile application for indoor geolocalization" within ENSI

2014 Industrial supervisor, "Implementing an e -Health communication platform" within ENIT

2014 Industrial supervisor "Design and Development of an indoor location application of a Smartphone" within ENSI

Head of a recruitment jury

2016 Admission Exams, Medtech, Tunisia

Member of the association "Tunisian Association for Scientific Innovation and Technology" (TASIT).