
AHMED MOHAMED MANSOUR EL-SHAER

8 Ahmed Basha Tork, ElSafwa Tower, 7 Floor, Fleming (21523), Alexandria, Egypt.

Mobile: +2 01220600050, **E-Mail:** ahshaer1@aast.edu / ahshaer@alexu.edu.eg

Personal Data

Surname: El-Shaer

Name: Ahmed Mohammed Mansour

Birth Date: 24-10-1981

Marital Status: Married, with 2 children

Nationality: Egyptian

h-index (Google Scholar): 9



Position

Associated Professor, College of Artificial Intelligence, Arab Academy for Science, Technology & Maritime Transport.

Education

- **PhD.**, in “**Electrical Engineering**”, Electrical Engineering Department, Faculty of Engineering, Alexandria University, Alexandria, Egypt. GPA: 3.55/4.0, 2015.
Thesis Title: “**Fabrication of Infrared Sensors and Implementation of a Smart Measuring System**”.
- **M.Sc.**, in “**Electronics and Communications**”, Electronics & Communications Engineering Department, College of Engineering & Technology, Arab Academy for Science, Technology & Maritime Transport 'AASTM', Alexandria, Egypt, GPA: 3.67/4.0, 2009.
Thesis Title: “**Behavioral VHDL-AMS Modeling of Single-Electron Transistor**”.
- **B.Sc.**, in “**Electrical Engineering**”, Electronics & Communications Engineering Department, Alexandria Higher Institute of Engineering & Technology 'AIET', Alexandria, Egypt, 2003.
Graduation year: 2002/2003 **Grade:** Excellent 91.81% with HONOR **Rank:** First.

Practical Experience

- ❖ **College of Artificial Intelligence, Arab Academy for Science, Technology & Maritime Transport [Education]:** Associate Professor, Full Time from Feb. 2023.
- ❖ **Institute of Graduate Studies and Research, Alexandria University:** Associate Professor, Academic supervision for Ph.D. and M.Sc. degrees from 2017 to present in fabrication of nano-sensor and supercapacitor for energy harvesting applications.
- ❖ **Higher Institute of Engineering & Technology:** Associate Professor, Computer Engineering Department from Nov. 2012 to 2015.
- ❖ **Al-Watania Technologies Company:** research and development, department of embedded system projects from 2016 to 2018.
- ❖ **Faculty of Air Defense [Education]:** Assistant Professor, Part Time, in Electronic and Communications Engineering department from February 2016 to present.
- ❖ Certified as an **External Reviewer** for universities and higher educational institutions, National Authority for Quality Assurance and Accreditation of Education (NAQAAE), 2017.
- ❖ **College of Engineering and Technology, Arab Academy for Science, Technology & Maritime Transport (AASTM) [Education]:** Assistant Professor, Part Time, in Electronics and Communications Engineering Department and Electrical Power Engineering Department.
- ❖ **Alexandria Higher Institute of Engineering & Technology (AIET) [Education]:** Teaching Assistant in Electronics and Communication Department from 2003 to 2012.

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❖ **About Quir for Fertilizers** [Fertilizers]: Trainee in instrumentation departments and supervisor for students traineeship after my graduation.

Publications

- | | Impact
Factor |
|---|--------------------------|
| 1. Elmanfaloty, Rania A., Esraa Shokry, Ehab Abou-bakr, Shaker Ebrahim, and A. M. Elshaer . "Electrochemical measurements, structural and morphological studies of electrodeposited polypyrrole supercapacitor electrode." <i>Alexandria Engineering Journal</i> 107 (2024): 867-877. | 6.2 |
| 2. Medhat, Mai, Ahmed M. Elshaer , Moataz Soliman, Shaker Ebrahim, and Marwa Khalil. "Aluminum Oxide Nanoparticles as a Photocatalyst for Water Splitting." <i>Integrated Nano</i> , vol. 1 (2024): 1-8. DOI: 10.62184/in.jin010120241 | |
| 3. Elshaer, A. M. , Yousef Ambioh, Ziad Soliman, Omar Ahmed, Miral Elnakib, Mohamed Safwat, Salma M. Elsayed, and Mahmoud Khalid. "Enhancing Arabic Alphabet Sign Language Recognition with VGG16 Deep Learning Investigation." In <i>2024 14th International Conference on Electrical Engineering (ICEENG)</i> , pp. 184-186. IEEE, 2024. | |
| 4. Elshaer, A. M. , Moamen Mostafa, Mahmoud Elrakaiby, Rania A. Elmanfaloty, and Ehab Abou-Bakr. "IoT-Enabled E-Prescription Management and Dispensing Machine Monitoring." In <i>2024 14th International Conference on Electrical Engineering (ICEENG)</i> , pp. 243-247. IEEE, 2024. Doi: 10.1109/ICEENG58856.2024.10566431 | |
| 5. Hamy, M., Eldesouky, A., Soliman, M., Ebrahim, S., Elshaer, A. M. , "Fabrication and characterization of Fe ³⁺ doped ZnO nanoparticles for light induced pyroelectric photodetector," submitted. | |
| 6. El Nady, J., Shokry, A., Khalil, M., Elshaer, A. M. , "One-step electrodeposition of a polypyrrole/NiO nanocomposite as a supercapacitor electrode," <i>Scientific Report</i> , vol. 12, 3611, 2022 . Doi: 10.1038/s41598-022-07483-y | 5.5 |
| 7. Shokry, A., Elshaer, A.M. , El Nady, J., Ebrahim, S. and Khalil, M., "High energy density and specific capacity for supercapacitor based on electrochemical synthesized polyindole," <i>Electrochimica Acta</i> , vol. 423, pp.140614, 2022 . Doi: 10.1016/j.electacta.2022.140614 | 6.2 |
| 8. Ahmed Elsonbaty, A.M. Elshaer , Mohamed Harb, Moataz Soliman, Shaker Ebrahim, Ayman Eltahan, "Novel ZIF67/Mn/MWCNTs decorated with layer double hydroxide supercapacitor electrodes," <i>Electrochimica Acta</i> , vol. 368, pp. 1-12, 2021 . Doi: 10.1016/j.electacta.2020.137577 | 6.2 |
| 9. A. M. Hassan, Shaker Ebrahim, A. M. Elshaer , "Investigation of High Performance Conducting Polymer Parameters for Supercapacitor Electrode", <i>International Tele-communication Conference (ITC-Egypt'2021)</i> , pp. 1-4, Egypt, July 2021 . | |
| 10. Jehan Elnady, Tosson Shaala, Hassan M. Tork, Moataz Soliman, Shaker Ebrahim, A.M. Elshaer , "Acquisition of optimum co-sources of sulfur MAA capped-ZnS quantum dots conditions for photoluminescence chlorine sensor," <i>Journal of Materials Science: Materials in Electronics</i> , vol. 32, pp. 16831-16844, 2021 . Doi: 10.1007/s10854-021-06243-4 | 2.2 |
| 11. Manal Mostafa, Jehan El Nady, Shaker M. Ebrahim, A.M. Elshaer , "Synthesis, structural, and optical properties of Mn ²⁺ doped ZnS quantum dots for biosensor application," <i>Optical materials</i> , vol. 112, pp. 1-12, 2021 . Doi: 10.1016/j.optmat.2020.110732 | 2.03 |
| 12. G. Magdy, M. Harb, A. M. Elshaer , S. Ebrahim,, M. Soliman, "Preparation of Electrolytic Quasi-Solid State Nanofibers for Solar Cells," <i>Journal of Mineral, Metal, and Materials Society</i> , vol. 71, pp. 1944-1951, February 2019 . Doi: 10.1007/s11837-019-03404-z | 2.145 |
| 13. K. Amer, A. M. Elshaer , M. Anas, S. Ebrahim, "Fabrication, characterization, and electrical measurements of gas ammonia sensor based on organic field effect transistor", <i>Journal of Materials Science: Materials in Electronics</i> , vol. 30(1), pp. 391-400, January 2019 . | 2.34 |

Doi:[10.1007/s10854-018-0303-7](https://doi.org/10.1007/s10854-018-0303-7)

14. Hamida Hamid, Mohamed Harb, **A. M. Elshaer**, Shaker Erahim, “Electrochemical Measurements of a Conducting Polymer for Optimizing Detector Applications,” *Journal of Electronic Materials*, vol. 42, no. 9, pp. 1-6, July **2018**. **1.68**
15. **A. M. Elshaer**, S. Ebrahim, “Electrochemical preparation and electrical characterization of polyaniline as a sensitive biosensor,” *Journal of Microsystem Technologies*, vol. 24, pp. 1775- 1781, February **2018**. Doi: [10.1007/s00542-018-3793-6](https://doi.org/10.1007/s00542-018-3793-6). **1.195**
16. K. H. Baz, Mohamed Harb, **A. M. Elshaer**, “Electromagnetic sensor using plasmonic different nano-structure array model”, 36th National Radio Science Conference NRSC 2019, pp. 1-8, Arab Academy for Science, Technology, and Maritime Transport, Port Said, Egypt, April **2019**.
17. **A. M. Elshaer**, “Electrodeposition of doped polypyrrole for electromagnetic interference shielding”, 18th Arab International Conference on material Science- Material Science and Scientific Instruments: Toward Building Research Capacity in the Arab World, pp. 1-4, Institute of Graduate Studies and Research, Alexandria, Egypt, December **2018**.
18. **A. M. Elshaer**, Mohamed Harb, M. M. Elrakaiby, “Autonomous Car Implementation Based on CAN Bus Protocol for IoT Applications” The 13th IEEE International Conference on Computer Engineering and Systems (ICCES 2018), pp. 1-4, Cairo, Egypt, December 18-19, **2018**.
19. **A. M. Elshaer**, Mohamed Harb, K. Elbaz, “Preparation and Investigation of Introduced gold nanoparticles for Biomedical Sensing Applications,” 6th International Japan-Africa Conference on Electronics, Communications and Computations (JAC-ECC 2018), Egypt-Japan University of Science and Technology, pp. 1-4, Alexandria, Egypt, December, 16 – 18, **2018**.
20. **A. M. Elshaer**, S. Ebrahim, M. Soliman, K. Elsayed, “ Organic Field Effect Transistor Based on Polyaniline - Dodecyl Benzene Sulphonic Acid for Humidity Sensor,” 34th National Radio Science Conference (NRSC 2017), Arab Academy for Science and Technology, Port Said, Egypt, no. D8(1-8), pp. 1-8, March 13-16, **2017**.
21. Moustafa H. Aly, A. A. A. Nasser , I. G. Morsi, **A. M. Elshaer**, “Fabrication and Characterization of Nano-Sensor,” Invited paper ,34th National Radio Science Conference (NRSC 2017), pp. 1-16, Arab Academy for Science and Technology, Port Said, Egypt, March 13-16 **2017**.
22. **Elshaer, A. M.**, Tayel, M., Ebrahim, S., Soliman M., “Responsivity and Detectivity of Pyroelectric Infrared Sensor Based on Polyaniline/Polyvinyledene Fluoride Blend,” *Journal of Sensor and Actuator: A*, vol. 238, pp. 389-396, **2016**. **2.214**
23. **Elshaer, A. M.**, Tayel, M., Ebrahim, S., Soliman M., “Voltage Responsivity Measurements for PANI-DBSA/PVDF infrared Sensor Using Electrical Chopped Circuit,” 10th International Conference on Electrical Engineering INEENG-10, no. 083, pp. 1000-1004, Military Technical College, Apr. 19-21, **2016**.
24. **Elshaer, A. M.**, Tayel, M., Ebrahim, S., Soliman M., “Pyroelectric Parameters Measurements of Infrared Sensors Based on PANI-CSA/PVDF/BaTiO₃ Composite Films,” 10th International Conference on Electrical Engineering INEENG-10, no. 043, pp. 1005-1009, Military Technical College, Apr. 19-21, **2016**.
25. **Elshaer, A. M.**, Tayel, M., Ebrahim, S., Soliman M., “Polyaniline/Polyvinyledene Fluoride Blends for Pyroelectric Sensor,” The First International Conference on Radiation Physics and Its Applications ICRPA, no. 076, pp. 1-8, Alexandria, Egypt, Apr 11-14, **2015**.
26. **Elshaer, A. M.**, Aboulsoud, A. K., Ebrahim, S., Soliman M., “Electrical Chopped Frequency Circuit for Characterizing Pyroelectric Sensor,” *Journal of Electrical Engineering*, vol. 14, pp. 1-6, **2014**. **0.967**

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27. **Shaer, A. M.**, Aboulseoud, A. K., Soliman, M., and Ebrahim, S., "Fabrication of Infrared Detector Based on of Polyaniline/Polyvinylidene Fluoride Blend Films and their Pyroelectric Measurement," Key Engineering Materials, vol. 605, pp. 103-106, **2014**. **0.39**
28. **El- A. M. El-Shaer**, A. A. A. Nasser, and N. Hamdy, "Simulation of Single-Electron Transistor Circuits Using "VHDL-AMS" Model," Minufiya Journal of Electronic Engineering Research, MJEER, Faculty of Electronic Engineering-Menufiya University, vol. 20, no. 1, ISSN 1687-1189, pp. 1-10, January **2010**.
29. **A. M. El-Shaer**, A. A. A. Nasser, and N. Hamdy, "VHDL-AMS based modelling and simulation of single-electron transistor circuits," Proceeding of the 19th International Conference on Computer: Theory & Applications, Alexandria, Egypt, ICCTA 2009, pp. 154-157, Alexandria, Egypt, Oct. 17-19, **2009**.
30. **A. M. El-Shaer**, A. A. A. Nasser, and N. Hamdy, "Behavioural "VHDL-AMS" modelling of single-electron transistor," Proceeding of the 26th National Radio Science Conference, NRSC'2009, pp. D17 (1-8), Cairo, EGYPT, Mar. 18-20, **2009**.

Conferences

1. 34th National Radio Science Conference, NRSC'2017, Arab Academy for Science and Technology and Maritime Transport, Port Said, Egypt, March 13-16, 2017.
2. Participate as a judge in the "Intel International Science and Engineering Fair 2017 (Intel ISEF)", Luxor, Egypt, March 4th to 6th, 2017.
3. Participate as a judge in the "Intel International Science and Engineering Fair 2016 (Intel ISEF)", Luxor, Egypt, February 1st to 4th, 2016.
4. The First International Conference on Radiation Physics and Its Applications ICRPA-1, Alexandria, Egypt, April 11-14, 2015.
5. 31th National Radio Science Conference, NRSC'2014, Ain Shams University, Cairo, Egypt, April 28-30, 2014.
6. International workshop, Current Developments in Materials Science/Physics with Relevance to Photovoltaic, Institute of Graduate Studies and Research, Alexandria University, Egypt, December 3-5, 2012.
7. 29th National Radio Science Conference, NRSC'2012, Cairo University, Cairo, Egypt, April 10-12, 2012.
8. 27th National Radio Science Conference, NRSC'2010, Menoufiya University, Egypt, 2010.
9. 26th National Radio Science Conference, NRSC'2009, Future University, Egypt, 2009.
10. 19th International Conference on Computer: Theory & Applications, Alexandria, Egypt, ICCTA 2009. (Egypt, 2009)
11. 22nd National Radio Science Conference, NRSC'2005, Cairo University, Egypt, 2005.

Teaching Courses

- Introduction to computer & programming
- Embedded systems
- C/C++
- DC & AC Circuits
- Computer Architecture.
- Machine learning
- Digital integrated Circuits
- Probability Theory and Statistics
- Analog and Digital Communications
- Logic Circuit Design
- Computing Algorithm
- Python
- Digital System Design
- Electronic Circuits
- Modelling and simulation
- Artificial intelligence (tensor flow)
- Numerical methods
- Introduction to Microprocessor

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- Microprocessor Interfacing
- Analog Integrated Circuits
VLSI Design and Technology
(Very Large Scale Integrated Circuits
& Fabrication) Supervisor, and Author of the lab book
- Digital Electronic Design
- Assembly Language
- Mathematics I, II, and III.
- FPGA based VHDL design

Reviewing Journals

- Journal name: “**Advances in Nanomaterials**,” Science Publishing Group, reference number: AN, April 20th, 2017.
Web site: www.sciencepublishinggroup.com/j/an

Academic Supervision

- **M.Sc. degree:** “Fabrication and characterization of super-capacitor,” Institute of Graduate Studies and Research, Alexandria University, Alexandria, Egypt, 2017.
- **Ph.D. degree:** “Organic Synthesis of colloidal of CuInS quantum dot for optoelectronics applications,” Institute of Graduate Studies and Research, Alexandria University, Alexandria, Egypt, 2019.
- **M.Sc. degree:** “Preparation and characterization of high performance super-capacitor electrodes,” Institute of Graduate Studies and Research, Alexandria University, Alexandria, Egypt, 2021.

Graduation Projects

- “Detection of symptoms COVID 19 based on thermal camera,” Higher Institute of Engineering & Technology-EIBohira, 2021/2022.
- “Implementation of drone with 5 DOF,” Higher Institute of Engineering & Technology-EIBohira, 2018/2019.
- “Fabrication and Implementation a Tank Robot for Metal Detector,” Faculty of Air Defence, 2017/2018.
- “Implementation of Autonomous Vehicle Based on CAN Bus Protocol,” Computer Eng. Department, Higher Institute of Engineering & Technology-EIBohira, 2017/2018.
- “Pharmacy Robot,” Computer Eng. Department, Higher Institute of Engineering & Technology-EIBohira, 2016/2017.
- “Humanoid Robot for Home Applications,” Computer Eng. Department, Higher Institute of Engineering & Technology-EIBohira, 2015/2016.

Professional Skills

- **Programming**
 1. VHDL -- Reliable and efficient code for all design phases such as coding, verification, simulation, synthesis RTL schematic, implementation, and place & route “I/O planning”, generate bit file mainly for Xilinx ISE, Altera FPGAs.
 2. VHDL-AMS -- Design tools for analog mixed signal, coding and simulation analog devices based R, L, C using VHDL, determine critical path, simulation, functional verification, design for test, and IC design mainly for ADVance MS for Mentor Graphics® and SIMPLORER® for Ansoft.
- **Authoring books**
 1. “VHDL note book based Xilinx FPGA”, how to write VHDL code, discussing the steps

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from verification to download the code onto FPGA using Xilinx ISE.

2. “VHDL examples based Mentor Graphics”, mention all possibilities of design based on mentor graphics: block diagram, components, Tt, FSM.

Certificates

- **“Self-Assessment of Institutions of Higher Education,”** National Authority for Quality Assurance and Accreditation of Education (NAQAAE).
- **“External Audit of Institutions of Higher Education,”** National Authority for Quality Assurance and Accreditation of Education (NAQAAE).
- **“VLSI-Based Communication Application Design,”** Organized by National Telecommunication Institute, Ministry of Communications and Information Technology, 144 Training Hours, 18th February 2006, Faculty of Engineering, Alexandria University. Alexandria, Egypt.
- **“International Computer Driving License ICDL,”** Version 4.0, Ministry of Communications and Information Technology, Egypt, 18/4/2009.

Skills and Qualifications

- **Languages :-** **Arabic:** Mother Language **English:** Fluent
- **Electronic Skills:** Basic knowledge for VLSI, Mentor Graphics tools (FPG Advantages).
- **Computer Skills:** C, C++, Python, Proteus, Origin®
 - VHDL -- Reliable and efficient code for all design phases such as coding, verification, simulation, synthesis RTL schematic, implementation, and place & route “I/O planning”, generate bit file mainly for Xilinx ISE, Altera FPGAs.
 - VHDL-AMS (ADVance MS for Mentor Graphics®: VHDL-AMS -- Design tools for analog mixed signal, coding and simulation analog devices based R, L, C using VHDL, simulation, functional verification, design for test, and IC design mainly for ADVance MS for Mentor Graphics® and SIMPLORER® for Ansoft.
- **Managerial Skills:**
 1. Time Manage Coordinator of student time table for Electronic & Communication Engineering, Computer Engineering and Electromechanical Engineering Departments.
 2. President of the Student Union AIET (2001-2002).

Scientific and Engineering Societies

- Member of the Institute of Electrical and Electronic Engineers (IEEE).
- Member of the Science of Materials Society.
 - Member of the Egyptian Syndicate for Engineers