جامعة العلوم والتقنية في الفجيرة
UNIVERSITY OF SCIENCE & TECHNOLOGY OF FUJAIRAH

# CURRICULUM VITAE

| PERSONAL INFORMATION | |
|---|---|
| Name: | Yomna Omran Abdelhaleem Shaker |
| Nationality: | Egypt |
| Job Title: | Assistant Professor |
| College: | Engineering and Technology |
| Department: | Engineering |
| Contact Information: | E-mail: y.shaker@ustf.ac.ae Office Phone No, Mobile Number (552258609) |

## EDUCATIONAL BACKGROUND

**1. Doctorate: Electrical Engineering**
**Analysis of Thermal behavior of cast Resin Dry Type Transformers using Finite Elements Technique**
**Cairo University,Egypt,2010.**

**2. Master: Electrical Engineering**
**Thermal Behavior of SF6 Gas Insulated Transmission Lines**
**Cairo University,Egypt,2003.**

**3. Bachelor: Electrical Engineering**
**Cairo University,Egypt, 1998.**

## PROFESSIONAL EXPERIENCE

| From (year) | To (year) | Position | Employer | Country |
|---|---|---|---|---|
| 2021 | Present | Assistant Prof. | University of science and Technology of Fujirah) | Fujirah/ UAE |
| 2017 | 2021 | Assistant Prof. | Al Dar University | Dubai/ UAE |
| 2016 | 2017 | Assistant Prof. (visiting professor) | AlGhurair University | Dubai/ UAE |
| 2012 | 2015 | Research Associate. | American University of Sharjah | Sharjah/UAE |
| 2013 | 2015 | Assistant Prof. (adjunct position) | University of Sharjah | Sharjah/UAE |

## TEACHING EXPERIENCE AREA / COURSES)

| Academic Year | Course Title | Academic Year | Course Title |
|---|---|---|---|
| 2020-2023 | Renewable energy | 2019-2023 | Electric machines |
| 2020-2023 | Smart grid | 2020 | Power electronics |
| 2020 | Energy conversion and storage | 2019 | Computer control and instrumentation |
| 2019 2017 2015 | Electric Circuit I | 2017/2018 | Electronics I |
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| 2017 2015 2014 | Electric circuit II | 2017/2018 | Electronics II |
| 2016 | High Voltage | 2017/2018 | Physics I |
| 2016 | Electric machines | 2017/2018 | Physics II |
| 2016 | Electromagnetic fields | 2017/2018 | Differential Equations |
| 2016 | Generation of electric power | 2017/2018 | Linear Algebra |

## RESEARCH AREA

**Renewable energy system, Modeling of Photovoltaic system modeling and simulation**
**High voltage engineering, Electric Machines, AI application in PV defect detection**
**Partial discharge**

## PUBLICATIONS

### 1. JOURNALS

1. Journal Articles

2023 Fatmah Mazen, Rania Abo Elseoud and Yomna Shaker," Deep Learning for Automatic Defect Detection in PV Modules Using Electroluminescence Images" IEEE access, June 2023.

2023 Raghad Melhem, Yomna Shaker "Optimum Tilt Angle and Solar Radiation of Photovoltaic Modules for Gulf Collaboration Council Countries" International Journal of Energy Research. May 2023

2022 Fatmah Ali Mallahi, Mariam Mohamed and Yomna Omran Shaker," Integration of Solar Energ Supply on Smart Distribution Board Based on IoT System", Designs, MDPI, November 2022.

2022 Dalia Yousri , Ehab F. El-Saadany , Yomna Shaker , Thanikanti Sudhakar Babu , Ahmed F. Zobaa, Dalia Allam ,"Mitigating mismatch power loss of series–parallel and total-cross-tied array configurations using novel enhanced heterogeneous hunger games search optimizer", Energy Report, November 2022.

2022 Dalia Yousri , Mohammed Mudhsh , Yomna O. Shaker, Laith Abualigah , ElsayedTag-Eldin, Mohamed Abd Elaziz , and Dalia Allam,"Modified Interactive Algorithm Based on Runge Kut Optimizer for Photovoltaic Modeling: Justification Under Partial Shading and Varied Temperature Conditions", IEEE access, March 2022.

2022 Dalia Yousri , Ahmed Ousama , Yomna shaker , Ahmed Fathy,Thanikanti Sudhakar Babu , Hegazy rezk , Dalia Allam," Managing the exchange of energy between microgrid elements based on multi-objective enhanced marine predators algorithm", Alexandria Engineering Journal, Febreury 2022

2021 Yomna Shaker, Dalia Yousri , Ahmed Osama , Ahmed Al-Gindy , Elsayed Tag-Eldin , and Dalia Allam "Optimal Charging/Discharging decision of Energy Storage Community in Grid-connected Microgrid Using Multi-objective Hunger Game Search Optimizer" IEEE access Septemper 2021

2021 Dalia Yousri, Yomna Shaker , Dalia Allam and Seyedali Mirjalili,"An Efficient Photovoltaic Modeling Using an Adaptive Fractional-order Archimedes Optimization Algorithm: Validatio with Partial Shading Conditions", Solar Energy, submitted 2021.

2019 Yomna Shaker," Understanding and localization of partial discharge by numerical analysis of acous emission". Asian Journal of Scientific Research. April 2019.

2019 Y. O. Shaker, "Detection of Partial Discharge acoustic emission in power transformer", Internation Journal of electrical and computer engineering (IJECE), December 2019

2014 Y. O. Shaker, A. EL_Hag, and S. h. Jayram, "Thermal Modeling of MV Cable Termination und Square Pulse", IEEE Transactions on Dielectrics and Electrical Insulation, June 2014.

2010 Magdy B. Eteiba, Essam A. Alzahab, and Yomna O.Shaker, "Steady State Temperature Distribution Cast-resin Dry Type Transformer Based on New Thermal Model Using Finite Element Method" International Journal of Electrical and Computer Engineering,World Academy of Science, Engineeri and Technology, Vol.4, no.2, 2010.

2. CONFERENCES

**4. Conferences**

2022 Raghad Melhem, Yomna Shaker "Estimating the Optimum Tilt Angle of Solar Panels in Fujairah Advances in Science and Engineering Technology International Conferences (ASET), Sharjah UAE,2023.

2019 Yomna Shaker," Modeling of Pulsed Electric Field for liquid food processing using simulation method", International Conference On Digitization, Landscaping & Artificial Intelligence , UAE Nov.2019

2018 Yomna Shaker, "Propagation Behavior of Partial Discharge Acoustic Signals by Using Finite Element Technique", 1st International Conference on Computer Application and Information Security, Riyadh Saudi Arabia, 2018.

2016 Yomna Shaker, Abdelmonaem Zahed and Ayman El-Hag," Experience with Acoustic Sensors for Partial Discharge Detection", IEEE conference on High Voltage Engineering and application Chengdu, China, 2016.

2012 Y.O.Shaker, A. Elhag, and S.H.Jayram, "Thermal Model of MV Cables Termination using Finite Element Technique", Conference on Electrical Insulation and Dielectric Phenomena, Montreal Canada, 2012.

2011 Yomna O.Shaker, "Sensitivity Study of Transient Temperatures of Cast-resin Dry Type Transformer",2nd International Conference on Electric Power and Energy Conversion System EPECS'11, Sharjah, UAE, September 2011

**PROFESSIONAL AND ACADEMIC ACTIVITIES**

- Research projects
- Project funding association : "Qatar Foundation"
- Project Title:" Asset Management for Power Transformers in Smart Grid"
- Principal Investigator: Prof. Ayman El-Hag
- Co-PI: Dr. Yomna Shaker
- Enhancement of transformer PD online monitoring techniques because PD monitoring is a very common online testing technique that has been used extensively in the context of power transformers. Several types of sensors have been utilized like RF antenna, acoustic sensors and high frequency current transformer. Each technique has its own advantages and disadvantages that limit the usefulness of each. This research work will study the possibility to fuse different types of PD sensors and integrate them to improve PD detectability. The significance of this project is foreseen as a result of its contribution in advancing state-of-the-art smart grid technologies. The proposed research employs a number of novel ideas and combines a set of technologies to produce a reliable power transformer on-line monitoring system that is unique and very helpful in electric power network.
- Academic programs accreditation for Arab university (Arab universities association)
- Acting as E- learning coordinator for Engineering School to organize all online material in the pandemic period and enhancing the quality of delivered contents through LMS by conducting workshops and training session. Ensuring the level of quality by making surveys on the Faculty and students' level.
- Developing several quality indicators for E-learning based on system and service quality, content quality, learner perspective and instructor attitude.
- Contributing in institutional effectiveness committee (IE) to maintain the quality assurance on the institutional level and program level by auditing and revise the level of course files, course assessment report and measuring the quality based on the benchmarks referred to MOE.
- Responsible of research activity in the Engineering school as a research representative by organizing research groups , joined research plans , applying for funded projects and participating in IEEE student day and the research day of the university.
- Conducting presentations in academic responsibilities like advising and curriculum development.
- Participating in the preparation of all required documents for applying on CAA accreditation and ABET accreditation for engineering programs and concentrations.
- Participating in community service activity like school visits, organizing works shops and conducting research related to Covid 19 effect on E-learning and assessment quality.

| Workshops |
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| ▪ Regional Benchmarking and Roundtable Discussion for Aspirational Peer Comparison and Self-Assessment Presenters<br>New Teaching Techniques<br>Scientific research ethics<br>Funding academic project |
| **Awards** |
| ▪ The best teaching staff from Electrical Engineering Department,<br>▪ IEEE student day<br>▪ Certified as Academic Program Assessor from Arab Universities Association<br>▪ Excellence in Research from University of Science and Technology of Fujairah |
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