Malik Farag Elmzughi.

UK, 18th Feb.1993.

Mechanical Engineer

Assistant Lecturer.

An independent candidate with plenty of experience academic and gained skills in several programs. A strong link between theorical and practical, hardworking, complex problem solving, holding B. Sc. and M. Sc. Degree from University of Tripoli.

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CAREER OBJECTIVE

Skilled Mechanical Engineer with 7+ years of experience with Designing, Simulations, Thermal power systems, and Renewable energy (Solar energy system). Fiercely competitive in my approach to handle complex situations from a strategic and tactical perspective. Aiming to utilize my strong prioritization skills and analytical ability to achieve the goals of the company. When showing an idea, I have the ability to clearly persuade clients and customer.

RESEARCH INTERESTS

Heat Transfer, Thermodynamics, Fluid Mechanics, Numerical Methods, Wind Energy, Computational Fluid Dynamic (CFD), Gas Dynamic, Thermal Energy Conversion, Renewable Energy, Simulations and Energy Saving.

EDUCATOIN

(2015- 2017) University of Tripoli *Master degree* in Mechanical engineering, *(GPA3.89)*.

(2010- 2014) University of Tripoli First class honor *Bachelor degree* in Mechanical engineering, *(GPA3.91)*.

PUBLICATIONS

Academic Articles (Advanced Exergoeconomic and Exergy Cost Sensitivity Analyses of Steam Power Plants), Authors (Malik F. Elmzughi, Elham M. Radwan, Mawadda A. Bahoor, Elhadi I. Dekam), International Journal of Scientific Engineering and Applied Science (IJSEAS) – Volume-6, Issue-8, August 2020.

Academic Articles (Part Load 2nd Law Analyses of 3-Pressure Stage Turbines with 6 heaters, 350 MW Power Plants), Authors (Malik F. Elmzughi, Elham M. Radwan, Mawadda A. Bahoor, Elhadi I. Dekam), Journal of Research in Mechanical Engineering (Quest Journal) – Volume-6, Issue-1, November 2020.

Academic Articles (Sensitivity and Parametric Investigation of Optimum Thermal Insulation Thickness for External Walls), Authors (Malik.F. Elmzughi, Samah.K. Alghoul, Luaye.M. Sharawy), Journal of Research in Mechanical Engineering (Quest Journal) – Volume-6, Issue-1, November 2020.

Academic Articles (Exergoeconomic and Optimization Analyses of Steam Power Plants Based on the Specific Exergy Costing Approach), Authors(Malik F.Elmzughi, Elham M.Radwan, Mawadda A.Bahoor, Elhadi I. Dekam), i-manager's Journal on Future Engineering & Technology, Vol. 16 No. 2 November 2020 - January 2021

Academic Articles (A Parametric Study with Exergy Cost Sensitivity Analysis and Life-Cycle Assessment for a Cogeneration Steam Power Cycle.), Authors (Malik F.Elmzughi, Elham M.Radwan, Mawadda A.Bahoor, Elhadi I. Dekam), i-manager's Journal on Power Systems Engineering, Vol. 8 No. 4 November 2020 - January 2021

Academic Articles (Optimizing Thermal Insulation of External Building Walls in Different Climate Zones in Libya), Authors (Malik.F. Elmzughi, Samah.K. Alghoul, Mohammed.M. Mashena), Journal of Research in Mechanical Engineering (Elsevier journals) – Volume-6, Issue-1, November 2020.

Academic Articles (Optimization and Energy Performance of 400MW Steam Power Plant Based On

MINI-REFPROP Software Packages), Authors (Malik.F. Elmzughi, Abdulhafed.M. Mjani,Saji S. Lagha, Mohammed A. Umbarek), Journal of Research in Mechanical Engineering (Elsevier journals) – Volume-11, Issue-4, October 2021.

TEACHING EXPERINCE

(2017-Present) A Faculty at Department of Mechanical and Industrial Engineering, Tripoli University, where I teach college-level courses like (Fluid Mechanics, Thermodynamics, Numerical Analysis).

(2014-2015) Demonstrator, Department of Mechanical and Industrial Engineering, Faculty of Engineering, Tripoli University. My responsibilities include teaching under graduates, tutorials, grading exams, homework papers, and holding office hours to assist students in the completion of assignments. I performed these duties for the following classes: Fluid Mechanics, Heat Transfer, Thermodynamics, and Descriptive Geometry classes.

WORK EXPERINCE

I gain lots of knowledge when giving courses and tutorials to students. Additionally, I supervise graduate-projects that include Thermal Systems such as steam power plant and thermal fluids.

Teaching courses (Thermodynamics, Fluid Mechanics, Heat Transfer, Numerical Methods, Incompressible Flow machines, Wind Energy and Gas Dynamics).

Project Supervision (2017-present): I supervise graduate-projects that include:

- CFD study on aerodynamic effects of add-on devices on an Audi TT vehicle.
- Solar Energy to drive a half effect absorption cooling system.
- Study the effect of using nanofluid (water and nano size metal particles) on the Thermal Efficiency of Flat Plate Solar Collector.
- A mathematical model for the selection of an economical pipe size in Abu-Attofel Field.
- Fluid selection for a low-temperature Solar Organic Rankine Cycle.
- Advanced Exergoeconomic and Exergy Cost Sensitivity Analyses of 350 MW Steam Power Plants.
- A mathematical model for the selection of an economical pipe size of Gas Supply from Mellitah to Zuwarah.
- Optimum Insulation Thickness for Building Exterior Walls in Tripoli using Sensitivity Analysis.
- Improving Energy Performance of Residential Building Based On Photovoltaic Information Model
- Optimization and Exergoeconomic Analysis of steam generation solar power plant
- Parametric Investigation and Performance Simulation of Exchanger Based on ANSYS
- Exergoeconomic Analysis and Parametric Investigation of a gas turbine power plant
- Dynamic heat-transfer characteristics of building external walls and optimization of insulation thickness.
- Parametric simulation study for Insulations Wall and Photovoltaic Model for Residential Building
- Parametric simulation study for green roof and Photovoltaic Model for Residential Building
- Exergoeconomic and Sensitivity Analyses of a gas turbine power plant
- Thermodynamic and Thermoeconomic operation optimization of 400MW Steam power plant.

2019-2020) Solar Division Manager with Alraied Group: Installation and design of solar energy systems and supervision of several locations and differentiation between technical and commercial offers and also I have supervision of more than 130kW solar system.

2020-Present) Manager of Renewable Energy Department in Global Electricity Service Company GESCO: Installation and Design of an Off Grid Photovoltaic PV Solar Powered System and supervision of several locations and differentiation between technical and commercial offers and also I am Certified Trainer in Design of an Off Grid Photovoltaic PV solar system.

Academic activities *A coordinator for the study and examinations in the department.*

Software Packages I have a very well experience with using various software's that include:

ANSYS HYSIS

EES MATLAB

WATERCAD EPANET

Energy Plus TeXworks,

Mini-REFPROP, AutoCAD, Microsoft Excel, PowerPoint, Microsoft Word, Microsoft Visio drawing, Mendeley, and Outlook.

Practical Experience

1- Coordinator and examination of the Faculty of Engineering Department of Mechanical and Industrial Engineering

2- Member of Quality and Evaluation Committee, Faculty of Engineering, Mechanical and Industrial Engineering Department

Adequate experience in dealing with many companies:

- ✓ Mellitah Oil Services Company
- ✓ Waha Oil Company
- ✓ Zueitina Oil Company
- ✓ Berga Marketing Oil Company
- ✓ Arabian Gulf Oil Co (AGOCO)
- ✓ Sirte Oil Company (SOC).
- ✓ Harouge Oil Operations
- ✓ Al Ahlia Cement Co. and its subsidiaries.
- ✓ General Electricity Company of Libya (GECOL).
- ✓ Libyan Iron and Steel Company (LISCO).
- ✓ Libyan Telecom and Technology Company service center
- ✓ Tripoli Security Directorate
- ✓ Libya Telecom and Technology Company
- ✓ Almadar Aljadid

3- Certificate of Appreciation as the Best Faculty Member, Faculty of Engineering, Mechanical and Industrial Engineering Department

4- Certificate of submission of international scientific journals:

- ✓ Journal of Research in Mechanical Engineering (Quest Journal)
- ✓ International Journal of Scientific Engineering and Applied Science (IJSEAS)
- ✓ i-manager's Journal on Future Engineering & Technology
- ✓ Journal of Research in Mechanical Engineering (Elsevier journals)

5- Solar Division Manager with ALRaied group

GENERAL SKILLS

Public speaking, Keywords optimization, Critical thinking, Verbal and written communication, Project management.

SOFT SKILLS

- Adaptability
- Collaboration
- Strong Work Ethic
- Problem Solving
- Team Leadership
- Communication.
- Interpersonal.
- Critical reasoning.
- Creativity.
- Innovation.
- Enthusiasm
- Attention to Detail
- Resilience

LANGUAGES

Arabic: Mother Language,

English: Limited working proficiency.

Japanese: Beginner

INTEREST

Typography, Chess, Sustainability.