



Mohammad Abdulaziz Joma'h AL-Tarawneh, Ph.D.

Applied Science University Street
Shafa Badran
Amman, Jordan
mtar413@yahoo.com
mohammad.tarawneh@hu.edu.jo
Tel: 962-6-5234758 (home)
962-799123625 (Mobile)

PERSONAL DETAILS

Place & date of birth: AL-Karak/ Husainieh, 1963
Marital status: Married
Nationality: Jordanian
Health: Excellent

EDUCATION

- **Ph.D. Mechanical Engineering**, Thermal Sciences, University of Jordan, Jordan. 2008.
Dissertation Title: Characteristic study of CO₂ during condensation and evaporation processes in porous media wh used as refrigerant.

- **M.Sc. Mechanical Engineering**, Thermal Sciences, University of Jordan. 2004.
Thesis Title: Performance study of window type air conditioning unit with super heating and sub cooling that uses R407c as an alternative refrigerant.

- **B.Sc. Mechanical Engineering**, Thermal power, Yarmouk University. 1987.
B.Sc. Project Title: Performance of a half circular cylindrical solar concentrator.

EMPLOYMENT:

A. ACADEMIC EMPLOYMENT

Chair of Mechanical Engineering Department The Hashemite University, Engineering College
,1/9-2016-Now

Assistant Dean of the Faculty of Engineering for Science Engineering Support, The Hashemite University, Engineering College,1/9-2014-1/9/2016

Assistant Dean of the Faculty of Engineering for Industrial Affairs, The Hashemite University, Engineering College,1/9-2013-1/9/2014

**Chair of Mechanical Engineering Departement The Hashemite University, Engineering College
.29/5-2013-1/9/2013**

Member of Teaching Staff (Associate Professor), The Hashemite University, Engineering College, Mechanical Engineering Department.9/2010- Now

B. TECHNICAL EMPLOYMENT

Manager of Maintenance Group, Jordan Armed Forces. 12/2008 – 8/2009

In charge of all the technical work relating to the maintenance services, manufacturing and rebuild of armored and heavy and small vehicles in Jordan armed forces as a leader of group consists of about 900 employees.

Chief of Mechanical, Electrical and Quality Control Systems Branch, Royal Maintenance Corps. 11/1992-12/2008

In charge of all the technical work relating to the maintenance services, manufacturing and rebuilding of all systems related to mechanical and electrical equipments such as.

1. Steam generation and steam boilers
2. heating ventilating systems
3. ventilating systems
4. Air conditioning systems
5. refrigeration systems and refrigeration rooms
6. Heating systems of big industrial buildings
7. Dynamometers and power test systems
8. Milling and cutting machines with CNC systems
9. Heavy duty central and portable air compressors
10. Large load cranes (50 tons and more)and lifting systems
11. Cooling Towers and all related systems
12. Heavy duty mechanical and hydraulic pumps
13. Drinking water treatment stations and all related mechanical and electrical systems
14. Waste water treatment stations and all related mechanical and electrical systems

Industrial water treatment stations and all related mechanical and e electrical systems

Chief of Machine shop, Royal Maintenance Corps. 4/1987-11/1992

I was in charge of all the technical work relating to the inspection and corrective and preventive and corrective maintenance and rebuild of heavy and small vehicles and machines and electrical generators and cranes

OTHERS

- Member of Prince Abdullah Ben Al Hussein military College Board of Trustees from 2007 to 2009.
- I presented many lectures in (Value Engineering) and Total quality management and the continual improvement during my service in Jordan armed forces.
- Directing & checking shutdown maintenance plan / work.
- Implementing quality control standards in maintenance work
- Planning and establishing maintenance work schedules, priorities, assignments, and process sequences by employing "Computerized Maintenance Management systems (CMMS)".

COURSES

- Six sigma: The University of Jordan (August 2007).
- Programmable Logic Controllers (PLC): The University of Jordan (September 2006).
- Materials Management and Inventory Control: The University of Jordan (July 2006).
- Water Treatment Systems: Huber Company/Germany (May 2005).
- Fire Alarm Detection Systems: The Engineers Training Center (September 2007).
- MEUI Electronic Engines, Power Wizard Control Panel and Perkins Engines for Diesel Electrical Generators: United Arab Emirates (September 2007).
- Fluid Power Control Systems: Jordan University of Science and Technology (May 2004).
- Visual Basic: Computer Training Center/Jordan Armed Forces (November 2004).
- Total Quality Management: Jordan Society of Quality (October 2003).
- Advanced Course of Mechanical, Electrical and Electronic Maintenance of Vehicles and Engines: Jordan Armed Forces (Sep.2003).
- French Language: French Cultural Center (Nov.1998).
- English Language: Jordan Armed Forces (August 1992).
- Comprehensive Computer skills: California Computer Academy (December 1997).
- Computer skills: Jordan Armed Forces (March 1998).
- Basics of Mechanical, Electrical and Electronic Maintenance of Vehicles and Engines: Jordan Armed Forces (March 1996).

PUBLICATIONS AND SCIENTIFIC PRESENTATIONS:

1. Alshqirate, A. Tarawneh, M. and Hammad, M. *"Cooling of superheated refrigerants flowing inside tubes filled with porous media, study of heat transfer and pressure drop, CO₂ case study"* *Journal of Energy And Power Engineering volume 5 (2011) 802-810"*.

2. Alshqirate, A. Hammad, M and Tarawneh, M. "*Cooling of super heated refrigerants flowing inside mini and micro tubes, study of heat and pressure drop, CO₂ case study*" *Jordan Journal of Mechanical and Industrial Engineering(JJMIE) Volume 6, Number 2 (2012)*.
3. Tarawneh, M. Alshqirate, A. and Hammad, M. "*Heating of subcooled refrigerants flowing inside tubes filled with porous media, study of heat transfer, CO₂ case study*" *International conference on energy & water and environment. Amman-Jordan, 2011*".
4. Alshqirate, A. Tarawneh, M. and Hammad, M. "*Dimensional analysis and empirical correlations for heat transfer and pressure drop in condensation and evaporation processes of carbon dioxide (CO₂) flow inside micro pipes. Case Study of Carbon Dioxide (CO₂)*" *Journal of the Brazilian Society of Mechanical Sciences and Engineering (JBMSSE), Volume 19, No. 1 (2012) 89-96 .January (2012)*.
5. Hammad, M. Tarawneh, M. and Alshqirate, A. "*Simplified Correlation Equations of Heat Transfer Coefficient during Phase Change Flow inside Tubes filled with porous media. CO₂ case study.*" *Has been presented at the IMECE2012: International Mechanical Engineering Congress and Exposition that held in USA, HOUSTON, TEXAS during November 9-15, 2012.*
6. Alshqirate, A. Tarawneh, M. and Hammad, M. "*Study of heat transfer for superheated refrigerants flow inside micro pipe heat exchanger. Australian Journal of Basic and Applied Sciences, 6(10): 462-468, 2012*
7. Ali Jawarneh, M. Tarawneh, Amer ababneh, Hitham Tlilan "*Solar Energy Availability on Horizontal and Tilted Surfaces in Zarqa Governorate, Jordan*" *The International Review of Mechanical Engineering (IREME). Vol (6), No.4 , 901-917, May (2012)*.
8. Mohammad Tarawneh, Abed Alrzaq Alshqirate, Khaleel Khasawneh, and Mahmoud Hammad, "*Experimental Study on the Effect of Porous Medium on Performance of a Single Tube Heat Exchanger A CO₂ Case Study: Heat Transfer—Asian Research, 42 (6), 2013*
9. Mohammad Tarawneh, Abed Alrzaq alshqirate and khaleel khasawneh, "*Experimental Analysis and CFD Simulation of Pressure Drop of Carbon Dioxide in Horizontal Micro Tube Heat Exchangers. International Journal of Natural and Engineering Sciences 8 (2): 15-20, 2014*

10. M. Tarawneh, A.S. Alshiqirate, and A.M. Jawarneh, *Effect of Darcy, Reynolds, and Prandtl Numbers on the Performance of Two-Phase Flow Heat Exchanger Filled with Porous Media; Heat Transfer—Asian Research*, 43 (8), 2014.
11. Mahmoud Ahmad Hammad , , Mohammad A. Tarawneh , and Abdel-Razaq Al-Shqirat. *Convection Heat Transfer in Porous Media with Evaporation and Condensation Processes; Transaction on control and Mechanical Systems*, vol. 2, no. 5, pp. 225-231, may, 2013.
12. M. Tarawneh, *Two Phase Frictional Pressure Drop of Carbon Dioxide in Horizontal Micro Tubes; International Journal of Mechanical, Aerospace, Industrial and Mechatronics Engineering Vol:7 No:5*, 2013.
13. Abdelrazag S .Alshqirate, Mahmoud A. Hammad, and M.Tarawneh, *Surface Tension Effect on Heat Transfer Coefficient of Condensed Gases Flow Inside Micro-pipe Heat Exchanger. Journal of Engineering and Applied Sciences. Vol(8), Issue(4), pages(120-126),2013*
14. Abdelrazag S .Alshqirate, Mahmoud A. Hammad, and M.Tarawneh, *Parameters Affecting Heat Transfer During Condensation Inside Micro-pipes: Surface Tension Effect. Paper II. Experimental Heat Transfer: A Journal of Thermal Energy Generation, Transport, Storage, and Conversion. Vol (28), Issue (5) , pages (405-416),2015.*
15. M. Tarawneh , “Generalized Correlation for the condensation and evaporation heat transfer coefficients of Propane (R290), Butane (R600), R134a and R407c in porous horizontal tubes: Experimental investigation” has been accepted for presentation in ICMMME 2015 : International Conference on Mechanical, Materials and Mechatronics Engineering that was held in Madrid, Spain during March, 26-27, 2015.

AWARDS:

1) *Two times Award of Publishing in high impact factor Journals, the Hashemite University, 2011*

2) *Two times Award of Publishing in high impact factor Journals, Jordan University, 2011*

RESEARCH SKILLS:

- Professional research skills such as: 1) Idea initiating, 2) Problem solving, 3) Project conductance and management, and 4) Statistical Design of experiments and data analysis.
- Developing, refining and implementing new analytical methods and technologies.
- Team contributing roles and multiple projects oriented.
- Ability to interact effectively across different disciplines.
- Presenting work in formal environments to diverse audiences.
- Result oriented: focusing effort on achieving quality results.

RESEARCH INTERESTS

- Heat transfer in porous media (single and two phase flow) in Air Conditioning Field.
- Heat transfer in micro-channels and pipes (single and two phase flow) in Air Conditioning Field.
- Solar Energy and renewable energy
- Air conditioning and Refrigeration(Alternative Refrigerants)
- Linear and nonlinear vibrations (chaotic motion).
- Fluid mechanics and Computational fluid dynamics (CFD).
- Theory of elasticity and plasticity.

SUBJECTS (Can be taught):

Porous media, flow in porous media, Fluid mechanics ,Heat transfer, Solar Energy, Energy conversion, Theory of elasticity and plasticity ,composite materials, stress analysis, Thermodynamics, Refrigeration and air conditioning (AC), Engineering drawings and Engineering workshops, Linear and non linear vibrations and chaotic motions ,Automobile mechanics, Internal combustion engines, physical metallurgy, all other mechanical engineering courses (dynamics, static, strength of materials, vibrations, Advanced Math, Single and Two phase flow, Theory of machines, Numerical analysis and thermo-fluids

COMPUTER SKILLS:

- Operation systems.
- Microsoft word, power point, excels.
- FORTRAN, good knowledge of Labview and Mat lab.
- Image visualization and analysis.
- Scientific analysis and graphics programs.
- Visual Basic
- Computational Fluid Dynamic(CFD)
- Programmable Logic Controllers (PLC)
- Internet Applications

LANGUAGES

Language	spoken	written
Arabic	Excellent	Excellent
English	Very Good	Excellent
French	Fair	Fair

PROFESSIONAL SOCIETIES:

Member of Jordan Engineering Association since 1987

Member of Jordan renewable energy society since 2009

Member of National Community of Refrigeration (NCR) since 2011

Member of International Institute of Refrigeration (IIR) since 2011

MEMBERSHIPS

1. Member ship in the organizing committee of the *4th JIIRAC 2012: Jordanian International conference on Refrigeration and Air Conditioning that held in Amman, Jordan during September 10-12, 2012.*
2. Member ship in the organizing committee of the *2nd International conference on energy & water and environment. That held in the Hashemite University, Zarqa, April 2013''.*
3. Member of the editorial board of (IJASET), *The International Journal of Advanced Science and Engineering Technology*
4. Member ship in the organizing committee of the *5th JIICRAC 2015: Jordanian International conference on Refrigeration and Air Conditioning that will be held in Aqaba, Jordan during January 12-14, 2015.*
5. Member ship in the organizing committee of the (5 MW) Solar Energy Project at The Hashemite University.

REFERENCES:

Available upon request

DOCUMENTS:

All relevant certificates and documents are ready upon request