

Curriculum Vitae

Mamdoh Abd Alaziz Busoul
Department, Faculty of Engineering Technology, Al-Balqa Applied University

Professor at Mechanical Engineering
Department, Faculty of Engineering Technology, Al-Balqa Applied University



Data & place of birth

10/03/1962, Al Barha (Irbid)

Material Status

Married+ 4 children

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Department of Mechanical Engineering

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Education:

1988-1991 PhD in Mechanical Engineering / Thermal Power
Technical University of Czestochowa Poland

1981-1988 B.Sc (1988) in Mechanical Engineering / Applied
Technical University of Czestochowa Poland.

Research Interests

- Renewable and Thermal Energy
- Fluidized Bed Technology
- Heat Transfer

Subjects that had been lectured during Academic Career:

- Materials Science and Metallurgy
- Metals heat treatment
- Static's
- Strength of materials
- Dynamics

- Engineering workshops
- Manufacturing Processes
- Manufacturing Processes Lab.
- Engineering Workshop
- Thermodynamics
- AutoCAD
- Engineering Drawing
- Mechanical Drawing
- Heat Transfer
- Heat Transfer Lab.
- Energy Conversion

Academic and Administrative Duties

1988-1991	Teaching Assistant in Czestochowa Technical University (Poland)
1993-2013	lecturer in Faculty of Engineering Technology
1996-1998	Assistant Dean For Scientific Research
2004-2005	Assistant Dean for Associate Degree
2010-2012	Head of Mechanical Engineering Department in Faculty of Engineering Technology, AL-Balqa Applied University
2013/2014	Sabbatical Leave at Philadelphia University Department of Mechanical Engineering
2014- 2015	lecturer in Faculty of Engineering Technology
2015 - 2016	Sabbatical Leave at Philadelphia University Department of Mechanical Engineering
2016/2017	Head of Mechanical Engineering Department in Faculty of Engineering Technology, AL-Balqa Applied University
2017 - 2018	Sabbatical Leave at Philadelphia University Department of Mechanical Engineering
2018-2020	lecturer in Faculty of Engineering Technology

Industrial Experience

1992-1993 Assistant Manager metal works factory

Training Course:

September, 1999. Advanced Welding Technology. In Faculty of Engineering Technology. January 2010. New Welding Technology for Arab Federation for Technical Education.

Invited lecture :

Invited Lecture on Heat – Treating of Steel (hardening of Steel), Jordan Engineers Association, November (2002)

Professional Experience

Reviewer for Heat and Mass Transfer Journal (Springer), Reviewer for Energy and Buildings Journal (Elsevier), Fifth Jordan International Chemical Engineering Conference (JICEC), 2005, Participating in the third and fourth cycles of the national program Faculty For Factory 2005, 2006.

Professional Activities

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- A lot of department committees for academic and technical purposes.
 - Academic appointment and upgrading committee.
 - Student behavior committee.
 - Committee of academic plan for upgrading Amman College from Applied Engineering to Engineering Technology program.
 - Technical Apparatus Committee for Amman College for Engineering Technology.
 - New staff appointment committee at AL-Balqa Applied University.
 - Library Committee.
 - Scientific research committee.
 - Committee of academic plan for upgrading Welding Technology program.
 - Member of the Organization Committee of Oil Shale international conference Nov. 2006
 - Member of the Administration and Public Relation Committee of Oil Shale international conference Nov. 2006

Publications

Journal Publications

- 1) **Z Bis, M Busoul, W Gajewski, Heat transfer in circulating fluidized bed,** Gospodarka Paliwami Energy no 3 (1991) (in Polish)
- 2) **M Busoul,** The Characteristic Fluidization Velocities for Polydispersion fluidized bed, Arab University Journal of Engineering Science, Baghdad vol 1.4 no 1 (pp 73-86) (1997) (in Arabic)
- 3) **M AL –Busoul,** Experimental study for heat transfer in fluidized bed , Tashreen University Journal of Scientific studies and Research , Engineering science series, vol 20 no. (6-7)(pp271-282) (1998)
(in Arabic)
- 4) **M AL– Busoul,** Local heat transfer coefficient in fluidized bed, Diarist Engineering Sciences , University of Jordan vol 26.(pp147-154) 1999
(In Arabic)
- 5) **Z- AL-Qdah, M AL –Hassan and M –AL-Busoul,** Hydrodynamic and heat transfer characteristics of an Air Fluidized bed Utilizing a Transverse Magnetic field, Jour. Chin. Inst. Chem. Eng. vol. 31 no 2.
(2000)(pp211-218)
- 6) **M. AL –Busoul,** M Abu Zaid , Prediction of heat Transfer Coefficient between Immersed Surfaces and Fluidized bed, Int. comm. Heat Mass Transfer vol 27 no.4 (pp546-558) (2000). USA
- 7) **Z- AL-Qdah, M AL –Busoul, M- AL –Hassan,** Hydro – Thermal behavior of magnetically Stabilized Fluidized bed . powder Technology 115 (pp58-67)(2001) USA
- 8) **Z-AL- Qdah, M AL-Busoul,** The effect of Magnetic field on local heat transfer coefficient, in fluidized beds with immersed heating surface, Journal of Heat Transfer vol. 133/157. Copy right 2001 by ASME USA.
- 9) **M AL-Busoul,** Bed – to- Surface heat transfer in a Circulating fluidized bed, Heat and Mass Transfer, Germany 38 (pp295-299)(2002)
- 10) **M AL- Busoul** and S.K. Abu En, Local heat transfer Coefficients around a horizontal heated tube immersed in gas fluidized bed, Heat and Mass Transfer Germany 39(pp355-358) (2003)
- 11) **M AL-Busoul, Z Bis and W Gajewski,** Heat Transfer between a vertical wall and loose solid particles along its side, Mute University Journal, Engineering Science series vol. 20 no 1. (pp9-21) 2005

- 12) **M Al- Busoul**, Z – Al – Qodah, A Khreawish, Hydrodynamics and heat transfer characteristics of G – S magnetically stabilized beds consisting of admixture of shale oil and particles, Heat and Mass Transfer,(pp1099-1106) (2008) 44 1099-1106. DOI 10.1007/s00231-007-0352-6
- 13) Z- AL – Qodah, M Al- Busoul, A Khreawish, Hydrothermal Behavior of G-S Magnetically Stabilized Beds Consisting of Magnetic and Non-Magnetic Admixtures. International Journal of Chemical and Biological Engineering 1:1 2008.(pp595-600)
- 14) A.S. Khraiwish, M. Alshamasin, R. Kassasbeh, Y. Al shiboul, Z. Al-Qudah and **M. Al-Busoul**,The Effect of the Harmonics, the Fault Location and the Fault Resistance on the Performance of the Impedance-Type Distance Relay, American Journal of Applied Sciences 6 (4): 788-796, 2009.
- 15) Suleiman Abu-Ein, Sayel M. Fayyad Waleed Momani & **Mamdoh Al-Busoul**, Performance analysis of solar powered absorption refrigeration system, Heat and Mass Transfer vol,46 (2) : 137-145.2009
- 16) M. AL – Hassan, Mohammed Q.AL – Odat, **M AL- Busoul**.
An Experimental Investigation of Forced Convection heat transfer from a Coiled heat exchanger embedded in a packed bed. Experimental heat Transfer, vol.25 no 4, pp 363-376(14).
- 17) **Mamdoh Al-Busoul**, Aiman Al-Alawin, Hamza Al-Tahaine. Influence of Air-Fuel Ratio and Particle Size on Fluidized Bed Combustion of the El-Lajun Oil Shale, 3), ISSN 0976 –6340(Print), ISSN 0976 – 6359(Online) Volume 4, Issue 5 2013, PP 130 – 138.
- 18) **M Al- Busoul**, H. A. Al-Tahaine, The Effect of Flat Heater Inclination on the Heat Transfer Coefficient in Gas-Fluidized Beds, International Journal of Energy Engineering 2013, 3(5):(pp 272-277), D10.5923/j.ijee.20130305.06
- 19) H.A. AL-Tahaine, **M Al Busoul**, Numerical Investigation of Salt Gradient Solar Pond in Jordan, Journal of Energy Technologies and Policy ISSN 2224-3232 (Paper) ISSN 2225-0573 (Online Vol.3, No.10, (pp45- 57)2013.
- 20) **M. A. Al – Busoul**, Experimental Study of Wall-To-Bed Heat Transfer In A Fluidized Bed Reactor, International Journal on Recent Researches In Science, Engineering and Technology, Volume 2, Issue 10,(pp33-42)2014.
- 21) **M Al -Busoul**, Muataz Elayyan, Utilization of Geothermal Energy in Poultry Farming, Journal of Energy Technologies and Policy, ISSN 2224-3232 (Paper) ISSN 2225-0573 (Online), Vol.4, No.10, (pp25-30) 2014.
- 22) Muataz Elayyan, **Mamdoh Al-Busoul**, Energy Analysis of A Solar-Cooled House In Amman, International Journal on Recent Researches In Science, Engineering and Technology, Volume 4 Issue 2, Feb 2016
- 23) Z. Al Qodah,M. Al Shannag, **M Al Busoul**, I.Penchev,Wasim Orfali. Immobilized enzymes bioreactors utilizing a magnetic field: A review ,Biochemical Engineering Journal 121(94-106)2017.
- 24) **M. Al-Busoul** ,Design of fruits solar energy dryer under climatic conditions in Jordan, Journal of power and energy engineeringVol.5 N0.2 (123-137) 2017.

- 25) Z. Al Qodah, M. Al Shannag, **M Al Busoul**, I. Penchev, Wasim Orfali, **On the performance of Immobilized cells bioreactors utilizing a magnetic field: A review**. Accepted in Reviews in Chemical Engineering 21/2/2017
- 26) Munzer.S.Y. Ebaida, □, Ayoup.M. Ghrairb, **Mamdoh Al-Busoul**, Experimental investigation of cooling photovoltaic (PV) panels using (TiO₂) nanofluid in water -polyethylene glycol mixture and (Al₂O₃) nanofluid in water- cetyltrimethylammonium bromide mixture, Energy Conversion and Management, 155(2018) 324- 343. 2018
- 27) **Mamdoh Al- Busoul**. Zero energy building for a typical home in Amman, International Journal on Recent Researches in Science, Engineering & Technology, 6,10, 1-15(2018.)
- 28) **Munzer S. Y. Ebaid, | Mamdoh Al- Busoul, Ayoup M. Ghrair**. Performance enhancement of photovoltaic panels using two types of nanofluids. HEAT TRANSFER (WILEY).APR. 2020.

- **Proceedings and Conferences**

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- 1) Z Bis, **M AL-Busoul**, W Gajewski, W Nowak, Local heat transfer between a bed and a surface. Proc of the 4th inter. Conf. on Pneumatic Conveying. Budapest, (1990)
 - 2) Z Bis, **M AL-Busoul**, W Gajewski, Heat transfer in Circulating Fluidized bed 1st. Baltic heat transfer conf. Gotoborg (1991)
 - 3) W Nowak, N Arai, M, Hasatani, Z Bis and **M Busoul**, Stochastic model of heat transfer in CFB, Proceedings of 4th SCEJ Symposium on CFB. Tokyo (Japan) , 1991
 - 4) **M AL-Busoul**, Estimation of heat transfer Coefficient distribution in Circulating fluidized bed. The 1st Jordanian Mech. Eng. Conf Jordan University. (in Arabic) 1995
 - 5) M AL-Busoul, Study for heat transfer coefficient between A fluidized bed and immersed surface in it , the 3rd Jordanian Mech . Eng. And industrial Eng. Conf. 1999
 - 6) Z- AL-Qdah and **MAL-Busoul**, The effect of magnetic field on wall to bed heat transfer coefficient in magneto – air fluidized beds 1st Intr. Conf. on heat transfer, fluid mechanics and thermodynamics Kruger park South Africa ASME sponsorship (2002)
 - 7) **M AL-Busoul**, The effect of heater inclination on the heat transfer coefficient in gas fluidized bed, 18th polish thermodynamics conf. Muszyn- Poland. (2002)
 - 8) Z- Al-Qodah, **M – Al. Busoul**, A Khreawish Hydrodynamics and heat transfer characteristics of G – S magnetically stabilized beds consisting of magnetic and non magnetic admixtures. World Academy of Science, Engineering and technology, Vol. 23 August 2007

- 9) **Mamdoh Al-Busoul**, Yahya Khraisha* Aiman Al-Alawin, Direct Combustion of Oil Shale in a Fluidized Bed Combustor (FBC), The second international chemical engineering conference. University of Jordan, October 2010, 11-13
- 10) **Mamdoh AL-Busoul**, Design of solar Energy Dryer for fruits in Jordan^{1st}
RENEWABLE ENERGY SOURCE RESEARCH AND BUSINESS
CONFERENCE, 22-24/06/2016

11) Munzer S. Y. Ebaid, **Mamdouh Al-Bsoul**, Ayoup M. Ghrair, Effect of Magnetic Field on Heat Transfer Enhancement Using Fe₃O₄ Nanofluids In A Heated Pipe, Conference: 16th IEEE International Multi-Conference on Systems, Signals and Devices (SSD'19) March 21-24, Istanbul, Turkey.

Books

1- Book – Locally Published

Fundamentals of Engineering Drawing ,
Dar AL Safa Publishers Amman, 1997,
S. Tawfig, A- Kateeb , M. AL-Busoul

Society Membership

1992- Till now Jordan Engineering Association