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EDUCATION:

Ph. D. in Mechanical Engineering, The University of Jordan, Amman-Jordan, 2004-2007. (Cum. Avg. **3.85/4**).
- Ph. D. Dissertation Title: "Modeling and Testing of a Fuel Cell Utilizing Local Sand for Hydrogen Storage".
M. Sc. in Mechanical Engineering, The University of Jordan, Amman-Jordan, 1997 (Cum. Avg. **3.53/4**).
- M. Sc. Thesis Title: "Computational Aspects of Compressible Interacting Boundary Layers".

B. Sc. in Mechanical Engineering, Yarmouk University, Irbid-Jordan, 1985.
(University Honor - Cum. Avg. : **85.1%**)

Under- graduate project: "Estimating Thermophysical Properties of Combustion Gases of the Gas Turbine Engine using Peng Robinson Equation of State".

Jordanian General Secondary Education Certificate Examination for 1981/ Scientific Stream, and a grand total average of **(95%).**

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TOT / Trainer of Trainers certificate, Canada Global Centre, Feb. 2016.

IMAS Instructional Design, Canada Global Centre, Feb. 2016.

ILO/Diploma: Attended a comprehensive training course (Diploma) on **monitoring, evaluation and management** of technical cooperation programs, organized by **ILO**/International Labour Organisation, held in Amman, May, 2002, Supervised by **Italian** government.

WORK EXPERIENCE:

Professor *at The University of Jordan– School of Engineering/Mechanical Engineering Department since April, 2019; Associate Professor at The University of Jordan–Faculty of Engineering and Technology-Mechanical Engineering Department since April, 2014;* ***Chairman*** *of mechanical engineering department for the academic year 2018/2019, and as Assistant Professor since 2007, during which I instructed* ***29*** *courses*. Al Asfar has around **40-years** *of work experience in academic, international, private and public institutions: 18 years in Academic, 12 years in economic business and government as Director of studies, research, legal and information services department in Jordan investment Board, 2 years as National project director of UNDP project aiming at enhancing investment environment in Jordan, 8 years in Industry in private sector. Al Asfar's research interests falls in renewable energy, alternative fuels, fuel cells, combustion modeling and simulation of solid alternative fuel and biomass* and hybrid systems *in addition to his published research in international journals and conferences such as energy conversion and management, energy sources, renewable energy journals, international combustion symposium and World Renewable Energy Conferences. Al Asfar is also a Management, Investment and Technical Consultant hired by World Bank in 2007 through TEAM international-Beirut to enhance investment climate in Sanaa and Aden-Yemen. Al Asfar works also in performing feasibility studies and conducts on-site studies to improve management performance of several local and regional businesses. Al Asfar has initialled several BITs "Bilateral investment agreements-treaties" on behalf of Jordan government between Jordan and Slovakia, India, Algeria, Thailand and UAE.*

Publihed Work:

1) Omar K. Omar, Amer Al Jaradat, **Jamil Al Asfar**, Loiy Al-Ghussain, Hani Alkhatib, "**Techno-Economic and Thermodynamic Analysis of Biomass Combustion for**

Sustainable Power Generation", Results in Engineering Journal**, vol. 28, Dec. 2025 (107193).** DOI: https://doi.org/10.1016/j.rineng.2025.107193

2) Al Asfar J., Alrbai M**. Performance Analysis of a Hybrid PV–PTC System Integrated with a Biomass-Fired Steam Power Plant.** Energy Exploration and Exploitation**. July. 2025, pp: 1-8.** https://doi.org/10.1177/01445987251360282

3) Mohammad Dadou, M. Alrbai, Emad Tanbour & **Jamil Al Asfar, "Performance Assessment of a Novel Mechanism Design of Spark-ignition Internal Combustion Engine",** Energy Sources, Part A: Recovery, Utilization and Environmental Effects, **2025**, vol. 47, issue 2, pp: 1889076. DOI: https://doi.org/10.1080/15567036.2021.1889076

4) M. Hamdan, O. Nsour**, J. Al Asfar*,** A. Qaisia, O. Al-Oran, and N. Abu Shaban**. Experimental Study on Hydrogen Generation Using Solar Energy and Aluminum in Water.** EPPM/ZEC 2024 (Joint 14th International Conference on Engineering, Project, and Production Management (EPPM2024) and 5th Zaytoonah Engineering Conference (ZEC2024). Al-Zaytoonah University of Jordan, Amman, Jordan, **September 18th-19th,** 2024.
MATEC Web of Conferences, vol. 411 (2025) 01003.
https://doi.org/10.1051/matecconf/202541101003

5) M. Hamdan, **J. Al Asfar*,** E. Abdelhafez, B. Alkam, M. Khalil and M. Abu Hamdeh. **Introducing a Novel Hybrid Solar Dryer for Tomatoes: Design and Performance Evaluation.** EPPM/ZEC 2024 (Joint 14th International Conference on Engineering, Project, and Production Management (EPPM2024) and 5th Zaytoonah Engineering Conference (ZEC2024). Al-Zaytoonah University of Jordan, Amman, Jordan**, September 18th-19th,** 2024**.**
MATEC Web of Conferences, vol. 411 (2025) 01004.
https://doi.org/10.1051/matecconf/202541101004

6a) M. Hamdan, **J. Al Asfar***, E. Abdelhafez, L. Dabbour, M. Ma'Aitah and O. Al-Oran. **Emissions from a Kerosene Heater Equipped with a Catalyst Converter**. EPPM/ZEC 2024 (Joint 14th International Conference on Engineering, Project, and Production Management (EPPM2024) and 5th Zaytoonah Engineering Conference (ZEC2024). Al-Zaytoonah University of Jordan, Amman, Jordan, **September 18th-19th**, **2024**.

6b) J. Al Asfar* and K. Afaneh**. Enhancing The Outdoor Thermal Comfort of The School of Engineering Courtyard of the University of Jordan.** The first international conference on the future of sustainability for the business environment: Practical experience. Al-Balqa Applied University, Salt. Jordan, **May 7th - 9th, 2024.**

7) Al Asfar J., Alrbai M, Qudah N**. Energy analysis of a hybrid parabolic trough collector with a steam power plant in Jordan.** Energy Exploration and Exploitation**. Nov. 2023; Vol. 41 issue 6, pp: 1850–1868** https://doi.org/10.1177/01445987231188152

8) Ghaya Alawadhi, Meera Almehiri, Ahmad Sakhrieh, Ahmad Alshwawra, **Jamil Al Asfar, Cost Analysis of Implementing In-Pipe Hydro Turbine in the United Arab Emirates Water Network**, Sustainability **2023**, 15, 651. https://doi.org/10.3390/su15010651

9) Mohmmad Ahmad Hamdan, Esraa Taha Sublaban, **Jamil Jawdat Al-Asfar,** Mai Abdullah Banisaid**, Wastewater Treatment Using Activated Carbon Produced from Oil Shale.** Journal of Ecological Engineering **2023**, 24(2), 131–139. https://doi.org/10.12911/22998993/156664

10) Yazan Alsalem, Osama Ayadi, **Jamil Al Asfar**, **Techno-economic Assessment of Retrofitting Heating, Ventilation, and Air Conditioning System – Case Study.** Journal of Ecological Engineering **2023**, 24(3), 153–168. https://doi.org/10.12911/22998993/158383

11) Mohammad Hamdan**, Jamil Al Asfar**, Heba Al-Mashaqbeh, **Energy Management in Buildings Using Bio Phase Change Material,** International Journal of Energy for a Clean Environment, 24(3):83–95 (**2023**). **https://doi.org/**10.1615/InterJEnerCleanEnv.2022040746

12) Arwa Sandouqa, Zayed Al-Hamamre, **Jamil Al Asfar, "Structural characteristics of lignin extracted from Jordanian olive cake using different fractionation conditions",** Energy Sources Part A Recovery Utilization and Environmental Effects, ISSN: 1556-7230, Volume 45, issue 2, pp: 3831-3842, **2023**. https://doi.org/10.1080/15567036.2019.1668877

13) Sakhrieh, A., **Al Asfar*, J.** ., Ghandour, A., and Adel, A. **(2022**). **Improving Photovoltaic Systems in Jordan Using TRIZ Principle - Overview and Case Study**. International Journal of Energy Economics and Policy, 12(5), 73–78. https://doi.org/10.32479/ijeep.13304

14) Ahmad Sakhrieh**, Jamil Al Asfar*** and Nour Abu- Shuaib, **An optimized off-grid hybrid system for power generation in rural areas**, International Journal of Power Electronics and Drive Systems (IJPEDS), 2022, vol. 13, issue no. 2, pp: 865-872, ISSN: 2088-8694. DOI: https://doi.org/10.11591/ijpeds.v13.i2.pp865-872

15) Al Asfar*, J., Sakhrieh, A., Nayfeh, W., Al Ghandour, A., **Performance of Solar Modules integrated with Reflector**, International Journal of Power Electronics and Drive Systems (IJPEDS), 2021, vol. 12, issue 3, September 2021, pp: 1845-1852, ISSN: 2088-8694. DOI: https://doi.org/10.11591/ijpeds.v12.i3.pp1845-1852

16) Mohammad Alrbai, Sameer Al-Dahidi, Bashar Qawasmeh **& Jamil Al Asfar, "Combustion characteristics of Biogas fuel using particularly Simplified reaction mechanism for HCCI ignition engines",** 2021, Journal of Energy Engineering, vol. 147, issue 3, June 2021. DOI: https://doi.org/10.1061/(ASCE)EY.1943-7897.0000766.

17) Al Asfar, J., AlShwawra, A., Abu Shaban, N., Alrbai, M., Qawasmeh, B., Sakhrieh, A., Hamdan, M., Odeh, O., "**Thermodynamic Analysis of a Biomass-Fired Lab-Scale Power Plant", Energy**, vol. 194, **2020**, 116843, pp:1-9. https://doi.org/10.1016/j.energy.2019.116843

18) Abu Shaban, N., Nasser, I., **Al Asfar, J.,** Al-Qawabah, S., Olimat, A. (**2020**). **"Thermodynamic and economic analysis of a refrigerator display cabinet equipped with a DC compressor and electronic expansion valve",** International Journal of Heat and Technology, Vol. 38, No. 2, pp. 432-438. **https://doi.org/10.18280/ijht.380219**

19) Jarrar, L., Ayadi, O**., Al Asfar, J. (2020). "Techno-economic Aspects of Electricity Generation from a Farm Based Biogas Plant",** Journal of Sustainable Development of Energy, Water and Environment Systems, 8(3), pp: 476-492. https://hrcak.srce.hr/238738

20) Yahya H. Khraisha, **Jamil J. Asfar**, Ahmad A. Radwan. 'Characterization Of Shale Oil By Spectroscopic And Chromatographic Techniques'. International Journal of Scientific Research and Innovative Technology (IJSRIT), vol. 7. Issue 2, **2020**, pp: 82-96.

21) Ahmad Al-Qaisia**, Jamil Al Asfar**, Nabeel Abu Shaban, Areej Eniezat, " **Experimental Investigation of the Performance of a Vortex Tube with Conical Control Valve**", Jordan Journal of Mechanical and Industrial Engineering (JJMIE), Volume 14, Number 2, **2020**, pp: 195-204.

22) Al Asfar, J., Atieh, A., Al-Mbaideen, R. **"Techno-economic analysis of a microgrid hybrid renewable energy system in Jordan".** Journal Européen des Systèmes Automatisés**,** Vol. 52, No. 4, **2019**, pp. 415-423. https://doi.org/10.18280/jesa.520412

23) Eslam Mutlq, Mohammad Hamdan and **Jamil Al Asfar**, "**Enhancing the Performance of a Roof-Type Solar Still Utilizing Alumina Nanoparticles and Vacuum Pump",** Journal of Ecological Engineering, ISSN 2299- 8993, Volume 20, Issue 4, **2019**, pp: 187–193. DOI: https://doi.org/10.12911/22998993/102966

24) Arwa Sandouqa, Zayed Al-Hamamre, **Jamil Asfar, "Preparation and performance investigation of a lignin-based solid acid catalyst manufactured from olive cake for biodiesel production", Renewable Energy** Journal, elsevier, vol. 132, **2019**, pp: 667-682. https://doi.org/10.1016/j.renene.2018.08.029

25) W. Nsour, T. Taamneh, O. Ayadi and **J. Al Asfar**, **"Design of stand-alone PV-PEMFC Hybrid System under Amman Climate",** Journal of Ecological Engineering, ISSN 2299-8993, **v**olume 20, Issue 9, **2019**, pp: 1–10. https://doi.org/10.12911/22998993/111800

26) Al Asfar, J. J., Hammad, A., Sakhrieh, A. and Hamdan, M. A. "**Combustion Characteristics of Solid Waste Biomass, Oil Shale and Coal",** Energy Sources, Part A: Recovery, Utilization, and Environmental Effects Journal, vol 40, issue 3, **2018**, pp:335-342. Taylor and Francis. http://www.tandfonline.com/doi/ full/10.1080/15567036.2017.1416707

27) Jamil Al Asfar, Shahnaz Alkhalil, Ahmad Sakhrieh, Hazem Al-Domeri, "**2-D Numerical Modeling of Flame Behavior under Electric Field Effect",** International Journal of Heat and Technology**,** vol. 36, issue 3, **2018**, pp: 1101-1106. https://doi.org/10.18280/ijht.360342

28) Jamil Al Asfar, Zayed Hamamre and Rami Owais, "**Simulation of Flameless Combustion of Diesel Oil",** International Journal of Heat and Technology**,** vol. 36, issue 4, **2018**, pp: 1187-1192. https://doi.org/10.18280/ijht.360405

29) Jamil Al Asfar and L. Mazahreh, "**Automatic Domestic Stove Using Olive Cake Fuel",** Int. J. of Thermal and Environmental Engineering, **2018**, vol. 17, issue 1, pp: 67-72. https://doi.org/10.5383/ijtee.17.01.008

30) Ahmad Hammad and **Jamil Al Asfar**, "**Simulation of Olive Cake Combustion in a Fluidized Bed Burner**", International Journal of Mechanical Engineering and Robotic Research (IJMERR) 2278-0149, **2018**, 7(5): 483-488, DOI: 10.18178/ijmerr.7.5.483-488. http://www.ijmerr.com/index.php?m=content&c=index&a=show&catid=162&id=986

31) Osama Ayadi, **Jamil Al Asfar**, Rami Al-Assad, "**Techno-economic assessment of a grid connected photovoltaic system for The University of Jordan", S**ustainable Cities and Society Journal, vol. 39, **2018**, pp: 93–98. https://doi.org/10.1016/j.scs.2018.02.011

32) Mohammad Hamdan, Alaa Shaalan, **Jamil Al Asfar**, "**Solar Window for Hot Domestic Water and Passive Design**", International Journal of Mechanical and Production Engineering (IJMPE), Volume 6, Issue 6, **2018**, pp. 24-27. http://iraj.in/journal/IJMPE/paper_detail.php?paper_id=12514&name=Solar_Window_for_Hot_Domestic_Water_and_Passive_Design

33) Ahmad Atieh, **Jamil Al Asfar**, Nabeel Tawalbeh, Eyas Shaqour, Ibrahim Alsalhi, Othman Istaiteh, "**Smart Cooling Controlled System Exploiting Photovoltaic Renewable Energy Systems",** Journal of Ecological Engineering, ISSN 2299- 8993, Volume 19, Issue 2, **2018**, pp: 39-44. https://doi.org/10.12911/22998993/81241

34) Hanin al Hamidy, **Jamil Al Asfar**, "**Hybrid Renewable Energy System with Minimum Noise Wind Turbine**", Renewable Energy Journal, volume 114 part B, **2017**, pp 581-587. (https://doi.org/10.1016/j.renene.2017.07.015)

35) Rbeihat R., Sakhrieh, A., **Al Asfar, J.**, Hamdan, M. A., Al-Salaymeh, A., Al-hamamre, Z. and Al-bawwab, A. "**Performance Assessment and Theoretical Simulation of Adsorption Refrigeration System Driven by Flat Plate Solar Collector",** Jordan Journal of Mechanical and Industrial Engineering (JJMIE), ISSN 1995-6665, vol.11, issue 1, **2017**, pp.1-11.

36) Ahmad AlShwawra, **Jamil Al Asfar, "Simulation of Date Seed Combustion in a Fluidized Bed Burner",** Aust. J. Basic & Appl. Sci., AJBAS, ISSN:1991-8178 (print), 2309-8414 (online), 11(13): 124-127, **2017**.

37) Yahya Hamad Khraisha, **Jamil Jawdat Asfar**, "**Kinetics of Thermal Decomposition Combined with Toluene Extraction of Oil Shale"**, American Journal of Energy Science, 2(6), pp: 40-44, 2016. (http://www.openscienceonline.com/journal/energy)

38) Al Asfar, J. J., Hammad, A., Sakhrieh, A. and Hamdan, M. A. "**Two-Dimensional Numerical Modeling of Combustion of Jordanian Oil Shale",** Energy Sources, Part A: Recovery, Utilization, and Environmental Effects Journal, vol. 38, issue 9, **2016**, pp: 1189-1196.Taylor & Francis. http://www.tandfonline.com/doi/full/10.1080/15567036.2014.880091

39) Khraisha, Y. H., **Al Asfar, J. J.**, and Radwan, A. A., "**Thermal Cracking Combined with Supercritical Fluid Extraction of Jordanian Oil Shale"**, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects Journal, vol. 38, issue 8, **2016**, pp: 1148-1155,Taylor and Francis.http://www.tandfonline.com/eprint/gNzmpDwbcyvFWpkgnMcX/full

40) Al Asfar, J. J., O. Ayadi and Al-Salaymeh, A., "**Design and Performance Assessment of a Parabolic Trough Collector"**, Jordan Journal of Mechanical and Industrial Engineering (JJMIE), Volume 8, Number 1, **2014**, pp. 1-5.
https://www.academia.edu/52870818/Design_and_Performance_Assessment_of_a_Parabolic_Trough_Collector

41) Al Asfar, J. J., "**Gasification of Solid Waste Bio Mass",** Jordan Journal of Mechanical and Industrial Engineering (JJMIE), Volume 8, Number 1, Feb. 2014, pp. 13-19.

42) Fasfous, A., **Al Asfar, J. J.**, Hamdan, M. A., Al-Salaymeh, A., Sakhrieh, A., Al-hamamre, Z. and Al-bawwab, A. "**Potential of utilizing solar cooling in The University of Jordan", Energy Conversion and Management journal**, vol. 65, **2013**, pp: 729–735.
web site: http://dx.doi. org /10.1016/j.enconman.2012.01.045

43) Al Asfar, J., Hamdan, M., Yamin, J. and Abdullat, Y. "**Theoretical Study of Hydrogen Flow in Porous Medium of Local Sweileh Sand**", **Energy Conversion and Management journal**, vol. 51, **2010**, pp. 1727-1734.

44) Haj Khalil, R, Sakhrieh, A., Hamdan, M. A. and **Al Asfar, J. J.** "**Effect of Pressure and Inlet Velocity on the Adiabatic Flame Temperature of a Methane-Air Flame**", Jordan Journal of Mechanical and Industrial Engineering (JJMIE), Volume 4, Number 1, **2010**, ISSN 1995-6665.

45) Ahmad Hammad and **Jamil Al Asfar**, "**Comparative study on direct burning of oil shale and coal**", International conference on Numerical Analysis and Applied Mathematics, 19-25 Sep. 2016, Rhodes / Greece, ICNAAM-2016, **AIP Conference Proceedings, vol. 1863, 030024 (2017); (ISI international conference). doi: http://dx.doi.org/10.1063/1.4992177**

46) Rami Al-Assad, Osama Ayadi, and **Jamil Al Asfar**, "**Model Validation for a Photovoltaic System in Jordan",** Global Conference on Renewable Energy and Energy Efficiency for Desert Regions / GCREEDER 2018, 3-5 April, 2018, Amman- Jordan.

47) Alaa Rawashdeh and **Jamil Al Asfar**, "**Proposed CSP Plant at The University of Jordan",** Global Conference on Renewable Energy and Energy Efficiency for Desert Regions / GCREEDER 2018, 3-5 April, 2018, Amman- Jordan.

48) Al Asfar, J. J., O. Ayadi and Al-Salaymeh, A., "**Manufacturing and Testing of a Local Solar Trough",** World Renewable Energy Congress / WREC 2014, 3-8 August, 2014, London – UK**,** Kingston University.

49) Al Asfar, J. J., Hammad, A., Sakhrieh, A. and Hamdan, M. A. "**Theoretical Investigation of Direct Burning of Oil Shale", 12th International Combustion Symposium**, 24-26 May, 2012, Kocaeli - **Turkey**.

50) Al Asfar, J. J. and Salim, A. **"Case Study and Analysis of the Production Processes in a Steel Factory in Jordan",** World Renewable Energy Congress / WREC 2011, 8-13 May, 2011, Linkoping – **Sweden,** Linköping University Electronic Press, vol. 7, issue 57, paper no. 030 , pp:1708-1715, web site: http://www.ep.liu.se/ecp/057/vol7/030/ecp57vol7_030.pdf
DOI:10.3384/ecp110571708

51) Hammad, A., Hamdan, M. A., Sakhrieh, A. and **Al Asfar, J. J.,** "**Design, Construction and Performance Study of a Fluidized Bed Combustion Unit for The Jordanian Oil Shale",** Global Conference on Renewable Energy and Energy Efficiency for Desert Regions / GCREEDER 2013, 10-12 September, 2013, Amman- Jordan.

52) Al Asfar, J. J. and Al-Salaymeh, A., "**Design, Manufacturing and Testing of a Compact Solar Car",** International Conference on Renewable Energy and its Future in the Arab World 2013 (ICREFAW Conference 2013), April 22-24, 2013 Amman, Jordan.

53) Al Asfar, J. J., Hamdan, M. A. , Yamin, J. and Abdullat, Y. "**Building and Testing of a Simple PEM Fuel Cell.", GCREEDER-2009 international conference, Amman- 2009.**

54) Al Asfar, J. J., Hamdan, M., Yamin, J., and Abdullat, Y. "**Experimental Investigation of Hydrogen Storage in Local Materials**", Alternative Energy Applications Conference, Kuwait, 2-5 November (2009).

55) Al Asfar, J. J. and Al-Salaymeh, A., "**Ice Cubes Making Machine Using Dead Sea Water",** 4th Jordanian IIR International Conference on Refrigeration and Air Conditioning 4th JIIRCRAC, Amman, Jordan, 10-12 September, 2012.

Work experience:

(April, 2019 – still) **Professor**
Mechanical Engineering Department
The University of Jordan – School of Engineering,

(Sep. 2018 – Sep. 2019) **Associate Professor / Chairman**
Mechanical Engineering Department
The University of Jordan – School of Engineering,
during which I taught the following courses:
- **(i) Thermodynamics I,**
- **(ii) Design of Sanitary systems,**
- **(iii) Fluid Mechanics Lab.**
- **(iv) Heat Transfer**
- **(v) Graduation Projecs Supervisor,**

(Feb - June 2015) **Visiting Associate Professor / Tabuk University - KSA**
Faculty of Engineering and Technology -Mechanical Engineering Department, during which I instruct the following courses :
- **(i) Thermodynamics I,**
- **(ii) Thermodynamics II,**
- **(iii) Engineering Instruments and Measurements,**
- **(iv) Turbomachinery II**

(April 2014 - March 2019) **Associate Professor**
The University of Jordan – Faculty of Engineering and Technology -Mechanical Engineering Department, during which I instruct the following courses in addition to

supervising 12 Master Degree students in Mechanical engineering, Renewable Energy and 6 undergraduate projects (20 students):

(i) Thermodynamics II,
(i) Fluid Mechanics I,
(ii) System Dynamics and Control,
(iii) Thermodynamics I,
(iv) Advanced Numerical Methods - Master Civil Eng.
(v) Design of Sanitary systems,
(vi) Engineering Numerical Methods,
(vii) Numerical Analysis- Master Mechanical Eng.
(viii) Engineering Measurements,
(ix) Measurement Laboratory
(x) Thermal Fluid Sciences
(xi) Thermal Fluid Sciences Lab
(xii) Turbomachinery,
(xiii) Thermal Power Plants.

(Sep. 2016 – Aug. 2017) **Associate Professor (Sabbatical leave) : Al-Zaytoonah University of Jordan –** Faculty of Engineering and Technology - Mechanical Engineering Department, during which I instruct the following courses:

(i) Thermodynamics I,
(ii) **Mechanical vibrations,**
(iii) Engineering Mechanics – Dynamics,
(iv) **Automatic Control**.
(v) CAD/ CAM Computer Aided design and Manufacturing
(vi) **Heat Transfer II**
(vii) Engineering Numerical Methods,

(Feb. 2009- March, 2014) **Assistant Professor**
The University of Jordan – Faculty of Engineering and Technology -Mechanical Engineering Department, during which I instruct the following courses in addition to courses mentioned above:

(xii) Fluid Mechanics II,
(xiii) Mechanical vibrations,
(xiv) Engineering Mechanics – Statics and Dynamics,
(xv) Computer Programming for Engineers, MatLab
(xvi) Thermal Fluid Sciences
(xvii) Engineering Economy
(xviii) Engineering Mechanics – Dynamics
(xix) Thermodynamics Laboratory
(xx) Thermal Fluid Sciences Laboratory

(Sep. 2011- Jan 2012) **Assistant Professor - part time lecturer- German Jordanian University – Jordan, during which I taught**
(i) Fluid Mechanics I,

(Sep. 2007- Jan. 2009) **Assistant Professor- Philadelphia University/Jordan**
Faculty of Engineering - Mechatronics Engineering

Department, during which I instruct the following courses:

(i) Robotics,
(ii) Engineering Mechanics – Dynamics,
(iii) Pneumatic and Hydraulic Systems,
(iv) Thermal Fluid Sciences,
(v) Theory of Machines,
(vi) Mechanical Vibrations,
(vii) Supervisor of several undergraduate projects,
(viii) Automation and Control lab., and
(ix) Pneumatic and fluid control lab.

(Feb. 2007- Jan 2009) **Assistant Professor - part time lecturer-**
The University of Jordan – Faculty of Engineering and Technology -Mechanical Engineering Department, during which I instruct the following courses in Spring and Summer semesters/2007, Spring/ 2008 and Fall 2008/2009:

(i) Mechanical Vibrations,
(ii) Engineering Mechanics – Dynamics,
(iii) Engineering Numerical Methods,
(iv) Computer Programming for Engineers, MatLab
(v) Thermodynamics Laboratory.

(Jan. 2007-still) **Engineering and Management Consultant**
Investment promotion and investor facilitation(One stop Window, one stop service) expert. Studies, Planning, Monitoring and Performance Evaluation expert.
During which I achieved the following tasks:

1) Assisted the **Government of Yemen** in simplifying investment procedures and establishing an Investment Services Center (ISC) in Aden, including organization structure manual, job description and staff training, during the period: June - Aug. 2007.
2) Assissted **Jordan Investment Board** as advisor of the CEO in Jordan negotiations with Canada concerning the signature of a BIT(Bilateral Investment Treaty), during the period Jan. 10 - Feb.3, 2007.
3) Conducted feasibility, restructuring and managemnent appraisal studies for several private sector businesses.

(June 1995 - Jan. 2007) **Director (Senior official) at** Jordan Investment Board, Amman- Jordan.

(Mar. 2005- Jan. 2007) **Director of Studies, Research, Legal Services, Information Technology and Monitoring Department**
Jordan Investment Board, Amman- Jordan. **During which:**

1) I was nominated by the minmister of industry and trade as: Acting CEO of JIB through the period 21-23 June, 2006 during one of CEO's outside visits to Gulf region.
2) I was authorized to initial (6) six Bit's agreements after

detailed negotiations with: **Algeria** (August, 1996), U**AE** (June, 2005), **Thailand** (December, 2005), **Slovakia** (May, 2006 ***in Slovakia***), **Pakistan**(June, 2006 **in Pakistan**) and **India**(August 2006 in **India**); in addition to MOU with **Algeria** (April, 2006), **Indonesia** (December, 2005) and Syria (August, 2006).

3) I was also the coordinator of JIB criteria working groups and contact officer of King Abdullah II Award for Distinguished Governmental Performance and Transpirancy, for years 2005 & 2006.

(Jan. 2003 - Feb. 2005) **Senior Projects Officer / Follow-up**
Jordan Investment Board, Amman- Jordan.

(Dec. 2000- Nov. 2002) National Project Director, UNDP
United Nations Development Program – Amman.
During which I achieved many important investment promotion tasks such as sectoral studies, training center, one stop service(OSS) implementation and investor tracking system in addition to my duties as National Director of project no. JOR/97/008 - Investment Promotion: Support for Strategy Development and Institution Building in Jordan.

(Jan. 1998- Dec. 2000) **Director of Technical Cooperation Programs with NGOs/ Technical Director of the Director General' Bureau**
Jordan Investment Board (JIB), Amman- Jordan.
During which I practiced the following Duties:

i- Project manager for JIB's project with UNDP/Amman, coordinating JIB's technical and financial cooperation programs with UNCTAD, UNIDO, IMF, World Bank, FIAS, EC,..., etc. **Mainly the road map study "Simplifying Investment Procedures**" and preparation of JIB' Strategy and structure.

ii- Secretary of JIB's Board of Directors which is headed by H.E. Minister of Industry and Trade.

iii- Preparing the agendas and minutes of meeting of JIB's Higher Council for Investment Promotion, which is headed by **H.E. Prime Minister**.

iv-Two-year member of JIB's personnel committee.

v- Head of JIB's local tenders committee.

vi- Head of JIB's "One-Stop-Service Team" responsible for **computerizing and simplifying all investment and licensing procedures** .

vii- Membership of Jordan Society for Quality.

viii- Membership of JIB's organizational planning and policies committee.

(Oct. 1997- Dec. 1997) **Senior Industrial Projects Officer**
Investment Promotion Corporation, Amman- Jordan.

(Oct. 1996- Sep. 1997) **Director of Follow-up Division**
JIB/ (Investment Promotion Corporation), Amman- Jordan.
During which I prepared a work-plan to computerize the

procedures performed by JIB in issuing the letter of exemption, recording imported fixed assets, receiving the application forms from investors, and computerizing the Statistical reports of approved investments; and also headed a team of JIB' staff to implement this work-plan.

(June 1995 - Oct. 1996) Research Engineer / Studies & Research Department Investment Promotion Corporation, Amman- Jordan. During which I was responsible for studying and reviewing all International / Bilateral agreements on reciprocal protection and promotion of investments between Jordan and other countries from legal, procedural and technical points of view, before initializing these agreements by the Director General of JIB, or me on behalf of him, so that it could be signed by the government of Jordan.

(Sep. 1992 - Jun. 1995) Director of Engineering and Interior Design Department- National College, Amman- Jordan.
During which I practiced the following duties in addition to my work, which includes supervising around 25 teachers / trainers & technicians of varied academic degrees, in addition to around 850 students :
I – Membership of personnel committee
II- Head of Ministerial Comprehensive Experimental Exam Committees (Engineering sections).

(1991 – Aug. 1992) Mechanical Engineer (Teacher and training supervisor)/ Mechanical Engineering Division, National College, Amman

(July 1988 – 1990) Mechanical Engineer / Studies, Contraction & Sales Engineer at American Products Company, Al Ain-UAE. During which I am responsible to study, prepare and negotiate offers submitted to Tender Department of Abu Dhabi regarding the purchasing of Pumps (submersible, booster and turbine pumps), diesel engines and generatores, rock bits, casings and screens for water wells.

(Feb. 1986 – June 1988) Teaching Assistant (TA), Jordan University of Science and Technology (JUST) - Jordan. During which I assisted in teaching Mechanical Vibrations, Gas Turbines, Fluid Mechanics, Engineering Mathematics and Air Craft Propulsion courses.

Publihed Engineering and Economic Papers, Before 2007 (Before PH. D.):

Al Asfar, J. J. "**Investment in Tourism in Jordan",** Tourism in Jordan: Limitations and Visions, Mu'tah University / Jordan, 2000.

Al Asfar, J. J. and Zurigat, Y. "**Computer Simulation of Interacting Compressible Boundary Layers**", 1997, Syrian International Scientific Week – 37, held at Damascus University, Damascus-Syria.

Al Asfar, J. J. and Zurigat, Y. "**Numerical Simulation of Compressible Viscous Flow over a Surface with a Roughness Element**", 1997, Jordan International Mechanical Engineering Conference: JIMEC'97, held at the University of Jordan, Amman-Jordan.

Najjar, Y. and Mansour, A. "**Evaluation of Peng-Robinson Equation of State in Calculating Thermo-physical Properties of the Gas Turbine Combustion Gases**", J. Combustion Science and Technology, Vol. 56, pp. 77-84, 1987. (***My Undergraduate project)*.**

Najjar, Y. and Mansour, A. "**Evaluation of Peng Robinson Equation of State in Calculating Thermo-physical Properties of Combustion Gases**", International Journal of Chemical Engineering Communications,Vol. 61,pp.327-345,1987.(***My Undergraduate project)*.**

SUPERVISOR OR CO-SUPERVISOR OF SELECTED GRADUATE MASTER THESIS:

1) SIMULATION OF LIQUID FUEL FLAMELESS COMBUSTION
2) EXPERIMENTAL INVESTIGATION OF FLOW IN A VORTEX TUBE
3) CFD MODELING OF ALUMINUM FILTRATION PROCESS
4) SUPERCRITICAL EXTRACTION OF JORDANIAN OIL SHALE
5) THEORETICAL ANALYSIS OF A SOLAR COOLING PROJECT IN AMMAN.
6) HYBRID PV AND WIND RENEWABLE ENERGY SYSTEMS
7) POTENTIAL OF ELECTRICITY GENERATION IN JORDAN FROM OIL SHALE
8) POTENTIAL OF ELECTRICITY GENERATION IN JORDAN FROM BIO MASS
9) POTENTIAL OF ELECTRICITY GENERATION IN JORDAN USING CSP TECHNOLOGY
10) HYBRID SYSTEMS OF SOLAR AND WIND TURBINE/ MINIMIZING NOISE (DISTURBANCE)

SUPERVISOR OF THE FOLLOWING SELECTED UNDERGRADUATE PROJECTS:

(A) SMART CAR STEERING DESIGN AND IMPLEMENTATION
(B) GYROSCOPIC MOTION MODELING, SIMULATION AND IMPLEMENTATION
(C) TURN-TABLE CONTROL MODELING,SIMULATION AND IMPLEMENTATION
(D) STEAM BOILER MODELING, SIMULATION AND IMPLEMENTATION
(E) MODELING AND SIMULATION OF A 3R ROBOTIC ARM, MINES AND HEXABOD ROBOT
(F) DESIGN OF HVAC, SANITARY, FIRE FIGHTING, HOT AND COLD WATER SUPPLY FOR A COMPLEX COMMERCIAL BUILDING (MALL) IN AMMAN.
(G) BUILDING AND TESTING OF ICE CUBE MAKER USING DEAD SEA WATER
(H) DESIGN AND BUILDING A SOLAR COOLING SYSTEM FOR A BUILDING
(I) DESIGN OF SANITARY AND COLD WATER SUPPLY FOR A HIGH RISE BUILDING
(J) DESIGN AND BUILDING A SOLAR COMPACT CAR
(K) DESIGN AND BUILDING A SOLAR PARABOLIC TROUGH COLLECTOR- 6 M LONG
(L) DIRECT BURNING OF OIL SHALE AND BIO MASS IN A FLUIDIZED BED BURNER
(M) MAINTENANCE OF A STEAM BOILER AND COOLING TOWER OF AN EDUCATIONAL

STEAM POWER PLANT (5 KW).

(N) MAINTENANCE AND OPERATING AN INTERNAL COMBUSTION ENGINE UNIT.

EXAMINER OF ONE PH. D. DEFENCE IN MEMS FIELD, AND MORE THAN THIRTY M. SC. STUDENTS IN THE UNIVERSITY OF JORDAN, JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, HASHEMITE UNIVERSITY AND GERMAN JORDANIAN UNIVERSITY. ALSO ALL GRADUATION PROJECTS IN MECHATRONICS ENGINEERING DEPARTMENT-PHILADELPHIA UNIVERSITY, AND MOST GRADUATE PROJECTS IN THE UNIVERSITY OF JORDAN, TABUK AND AL-ZAYTOONEH UNIVERSITIES.

TRAINNING COURSES

1) INSTRUCTOR OF TRAINING COURSE : " Advanced Boiler Operation, Inspection and Maintenance".
2) "Practical Pumps - Design, Operation and Maintenance for Centrifugal and Positive Displacement Pumps".
3) "Pump Selection, Installation, Performance & Control"
4) "Heat Exchanger Operation, Maintenance & Repair".
5) "Power Plant Performance & Efficiency".
6) "Advanced Valve Technology: Design, Selection, Installation, Applications, Sizing, Inspection, Maintenance & Troubleshooting".
7) "Centrifugal Pump Selection, Construction, Operation, Maintenance, Repair & Troubleshooting".
8) "Gas Turbine Hot Section Assessment & Life Management of Turbine Operation & Control".
9) "Combined Cycle Power Plant".
10) "Bilateral investment treaties (BITs)".
11) "Simplifying investment procedures, One stop service facilitation and Investor tracking systems".
12) "Investment negotiation skills and Investment strategy planning to attract **FDI".**

SKILLS:

i- In the field of of Academic University Teaching and Research:
Ability to teach all mechanical engineering courses, whether thermal or applied sciences, such as Engineering Numerical Methods, Mechanical Measurements, Thermodynamics, Dynamics, Mechanical vibrations, MatLab, Finite element methods, modeling and simulation of mechanical systems, Theory of machines, fluid mechanics, Design of Sanitary systems, HVAC, Engineering economy, System Dynamics and Control, Numerical Analysis and CFD.

ii- In the field of **Feasibility Studies and Capacity Building**:
Practical experience and full knowledge in preparing, conducting and evaluating related studies, SWOT analysis, laying out administration procedures.

iii- **In the field of International bilateral and multilateral negotiations:**
Practical experience and full knowledge in negotiations to sign investment BIT's between Jordan and other countries on reciprocal promotion and protecion of investments.

iv- Ability to use different computer software such as COMFAR, Pro-engineer,

MathCad, Matlab, Ansys, Fluent, …, etc.

v- Fluent in Arabic and English, little French.

vi- **Management, Monitoring, Development and leadership skills**: Practical experience and ability to study, analyze, and suggest appropriate management structure, re-structuring, and prepare administration, financial, and personnel systems for different institutions(puplic or private), with experience in preparing annual working plans, set strategic objectives, job-description, ..etc.

vii- Attended a two-week comprehensive training course on using **COMFAR** software in preparing and conducting feasibiltiy studies; organized by UNIDO in Amman, Jan. 28th—Feb. 7th, 2006.

Membership of Scientific(Technical) and Organizing committees of:

WREC 2014 : International Steering Committee of WORLD RENEWABLE ENERGY CONGRESS 13 - to be held in University of Kingston, LONDON – UK, 3-8 August, **2014**.

ISMA : THE FIVTH INTERNATIONAL SYMPOSIUM ON MECHATRONICS ENGINNERING, HELD AT PRINCESS SOMAYYH UNIVERSITY-JORDAN DURING THE PERIOD MAY 27-29, 2008.

IEEE - SSD'08: THE SIXTH INTERNATIONAL CONFERENCE ON SYSTEMS, SIGNALS AND DEVICES HELD AT PHILADELPHIA UNIVERSITY- JORDAN DURING THE PERIOD JULY 20-22, 2008.

JIMEC'6: THE SIXTH INTERNATIONAL JORDAN MECHANICAL ENGINEERING CONFERENCE, HELD IN AMMAN-JORDN, OCTOBER 20 - 22, 2007.

JIMEC'7 : THE SEVENTH INTERNATIONAL JORDAN MECHANICAL ENGINEERING CONFERENCE, HELD IN AMMAN-JORDN, OCTOBER 20 - 22, 2010.

JIMEC'8 : THE EIGTH INTERNATIONAL JORDAN MECHANICAL ENGINEERING CONFERENCE, TO BE HELD IN AMMAN-JORDN, 2014.

GCREEDER 2018/ 2016/ 2013/ 2011: Global Conference on Renewable Energy and Energy efficiency for DEsert Regions.

4th Jordanian IIR International Conference on Refrigeration and Air Conditioning.

IEEE/ ISPCC 2013: International Conference on Signal Processing, Computing and Control (2013 IEEE ISPCC), held at Jaypee University of Information Technology, Shimla, India from 26-28 September 2013.

Membership of Jordan engineering association (JEA).

Administrative work:

Chairman of mechanical engineering department (Sep 2018-still): During which the B. Sc. Plan has been reviewed and updated. Three M. Sc. Programs have also been reviewed and updated. New devices and equipments through a new university tender have been selected to develop and modernize the laboratories of the department.

Memdership of Mechanical department committees to study applicants, interview and recommend appointment of new Faculty members; and select best candidiates of M. Sc. and B. Sc. holders to get Ph. D. scholarships.

Membership of Department committee to review and recommend new B. Sc. teaching plan.

Membership of department Graduate studies sub-committee for Renewable energy and Energy auditing Master programs.

REVIEWER OF ENGINNERING PAPERS SUBMITTED TO:

ENERGY CONVERSION AND MANAGEMENT INTERNATIONAL JOURNAL

INTERNATIONAL JOURNAL OF HEAT AND TECHNOLOGY

Energy Sources, Part A: Recovery, Utilization, and Environmental Effects Journal.

JORDAN JOURNAL OF MECHANICAL AND INDUSTRIAL ENGINEERING, ISSN: 1995-6665

ISMA : THE FIVTH INTERNATIONAL SYMPOSIUM ON MECHATRONICS ENGINNERING, HELD AT PRINCESS SOMAYYH UNIVERSITY-JORDAN DURING THE PERIOD MAY 27-29, 2008.

IEEE - SSD'08 THE SIXTH INTERNATIONAL CONFERENCE ON SYSTEMS, SIGNALS AND DEVICES HELD AT PHILADELPHIA UNIVERSITY- JORDAN DURING THE PERIOD JULY 20-22, 2008.

JIMEC'6, JIMEC'7 AND JIMEC'8: THE SIXTH, SEVENTH AND EIGTH INTERNATIONAL JORDAN MECHANICAL ENGINEERING CONFERENCE, HELD IN AMMAN-JORDN DURING THE PERIOD OCTOBER 20- 22, 2007, OCT. 2010, AND 2014.

GCREEDER 2018/ 2016/ 2013/ 2011: Global Conference on Renewable Energy and Energy Efficiency for Desert Regions / membership of organizing and scientific committees.

SUCCESS STORIES

1) Initial (Signing in initial letters) Six (6) Bilateral Investment Treaties (Bit's: International Agreements on the Promotion and Protection of Reciprocal Investments), and three (3) Momorandomes of Understanding **on behalf of the government of Jordan**, after detailed economic and investment negotiations, with:

A) ALGERIA in August, 1996.
B) UAE in June, 2005 in Amman
C) Thailand in December, 2005 in Amman.
D) Slovakia in May, 2006 ***in Slovakia.***
E) Pakistan in June, 2006 **in Pakistan**
F) India in August 2006 in **India**
G) MOU with **Algeria in** April, 2006
H) MOU with **Indonesia** in December, 2005
I) MOU with Syria in August, 2006.

2) ASSISTED THE **GOVERNMENT OF YEMEN** IN SIMPLIFYING INVESTMENT PROCEDURES AND ESTABLISHING AN INVESTMENT SERVICES CENTER (ISC) IN ADEN, INCLUDING ORGANIZATION STRUCTURE MANUAL, JOB DESCRIPTION AND STAFF TRAINING, DURING THE PERIOD: JUNE - AUG. 2007: **A WORLD BANK PROJECT**.

3) CONDUCTED FIELD, ADMINISTRATIVE AND EVALUATION STUDY FOR AWADY COMPANY FOR CARAVANS, 2004.

4) ASSISTED RAWAS COMPANY FOR CENTRAL HEATING SUPPLIES IN CAPACITY BUILDING AND REGULATING ADMINISTRATIVE, SALES AND MAINTENACE PROCEDURES, 2003.

5) CONDUCTED A PREFEASIBILITY STUDY FOR FLEAFLE COMPANY TO ESTABLISH A GARMENT AND BED SKIRTS FACTORY IN JORDAN.

6) ASSISSTED JIB IN THEIR NEGOTATIONS WITH **CANADA** REGARDING THE SIGNATURE OF A BILATERAL INVESTMENT TREATY, FEB. 2007.

7) PARTICIPATED IN FACULTY FOR FACTORY PROGRAM IN SUMMER 2008, AND CONDUCTED A TECHNICAL AND MANAGEMENT STUDY TO ENHANCE THE PERFORMANCE OF JORDAN CONSOLIDATED STEEL COMPANY IN ZARQA AREA, JULY-SEPTEMBER 2008.

Funded Projects

1) Utilization of Solid Waste Biomass and Oil Shale as a Source of Energy in Jordan; Direct Burning process: July, 2015 – July, 2016. Funded by Deanship for Scientific research in The University of Jordan with Total fund: 20,500 JD.
A circulating fluidized bed combustor that simulates the behavior of biomass and oil shale combustors was designed and manufactured. The inside diameter of the burner is 0.5 m and the height is 3 m. The fluidized bed reactor is expected to produce 3 kW, which corresponds to a fuel-feeding rate of approximately 1.5 kg/h.

2) Experimental Investigation of Solar Cooling Technique, Deanship for Scientific research in The University of Jordan, July, 2010 – July, 2013. Total fund: 56,500 JD.
The solar cooling analysis is performed for a 41 m^2 with a 3.65 m height laboratory located at Mango Centre for Scientific Research at The University of Jordan in Amman. The results showed that solar collectors of 196 m^2 can provide solar heat for an 8 kW solar airconditioning system. Moreover, domestic hot water (solar fraction up to 100%) and solar heating (approx. 15-25% solar fraction) could be also provided, with the solar air conditioning system, for the Center. An economic study was also carried out.

Research statement

My research relates to Fluid mechanics, flow in porous media, compressible flow, combustion, energy, fuel cells and renewable energy. I understand those areas as integrated methods to achieve better life quality.

Ongoing research

My research work deals with hybrid renewable energy systems (solar, wind and fuel cells), bio mass and oil shale direct burning, oil shale extraction, flameless combustion(flox), flow in porous media, solar cooling, solar CSP and PTC.

Previous Membership of National Economic Teams:

Head of Institutional sub-pillar national working group formulated to impement the national agenda recommendations in enhancing investment pillar(March-May, **2006**).

Member of Investment Promotion Strategy Formulating Committee, participated in meetings held through the conference: "Investment Opportunities and Prospects: Towards National

Investment Promotion Strategy ", organized by Middle East Studies Center/Amman, held in Amman-Jordan through the period 17-18 July, **2001**.

Member of national team responsible to prepare a national report on sustainable development in Jordan, September **2000**.

Member of national economic team as counterpart to WorldBank team concerning the Country Assistance Strategy, for the period **2006-2009**.

Member of national team responsible for merging economic tools between Jordan and Syria, **2005**(envecon).

Member of national team responsible for studying and analysing WTO members sugestions on modifying articles V, VIII and X of the **GATT agreement**, **2005**.

Teaching statement

One of the most rewarding aspects of an academic position is the opportunity to teach and interact with students. Whether or not they realize it, students have the freedom to explore and to think about problems in new ways. As teachers, we have the opportunity to guide students' discoveries, and learn a great deal in the process. I would be most interested in teaching classes in the area of Thermodynamics, Combustion and Energy, especially those classes with a strong lab component. Unquestionably my favorite aspect of teaching is in working with students individually as an advisor. In my tenure at The University of Jordan I have been very active in giving advice and help to to refine and explain their projects. As a faculty member, I expect working with students to be one of the most rewarding aspects, because it represents an opportunity to push forward research and fresh ideas that the students will bring.

A second aspect of teaching that I enjoy is the development of a well–designed course and associated materials. In my experience, I have learned a great deal about a subject in the process of organizing it for presentation. I also enjoy planning out homeworks, quizzes, and projects with care to eliminate busywork, errors and unnecessary confusion, allowing students to get right to the heart of the problems. This can be a time–consuming process and may require additional resources, but I believe that it vastly improves the student experience.

My personal style of teaching is based on the following:

Engage the students: Students must be active participants in the learning process, rather than passive observers.

Establish fair and clear grading policies: Despite our best efforts to inspire students to learn simply for the joy of learning, there will always be many students who focus primarily on whatever aspects of the material they believe will result in their receiving a good grade. However, this is not always a bad thing . the proper grading and assessment policies can guide these students to focus their attention on the essential points. It is also important that grading policies be fair and relevant to the objectives of the course; few things are more discouraging to students than receiving a low grade for work that they believe is good. Grading standards must also be flexible so that unconventional or original solutions are not penalized simply because they do not match the anticipated solution.

Set clear and realistic goals: Students respond best to goals that are both challenging and achievable. For example, extremely easy assignments are boring, allow students to become careless, and do not give the students any sense of accomplishment. In contrast, excessively

difficult assignments are frustrating and intimidating. Unclear or ambiguous assignments are even worse because the students are apt to waste their time solving the wrong problem.

Identify and fix misconceptions early: Once a misconception takes root, it is difficult to remove. Waiting until the next assignment or test has been graded to discover that students are confused is a grave mistake.

Let the students make mistakes in ordwe to learn: Learning what doesn't work is just as important as learning what does. Students learn more from understanding *why* an incorrect answer is wrong than from simply memorizing the correct answer. Experimentation is essential to education; students must be encouraged to learn from their mistakes.

Always respect the students: A teacher must respect the needs and individuality of each student,and help each student to do his/ her best to achieve his / her objectives. Not all students respond same to certain problem; since they came from differnet backgrounds, and don't have same level of educationa and culture.

International Conferences, Workshops and Seminars Attended :

World Renewable Energy Congress / WREC 2014, 3-8 August, 2014, London – UK**,** Kingston University.

12th International Combustion Symposium, 24-26 May, 2012, Kocaeli - **Turkey**.

World Renewable Energy Congress / WREC 2011, 8-13 May, 2011, Linkoping – **Sweden.**

WIFE: World Islamic Economic Forum on economic and trade bilateral relations between Islamic Countries, 2nd WIFE, held in **Islamabad/Pakistan,** 5-8 Nov. 2006. Represented Jordan as head of delegation of H.K.J.

Joint ministerial committee meetings on economic and trade bilateral relations between Jordan and **India**, held in **New Delhi/India,** 20-24 August, **2006**. Also, represented Jordan in the sideline negotiations with **Indian side** on signing an agreement in initial letters (**initial**) on the reciprocal promotion and protection of investments.

Joint ministerial committee meetings on economic and trade bilateral relations between Jordan and **Pakistan**, held in **Islamabad /Pakistan,** 26-27 June, **2006**. Also, represented Jordan's investment side in negotiations with Pakistani investment side on signing in initial letters (**initial**) an agreement (**BIT**) on the reciprocal promotion and protection of investments.

Economic transition conference about **Euro-Med**. Economic development and investment, organized by European Commission, held in **Brussels-Belgium,** 6-7 June, **2006.**

Islamic Development Bank seminar on Trade Facilitation of **OIC** (Countries of Islamic Organization) countries, held in **Abu Dhabi-UAE**, 22-24 May, **2006**.

ESCWA/UNCTAD EGM/ Regional Experts conference on **FDI**/foreign direct investment policies in the region countries, held in **Beirut-Lebanon**, 20-22 December, **2005**.

UNCTAD/WTO/ITC Arab Ministerial conference held in Amman, 26-28 September, 2005 to prepare for **WTO sixth ministerial meeting** that will be held in **HongKong/China** in December, 2005.

International OECD-MENA Experts of investment treaties meeting hosted by **Morocco** Economic Ministry and held in **Rabat**, 26-27 June, **2005**.

UNDP regional conference on "Industrial Policies in the Arab Countries within Global Trend" co-organized by **ESCWA** and **Frederich Ebert Stufting**, held in Amman-Jordan, 14-17 January, **2001**.
Invited by the ministry of Trade and Industry/ Government of Jordan, and attended a one-day conference to discuss the strengths and weaknesses of Jordan Industrial Sector, held in Amman on January 22nd, **2001**.

Attended a one-day national seminar on " **Tourism in Jordan: Limitations and Visions**" and **presented a paper about Investment in Tourism**, organized by Mu'tah University / Jordan, and held in Kerak-Jordan on 22nd November, **2000**.

Institutional Capacity for Effective Development: The role of trade and investment, organized by CASIN / Center for Applied Studies and International Negotiations, and held in **Geneva-Switzerland,** 8-17 November **2000**.
CYSERV'2000: **5th Euro-Mediterranean Services Forum** and Exhibition about New Techniques and Methodologies for the Promotion of the Export of Services, and The New Economy and E-Commerce, organized by the government of Cyprus and UNCTAD/ITC, held in **Nicosia-Cyprus,** 24-29 October **2000**.

Investment Promotional Techniques in the Arab Countries, organized by **IAIGA/JIB /FIAS**, as a **moderator** for the fourth session, held in Amman-Jordan, 30-31 October, **2000**.

Investment conference on Euro-Med. Economic development and investment, organized by Portugal and Tunisia, held in **Lisbon-Portugal** in Feb/March **2000**.

Regional seminar about Environment and Health Impact Assessment of Development projects, organized by WHO, CEHA/ Jordan and IDB, held in Amman-Jordan, November-December **1999**.
Regional seminar on Industrial Property Right Status in the Arab Countries, organized by the Arab Organization for Industry and Mining, IDB and the Higher Council for Science and Technology/Jordan, held in Amman-Jordan, in November-December **1999**.

International Conference on international development and investment, organized by UNCTAD, held in **Cairo-Egypt,** May **1999**, as head of Jordanian Delegation.

Conducted a lecture in Arabic about "Investment environment in Jordan", in July, 1998 through the program: "How to begin your small project", organized by Jordanian Administration Institute – Amman.

General Association of the **International Union of Islamic Banks meetings,** held in Amman, on November 26th, **1998,** where I **c**onducted a presentation in English about "Investment environment in Jordan".

BORITEC'97 conference on international development and investment, held in **Milan-Italy,** Oct. **1997,** as **head** of Jordanian Delegation.

Attended a two-day seminar in June **1996,** on Private Power Projects, held by NEPCO (National Electric Power Company), Amman.

Attended a one week seminar in May **1997**, on Management Appraisal and Development training program, held by Management Consultant Group International, Amra Hotel – Amman.

Attended the Global Panel of Jordanian and Netherlands Businessmen meetings held in February **1998** in Amman.