

Montasir Hader, Ph.D.

Education:

- (Ph.D.) Doctor of Philosophy in Mechanical Engineering** **1998**
University of Cincinnati (UC), Cincinnati, OH, USA
Dissertation: Thermal Plasma sponsored by National Science Foundation (NSF)
- (MS) Master of Science in Mechanical Engineering** **1993**
Jordan University of Science and Technology, Jordan
Thesis: Conjugate heat transfer
- (B.Sc.) Bachelors of Science in Mechanical Engineering,** **1991**
Jordan University of Science and Technology, Jordan,

Research Interests:

Renewable Energy Resources, Macro-and Microscale Heat Transfer, Computational fluid dynamics, Energy storage.

Experience:

Associate Professor, Department of Aeronautical Engineering, Jordan University of Science and Technology, Jordan, 2012-present

- Participated in establishing the Department of Aeronautical Engineering at Jordan University of science and technology.
- Supervised the establishment of Aeronautical Engineering Lab.
- Head of the laboratory committee in the department of Aeronautical engineering
- Department of Aeronautical engineering scientific research committee
- Head of the student training committee at department of Aeronautical engineering
- Chair of the AE technical committee for the Central Tenders Department, JUST
- AE Department representative in the College of Engineering Council, JUST (2012)

Senior Training Consultant (Mechanical), SAUDI ARAMCO MOBIL REFINERY LTD.

(SAMREF, Joint venture between Saudi Aramco and ExxonMobil 400,000 barrel per day), 2009-2012

- Provide training, coaching and consultation support to Samref employees in the area of Mechanical & Civil engineering.
- Assist in the preparation and administration of the development programs in the area of specialty for Samref Mechanical & Civil engineers and non-engineers, as well as, university/college students.
- Identify, arrange and coordinate off-the-job and on-the-job training with Samref Manufacturing Departments as well as the out-side Training Vendors and other Corporations.
- Develop and design new training/development programs and prepare/continually up-date curriculum for training courses including E-learning courses, computer based training and blended training.
- Prepare and conduct Technical training courses and coaching sessions in the area of Mechanical & Civil engineering (Courses taught: Pressure Vessel ASME Sec. VIII, Rotating Equipment, Material Selection, Process Equipment Design.
- Assist in preparing and conducting training courses for Mechanical Technicians
- Implementing Exxon Mobile global reliability system (GRS)

Director of Energy Center, Jordan University of Science and Technology, 2006-2009

- Development of master program in energy technology/Renewable Energy
- Establishment of the energy center at JUST

Chairman of the Energy Efficiency Committee, Jordan University of Science and technology, 2006-2009

TEMPUS Project, Quality of Technical Education in Jordan, 2005-2006

The objective of the project is to facilitate the introduction of a modern quality assurance system for technical education in Jordan. System for quality assurance is developed and applied for 5 selected pilot courses at JUST.

TEMPUS Project, Educational Center in Renewable Energy Resources and the efficient use of Energy at JUST, 2002-2006

- Development of master program in energy technology/Renewable Energy
- Establishment of the energy center at JUST

Assistant Professor, Department of Mechanical Engineering, Jordan University of Science and Technology, Jordan, 1998-2009

Participated in several administrative committees at the department of mechanical engineering
Head of the laboratory committee in the department of mechanical engineering
Department of mechanical engineering internet committee
Department of mechanical engineering graduate studies committee
Department of mechanical engineering scientific research committee
Supervised student summer training at Department of mechanical engineering

Lecturer, College of Evening and Continuing Education, University of Cincinnati, Cincinnati, OH. 1997-1998

- Taught engineering courses: Strength of Material, Numerical Analysis Methods for Engineers, Kinematics.

Graduate Teaching and Research Assistant, Thermal Fluid Laboratories, Department of Mechanical, Industrial, and Nuclear Engineering, University of Cincinnati, OH 1993-1998

Research

- Studied thermal effects in GaAs and InP based HBTs.
- Modeled heat transfer to a non-spherical drop suspended in an electric field.
- Investigated heat transfer in thermal plasma.

Teaching

- Taught and assisted with senior level heat transfer and fluid mechanics laboratory.
- Assisted with thermodynamic, Industrial heat exchanger classes, graded home works, projects, and help session.

Graduate Teaching Assistant, Department of Mechanical Engineering, Jordan University of Science and technology, Jordan. 1991-1993

- Assisted with heat transfer, fluid mechanics, and instrumentation laboratory

Consultation, Workshops

- Conducting energy audits in the residential, commercial and industrial sectors.

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- Maintenance for Hydraulic systems of rolling mills at Jordan Pipes MFG
- In-house training course for Noqul group in industrial hydraulics
- Hydraulics training courses for Royal Jordanian Air-Force
- Conducted the following Aeronautical Engineering courses to Air Force & National Security officers and engineers: Aerodynamics, Aeronautical lab I, Gas dynamics

Computer Skills:

Environments: Windows.

Languages: FORTRAN, C, C++

Specialized Software MS office, in addition to word processing, spreadsheet, and graphics, MATLAB, AutoCAD, ANSYS FLUENT, Comsol, *PVsyst*, *Sketchup*, SigmaPlot, Tecplot

AWARDS:

- Tempus Meda Joint European Project “Educational Center in Renewable Energy Resources and the efficient use of Energy at JUST grant amount 250,000.00 Euro, 2003
- TEMPUS Project, Quality of Technical Education in Jordan, 2005
- University of Cincinnati Graduate Scholarship. 1994-1997
- University of Cincinnati Graduate Assistantship. 1995-1997
- University Research Council Fellowship, University of Cincinnati. 1996
- University Honor List at Jordan University of Science and Technology, 5 times.

Master’s Theses Supervised

- Thermal behavior of a thin cylindrical layer carrying pulsating signals under the effect of the dual-phase-lag model
- Thermal behavior of a composite slab subjected to a fluctuating heating source under the effect of microscopic heat conduction model.
- Validity of Using the Local Thermal Equilibrium Assumption in Particulate Media.
- Thermal behavior of a composite thin layer exposed to a fluctuating heating source under the effect of the dual-phase-lag heat conduction model.
- Exergy analysis of ceramic production in Jordan
- Three elements fuzzy control of water level in drum

JOURNAL PUBLICATIONS:

1. A. Alshare, W. Al-Kouz, S. Kiwan, A. Al-khalidi, M. Hader, "Computational modeling of gaseous flow and heat transfer in a wavy microchannel", *Jordan Journal of Mechanical and Industrial Engineering*, Vol. 10 No. 1 , pp. 75-83 (2016).
2. M. A. Hader, M. A. Al-Nimr, M. Alata, M. K. Al-Jezawi, "Basic Viscoelastic Fluid Flow Problems Under Harmonic Fluctuating Driving Force, *Arabian Journal for Science and Engineering*, September (2013).
3. Hader, M., Darabseh, T. and Al-Othman, H., "Exergy analysis of ceramic production in Jordan, *Jordan Journal of Mechanical and Industrial Engineering*", Vol. 5, No. 6, pp. 483-488, (2011).
4. A. F. Khadraw, M. A. Al Nimr and M. A. Hader, "Thermal equilibrium assumption in transient natural convection flow in porous channel as described by a hyperbolic heat conduction model" *J. of Porous media*, Vol. 13, No.6, pp. 529 – 535 (2010).
5. M. A. Hader, M. A. Al-Nimr and V. A. Hammoudeh, "Transient Thermal Response of a Homogeneous Composite Thin Layer Exposed to a Fluctuating Heating Source under the Effect of the Dual-Phase-Lag Heat-Conduction Model", *Int. J. Thermophysics*, Volume 27, Number 2 / March, 2006.
6. M. A. Al-Nimr, M. A. Hader, Vladimir A. Hammoudeh, "Examination of the Thermal Equilibrium Assumption in the Microscopic Parabolic Heat Conduction Model Under the Effect of Two Types of Heating Sources", *Heat Transfer Engineering*, Volume 26, Issue 2, 2005, Pages 75-80
7. Najji, M., Al-Nimr, M.A., and Hader, M., "The validity of using the microscopic hyperbolic heat conduction model under harmonic fluctuating boundary heating source", *Int. J. Thermophysics*, Vol. 24(2), pp. 545-557 (2003).
8. Al-Nimr, M.A., Hader, M. and Najji, M., "Use of the microscopic parabolic heat conduction model in place of the macroscopic model: Validation criterion under harmonic boundary heating", *Int. J. Heat Mass Transfer*, Vol. 46(2), pp. 333-339 (2003).
9. Hader, M., Al-Nimr, M.A., and Daqqaq, M. F., "Effect of operating pressure on the performance of a novel summer air conditioning system", *Heat and Mass Transfer*, Vol. 39, pp. 395-400 (2003).
10. Al-Nimr, M.A., Abu-Hijleh, B. and Hader, M., "Effect of thermal losses on the microscopic hyperbolic heat conduction model", *Heat and Mass Transfer*, Vol. 39,201-207 (2003).
11. Hader, M., Al-Nimr, M.A., and Abu Nabah, Bassam, "The dual-phase-lag heat conduction model in thin slab under fluctuating volumetric thermal disturbance", *Int. J. Thermophysics*, Vol. 23(6), pp. 1669-1680 (2002).
12. Hader, M. and Al-Nimr, M.A., "Thermal behavior of a thin layer carrying pulsating signals in the dual-phase-lag model", *Heat Transfer Engineering*, Vol. 23(3), pp. 35-41 (2002).
13. Najji, M., Al-Nimr, M.A., and Hader, M., "Temperature and thermal stress behavior of a brake system-Lumped analysis, *Heat and Technology*", Vol. 19(1), pp. 75-84 (2001).
14. Hader, M., Al-Nimr, M.A., and Daqqaq, M. F., "Effect of operating pressure on the performance of a novel summer air conditioning system", *IASTED International Conference on Power and Energy Systems (EuroPES2001)*, Rhodes-Greece (2001).
15. Al-Nimr, M.A., Daqqaq, M. F. and Hader, M. A. " Effect of working fluids on the performance of a novel summer air conditioning system", *Int. Communications in Heat and Mass Transfer*, Vol. 28(4), pp. 565-573 (2001).
16. Al-Nimr, M.A., Hader, M. and Najji, M., "Transient pulsating flow in channels partially filled with a porous material, *Journal of Porous Media*", Vol. 4(2), pp. 187-193 (2001).
17. Al-Nimr, M.A., and Hader, M., "Melting and solidification under the effect of phase-lag concept in the hyperbolic conduction equation", *Heat Transfer Engineering*, Vol. 22(2), pp. 1-8 (2001).
18. Al-Nimr, M.A., and Hader, M. A., "MHD free convection flow in open-ended vertical porous channels", *Chemical Engineering Science*, Vol. 54(12), pp. 1883-1889 (1999).
19. M. A. Hader, and M. A. Jog, "Effect of drop Deformation on Heat Transfer to a Drop suspended in an Electrical Field," *Journal of Heat Transfer*, Vol. 120, No. 3, pp. 662-689, (1998).
20. M. A. Hader, and M. A. Jog, "Continuum plasma flow past a sphere," *Physics of Plasmas*, Vol. 4, pp. 902-909, (1998).
21. M. A. Jog, and M. A. Hader, "Transient Heat Transfer to a Spheroidal Liquid Drop Suspended in an Electric Field," *International Journal Heat and Fluid Flow*, Vol. 18, pp. 411-418, (1997).
22. M. A. Hader, A. Verma, and M. A. Jog, "Numerical Investigation of Heat Transfer To A Non-Spherical Drop Suspended in An Electric Field: Internal Problem," *ASME National Heat Transfer conference*, Baltimore, MD, HTD-Vol. 342, No. 4, pp. 59-66.(1997)

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23. M. Kumar, M. M. Cahay, S. Shi, K. P. Rornker, M. A. Hader, and F. Gerner, "A Hybrid Model of Carrier Transport Through Graded Heterojunction Bipolar Transistors," Presented at the 188th Meeting Of the Electrochemical Society," October, 1995.
24. Hader, M. A., F. M. Gerner, T. Kumar, M. M. Cahay, T. Concklin, and K. P. Rornker, "An Analytical Comparison of GaAs and InP Based HBTs Including Thermal effects", Presented at the 188th Meeting Of the Electrochemical Society," October, 1995.
25. El-Shaarawi, M., Al-Nimr, M.A. and Hader, M.A., "Transient conjugated heat transfer in concentric annuli", Int. J. Numerical Methods for Heat & Fluid Flow, Vol. 5(5), pp. 459-473 (1995).
26. Al-Nimr, M.A. and Hader, M. A., "Transient conjugated heat transfer in the developing laminar pipe flow," J. Heat Transfer ASME 116, pp. 234-236 (1993).