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Ahmad Alshyyab

Department of Aeronautical Engineering-Faculty member,
Faculty Of Engineering-Assistant Dean

Country of Citizenship: Jordan
Date of Birth: April 15, 1968.
Marital Status: Married (5 Childs).

EDUCATION

2004 **Ph.D.**, Mechanical Engineering, The University of Toledo, Toledo, Ohio, USA.
1993 **M.Sc.**, Mechanical Engineering, Jordan University of Science and Technology, Irbid, Jordan.
1991 **B.Sc.**, Mechanical Engineering, Jordan University of Science and Technology, Irbid, Jordan.

PROFESSIONAL EXPERIENCE

2/2011 – Present: Jordan University of Science and Technology , Irbid 22110, Jordan:
Assistant Professor, Department of Aeronautical Engineering.

9/2012 – Present, Dean Assistant

3/2005 - 2/2011: The Hashemite University, Zarqa, Jordan: Assistant Professor,
Department of Mechanical Engineering.

3/2009 - 2/2011: Director of the “Non-Destructive Testing Center” (NDT).

9/2000 – 12/2004: Teaching and Research Assistant, The University of Toledo, USA.

1993 – 2000: Ministry of Public Works and Housing, Jordan.

1991– 1993: Teaching Assistant, Jordan University of Science and Technology, Jordan

HONORS AND AWARDS

- The University of Toledo, Full Time Scholarship for International Students, 2001

TEACHING EXPERIENCE

- Jordan University of Science and Technology.
 - Aerodynamics (1)
 - Aircraft Structural Materials
 - Aircraft Structure
 - Aircraft Structure (1)
 - Dynamics
 - Fluid Mechanics for Mechanical Engineers

- Gas Dynamics
 - Mechanical vibrations
 - Numerical Methods for Engineers
 - Propulsion
 - Thermodynamics (2)
- Hashemite University, Jordan.
 - Machine Element Design
 - Mechanical Vibrations
 - Theory of Machines
 - Strength of Materials
 - Dynamics
 - Engineering Analysis
 - Strength of Material Lab.
 - Fluid Lab.
 - Hydraulic Machines
 - Finite Element Methods
 - Mechanical Engineering Problem Solving

TEACHING GOALS

- Complementing the existing expertise with the new technologies and novel areas.
- Having graduates with solid understanding of engineering concepts.
- Increase the graduates' confidence in what they have learned and practice applying it.
- Enhance the graduate communication, conceptual thinking and reporting skills.
- Contributing in improvement of the learning skills of the teaching assistants.
- Meet the social objectives of the continuing education and industrial training programs.

GRADUATE STUDENT ADVISING

Committee Member:

- Abraham Abu Alsukhen, The Hashemite University, "Crack Detection and Crack Orientation Effect Using Ultra Sonic Inspection Method and Vibration Based Method" (2010)
- Mahmood Al-Omary, M.Sc., Jordan University of science & Technology, - "Design of Horizontal-Axial Wind Turbine Using Numerical and Experimental Analysis" (2009)
- Mohammad M. Bataineh, Jordan University of science & Technology, "Numerical Study of Thermomechanical Behavior of Functionally Graded Hollow Circular Cylinders" (2008)

- Fatima Saleh Al-Wydiam, Jordan University of science & Technology, “ Monitoring Defects of Ceramic Tiles in International Ceramic Industrial Company using Fuzzy subtractive Clustering Based System Identification Method.” (2007)
- Kholoud Bani Salameh, Jordan University of science & Technology, “Numerical Simulation of Transient Thermal Stresses in a Cylinder of Functionally Graded Materials.” (2007)

RESEARCH INTERESTS

- Fracture Mechanics and Non-Destructive Evaluation
- Root Cause of Machine Failure and Vibration Signature Diagnose
- Linear and Nonlinear Dynamics
- Mechanical Stability of Frames and Structures
- Power Transmission and Gearing
- Mechanical Vibrations
- Micro Fluidics
- Thermoelasticity

RESEARCH PROJECTS

- Non-Linear Dynamics of Multi Mesh Gear Trains Having Shaft Flexibilities, the Hashemite University, JD1000, March, 2005 – March, 2006.
- Faculty for factory, Jordan University, Fourth and Fifth Cycles.

RESEARCH GOALS

- Attracting external funds in order to activate practical and industrial oriented researches
- Serving the local industries with innovative solutions through collaborative research programs
- Developing multidisciplinary (Mechanical - Electrical - Fluid - Thermal) system-levelled researches

CONSULTATION EXPERIENCE

1995 – 2000 Ministry Of Public Works, Jordan

- Responsible for preparing and following up electromechanical design works of new government Buildings.
- Supervising of Supply and Installations of Electromechanical Works.
- Preparing Contract Documents and Bill of Quantities and enforcing Local and International Engineering Standards and Specifications.

TRAINING COURSES

- Design of Medical gas Pipe Networks, Installations, Supervision, and Testing as well as Commissioning. July, 1999 Hospital and Technical Services Limited, Chester Field, UK
- Computerized Cooling and Heating Load Calculation, Sept, 1999, Jordan's Engineers Association, Amman, Jordan.

- AutoCAD and Engineering Drawing Course, August, 1999, Applied Technical Center, Irbid Jordan.

WORKSHOPS AND TRAINING COURSES:

- Mechanical Equipments Maintenance training course, May 2008, ICTA, Abu-Dubai, UAE.
- Practical Experiments of Non-destructive Testing., Non-destructive Testing Center, Hashemite University, Jordan

PROFESSIONAL MEMBERSHIPS

- Member of Jordan Engineering Association

INSTITUTIONAL AND PROFESSIONAL SERVICE

- Engineering Assistant Dean, Jordan University of Science and Technology 9/2012-present
- Member and coordinator of the engineering college website Committee, Jordan University of Science and Technology, 9/20012 – present.
- Director of the Non-Destructive Testing & Evaluation Center (NDE), Hashemite University, 2009–present.
- Representative of the Department of Mechanical Engineering at the College of Engineering Council, the Hashemite University, 2006–2007.
- Committee head of the graduation projects, Mechanical Engineering Department the Hashemite University, 2007 – 208.
- Member of the Scientific Research Committee, Mechanical Engineering Department the Hashemite University, 2008 – 2009.
- Coordinator of the examination committee, Mechanical Engineering Department the Hashemite University, 2007 – 2008.
- Member, of the Library Committee, Mechanical Engineering Department the Hashemite University, 2009 – 2010.
- Member, of the curriculum Committee, Mechanical Engineering Department the Hashemite University, 2008 – 2009.
- Member and Coordinator of ABET Committee, Mechanical Engineering Department the Hashemite University, 2007 – 2009.

CONFERENCES ORGANIZED

- Member of the organization committee of the “3rd International Conference on Thermal Engineering: Theory and Applications,” Amman, Jordan, May 21 – 23, 2007.
- Member of the organization committee of the “3rd National Technological Parade,” , Jordan University of science & Technology,2010

REVIEWER

- Jordan Journal of Mechanical and Industrial Engineering.
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PUBLICATIONS: JOURNAL PAPERS

1. Ahmad Al-Shyyab and A.F. Khadrawi, "Hydrodynamics and Thermal Behaviors of Fluid Flow between Two Rotating Micro-Concentric cylinders", *Journal of Heat and Technology*, Vol. 29, n. 1, 2011, pp. 75–86.
2. A.F. Khadrawi and Ahmad Al-Shyyab, "Slip Flow and Heat Transfer in Axially Moving Micro-Concentric cylinders", *International Communications in Heat and Mass Transfer*, Vol. 37, 2010, pp. 1149–1152.
3. A. Al-shyyab, K. Alwidyan, A. Jawarneh, and H. Tlilan, " Non-linear dynamic behavior of compound planetary gear trains: model formulation and semi-analytical solution" *Journal of Multi-Body Dynamics*, Vol. 223, Part K, 2009, pp. 199-210.
4. Al-shyyab A. and Kahraman A., "Non-linear dynamic Model for Planetary Gear Sets" *Journal of Multi-Body Dynamics*, Vol. 221, Part K, 2007, pp. 567-576.
5. Ahmad Al-Shhyab, Ahmet Kahraman., "A Nonlinear Torsional Dynamic Model of Multi-Mesh Gear Trains Having Flexible Shafts" *Jordan Journal of Mechanical and Industrial Engineering*, Vol. 1, Issue 1, 2007 pp. 31 – 41.
6. Jawarneh A.M., Al-Shyyab A, Tlilan H, Ababneh A, "Enhancement of a cylindrical separator efficiency by using double vortex generators", *Energy Conversion and Management*, vol. 50, issue 6, 2009, pp.1625-1633.
7. Tlilan H.M, Jawarneh A.M, Al-Shyyab A.S," Strain-concentration factor of cylindrical bars with double circumferential U-notches under static tension", *Jordan Journal of Mechanical and Industrial Engineering*, vol. 3, no. 2, 2009, pp. 97-104.
8. Tlilan H.M, Al-Shyyab A.S, Jawarneh A.M, Ababneh A.K," Strain-Concentration Factor of Circumferentially V-Notched Cylindrical Bars under Static Tension", *Journal of Mechanics*, vol. 24, no.4, 2008, pp. 419-427.
9. Jawarneh A.M., Tlilan H., Al-Shyyab A., Ababneh A., " Strongly Swirling Flows in a Cylindrical Separator", *Minerals Engineering*, vol. 21, issue 5, 2008, pp. 366-372.
10. Al-shyyab A. and Kahraman A., "Non-linear dynamic analysis of a multi-mesh gear train using multi-term harmonic balance method: period-one motions" *Journal of Sound and Vibration* 284, 2005, pp. 151-172.
11. Al-shyyab A. and Kahraman A., "Non-linear dynamic analysis of a multi-mesh gear train using multi-term harmonic balance method: sub-harmonic motions" *Journal of Sound and Vibration* 279, 2005, pp. 417-451.
12. Al-Nimr M. A. , Al-Jarrah M., and Al-Shyyab A. "Trial solution methods to solve unsteady PDE" *International Communications in Heat and Mass Transfer*, 21, 1994, pp. 742-753.

PUBLICATIONS: CONFERENCE PAPERS

1. Ahmad Al-Shyyab and A.F. Khadrawi, "Semi-Analytic Solution and Hydrodynamics Behavior of Fluid Flow in Micro-Converging plates", World Academy of Science, Engineering and Technology, Issue 60, Dec. 2011, Thailand.
2. Ahmad Al-Shyyab, Muhammad M. Kwafha, Suleiman E. Al-Lubani and A. F. Khadrawi, "Steady Hydrodynamics and Thermal Behaviors of Fluid flows in Micro – Parallel Plates (Couette Flows)", International Conference on Mechanical and Aerospace Engineering (ICMAE 2010)
3. A. F. Khadrawi, Saad A. Abo-Qudais and Ahmad Al-Shyyab, "Transient Thermal Behavior of Hot-Mix Asphalt Pavement" International Conference on Mechanical and Aerospace Engineering (ICMAE 2010)
4. Al-shyyab A. and Alwidyan Khalid, "A Nonlinear Dynamic Model for Compound Planetary Gear Sets" Proceedings of The Third International Conference on APPLIED and THEORITICAL MECHANICS' 07,

References

- Upon request