

## Adnan Mahmoud Mohammad Al-Ghasem, Ph.D.

### Assistant Professor.

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### Personal Information:

- Nationality: Jordanian.
- Date of birth: October 3, 1973
- Gender: Male.
- Marital status: Married with 4 children

### Education:

- **Ph.D. in Mechanical Engineering** from **Texas A&M University (TAMU)**, College Station, **TX, USA** (2004-2007). **GPA** of **(4.0/4.0)**, **Dissertation title**: “WINDBACK SEAL DESIGN FOR GAS COMPRESSORS: A NUMERICAL AND EXPERIMENTAL STUDY”.
- **M.S. in Mechanical Engineering** from **Texas A&M University (TAMU)**, College Station, **TX, USA** (2001-2004). **GPA** of **(4.0/4.0)**, **Dissertation title**: “Rotordynamic Coefficients Measurements Versus Predictions for a High-Speed Flexure-Pivot Tilting-Pad Bearing (Load-Between-Pad Configuration)”.
- **M.Sc. in Mechanical Engineering** from **Jordan University of Science and Technology, JORDAN**, (1996-1999). **GPA** of **(89.9/100)**, **Thesis Title**: “Heat Transfer Characteristics of a Non-Newtonian Fluid on a Power Law Stretched Surface with Suction or Injection”.
- **B.Sc. in Mechanical Engineering (Mechatronics)** from **Jordan University of Science & Technology (JUST)**, JORDAN, (1991-1996). **GPA** of **(83.4/100)**, **Rank**: First.

### Research interests:

- Mechatronics systems.
- Dynamics & Control
- Automation (Electro-Pneumatics, Electro-Hydraulics)
- Robotics
- CFD-Modeling and Simulation using Fluent software
- Fluid film bearing and seals.
- Frequency response and parameter identification.
- Renewable energy system( CPC-Concentrated Parabolic Collectors)

### Scholarship, fellowships, and Awards:

- Research assistant working in Turbomachinery laboratory located at Texas A@M University from 2002-2006 supervised by Professor Dara Childs (2002-2005), Professor Gerald Morison(2005-2006) Ph.D. funded by **Beyond Petroleum( BP )** Company.
- Jordan chair award 1000\$ by Prof. Dara Childs and instate tuition waiver from 2002-2006.
- Scholarship for 5-years in M.Sc. and Ph.D. program in TAMU funded by Jordan University of Science and Technology.

- Honored for academic excellence Jordan University of Science and Technology for the B. Sc. and M.Sc. programs ranked first.

### Professional experience:

- **Current (since September-2016):** Assistant Professor and chairman of the Mechanical Engineering Department of Fahad bin Sultan University.
- **February-2007 to September 2016:** Assistant Professor at the Mechanical Engineering Department of Jordan University of Science & Technology. I have been serving the mechanical engineering department in several aspects not limited to:
  - 1- Involved in establishing, constructing and upgrading the Mechanical Engineering labs including the new “Robotics and UAV” Lab at Jordan University of Science & Technology.
  - 2- Member of tender assessment committee for upgrading both mechatronics and control labs.
  - 3- Member of the **ABET** accreditation committee (2013/2014 and 2014/2015) at the mechanical Engineering department.
  - 4- Member of University council for **2007-2008, 2012-2013**.
  - 5- Served as a member in (Student affair committee, Scientific research and higher education committee, curriculum committee, Social committee, Head of department assistant)
  - 6- I also teach the following courses:
    - Statics
    - Dynamics
    - Engineering Mechanics
    - Engineering Strength
    - Dynamic and Vibration
    - Numerical Analysis
    - Instrumentation and Dynamic Systems Lab.
    - Strength of material Lab.
    - Mechatronics Lab.
    - Introduction to Mechatronics
    - Micro-controller Applications
    - Automatic Control
    - Digital Control
    - Advanced Control systems
    - Nero-Fuzzy Intelligent Systems
- **Aug-1999 to Aug-2001:** Full time lecturer at the Mechanical Engineering Department, **JUST**., Teaching the following courses
  - Engineering workshop,
  - Engineering Drawing
  - Numerical Analysis.
  - Strength of material Lab.

### Publications:

- 1) Khaled S. Hatamleh, Mohammad Al-Shabi, **Adnan Al-Ghasem**, and Asad A Asad, “*Unmanned Aerial Vehicles Parameter Estimation Using Artificial Neural Networks and Iterative Bi-Section Shooting Method*”. *Applied Soft Computing*. **36**(C), November **2015**. pp. 457-467.

- 2) Khaled S. Hatamleh, Qais Khasawneh, **Adnan Al-Ghasem**, M. A. Jaradat, Laith Sawaqed, and Mohammad Al-Shabi., "Scanning Electron Microscope Fine Tuning Using Four-Bar Piezoelectric Actuated Mechanism". *Mechanism and machine theory*. (**Under Review**).
- 3) Alshaer, B., **Al-Ghasem, A.**, Al-ShyyabA.,andAlhanouti, M. "Tyre Modelling for an Autonomous Articulated Wheel Loader Conducting a V-Shape Loading Cycle Simulation"Int. J. of Heavy Vehicle Systems.2015 Accepted for publication.
- 4) Batayneh,W. , Al-Araidah,O., Bataineh,K., and **Al-Ghasem, A.** " Fuzzy-Based Adaptive Cruise Controller with Collision Avoidance and Warning System", *Mechanical Engineering Research*,June 2013, vol.3,No. 1, pp. 143-151.
- 5) **Al-Ghasem, A.**, Tashtoush, G. and Aladeemy, M." *Experimental study of tracking 2-D Compound Parabolic Concentrator (CPC) with flat plate absorber*", International Conference on Renewable Energy Research and Applications (ICRERA),Madrid ,Spain- October 20-23, 2013.
- 6) **Al-Ghasem, A.** and Ussaleh, N. "Air Conditioner Controlled Using Neural Network and PID Controller", International Symposium on Mechatronics and its Applications, Sharjah, UAE- April 10-12,2012.
- 7) **Al-Ghasem, A.** and Childs, D., "Rotordynamic Coefficients; Measurements versus predictions for a High Speed Flexure-Pivot Tilting-Pad Bearing (Load-Between-Pad Configuration)," *ASME J. For Engineering for Gas Turbines and Power*, October 2006, 128 (4), pp. 896-906.
- 8) **Al-Ghasem, A.** and Childs, D., "Rotordynamic Coefficients; Measurements versus predictions for a High Speed Flexure-Pivot Tilting-Pad Bearing (Load-Between-Pad Configuration)," *ASME Turbo Expo 2005*,volume 4, Reno, Nevada, USA, June 6–9, 2005
- 9) **Adnan Al-Ghasem**, G. L. Morrison, and John P. Platt, "*Experimental and Numerical Investigation of a Gas Compressor Windback Seal*", *J. Tribol.* -- January 2007 -- Volume 129, Issue 1, 129 (6 pages).
- 10) Morrison, G.L., **Al-Ghasem, A.**, "Experimental and computational analysis of a gas compressor windback seal,"*Proceedings of the ASME Turbo Expo*, 4 PART B, pp. 1231-1247, 2007.
- 11) Al-Ghasem, A., Morrison, G.L., Platt Jr., J.P., "Experimental and numerical investigation of a gas compressor windback seal" *Proceedings of STLE/ASME International Joint Tribology Conference, IJTC 2006*.
- 12) Childs, D., Rodriguez. L., Cullotta, V., **Al-Ghasem, A.**, and Graviss, M., "Rotordynamic-Coefficients, and Static (Equilibrium Loci and Leakage) Characteristics for Short, Laminar-Flow Annular Seals," *ASME J.Of Tribology*, April 2006, 128, pp. 378-387
- 13) TASHTOUSH Bourhan (1) ; KODAH Z. (1) ; **AL-GHASEM A.**," *On thermal boundary layer of a non-Newtonian fluid on a power-law stretched surface of variable temperature with suction or injection*",*Heat and mass transfer*, 2001, vol. 37, no4-5, pp. 459-465.
- 14) Kodah, Z. H.; **Al-Gasem, A. M.**," Non-Darcy mixed convection from a vertical plate in saturated porous media-variable surface heat flux", *Heat and Mass Transfer*, Volume 33, Issue 5/6, pp. 377-382 (1998).
- 15) Tashtoush, Bourhan; Kodah, Z; **Al-Ghasem, A.**," *Heat transfer analysis of a non-Newtonian fluid on a power-law stretched surface with suction or injection for uniform and cooled surface temperature*", *International Journal of Numerical Methods for Heat & Fluid Flow*, Volume 10, Number 4, 2000 , pp. 385-396(12).

## Scientific and Professional Societies

- American Society of Mechanical Engineers (ASME)
- Reviewer for the *ASME Journal of Dynamic Systems Measurement and Control*.
- Reviewer of *Energy Conversion and Management* journal.
- Jordan Engineers Association
- Society of JUST Faculty members

## Professional development activities:

- Solar Cooling in Jordan: September 28, 2014
- Development of Curriculum and Study Plans according to ABET: March 11 & 13 & 15, 2014
- Modern University Instructional Methods: February 27 and March 3, 2008
- Testing and Evaluation "University Examinations": March 5-6, 2008
- Introduction to Wireless Networks: January 27-29, 2008

## References

<p style="text-align: center;"><b>Dara Childs</b> Leland T. Jordan Chair Regents Professor Director of Turbomachinery Laboratory Mechanical Engineering Department Texas A&amp;M University, College Station, TX, 88003 Phone: +(1)979.845.7417 Email: dchilds@tamu.edu</p>
<p style="text-align: center;"><b>Dr. Mohammad A. Jaradat</b> Chair, Mechanical Engineering Department Jordan University of Science and Technology. Irbid, Jordan. E-mail: majaradat@just.edu.jo Phone: + (962)79-585-5233.</p>
<p style="text-align: center;"><b>Professor Bourhan M. Taschtouch</b> Mechanical Engineering-Faculty member Head of Society of JUST Faculty members Jordan University of Science &amp; Technology, Irbid, Jordan. Email: bourhan@just.edu.jo Phone: + (962)79-766-7178.</p>