

## **Prof. Dr.-Ing. M. Abu Hilal**

Mechanical Engineering Department, An-Najah National University, Nablus, Palestine  
Tel: 970 9 2345113 ext 2215. E-mail: [abuhilal@najah.edu](mailto:abuhilal@najah.edu)

---

### **CURRENT POSITION**

Fulltime Lecturer at the Mechanical Engineering Department, An-Najah National University,  
August 2007 – Present

### **EDUCATION**

Dr.-Ing, Mechanical Engineering, Mechanical Vibrations and Machine Dynamics  
Technical University Berlin, First Institute for Mechanics, Berlin, Germany, 1993.

Dipl.-Ing, Mechanical Engineering, Mechanical Design,  
Kaiserslautern University, Kaiserslautern, Germany, 1988.

### **WORK EXPERIENCE**

#### **Academics:**

- October 2011 to present : Professor, Department of Mechanical Engineering,  
An-Najah National University, Nablus, Palestine
- August 2007 to Sept. 2011: Associate Professor, Department of Mechanical Engineering,  
An-Najah National University, Nablus, Palestine
- Sept.2006 to August 2007: Lecturer (Associate Professor), Department of Mechanical Technology  
Jazan College of Technology, Jazan, Saudi Arabia
- 25.6.2001 to Sept.2006 : Associate Professor, Department of Mechanical and Industrial  
Engineering, Applied Science University, Amman, Jordan
- Sept.1994 to 24.6.2001 : Assistant Professor, Department of Mechanical and Industrial  
Engineering, Applied Science University, Amman, Jordan
- Oct. 1988 - Oct. 1993 : Teaching and Research Assistant, First Institute for Mechanics,  
Technical University Berlin, Berlin, Germany

#### **ADMINISTRATIVE**

- Dec, 2006 to Aug, 2007 : Head of Mechanical Technology Department, Manufacturing and  
Automotive Technology, Jazan College of Technology
- Jul,2002 to Sep,2003 : Dean Faculty of Engineering,  
Applied Science University, Amman, Jordan
- Sept, 1999 to May, 2001; : Head-Mechanical and Industrial Department  
Oct, 2001 to Sep, 2002 : Applied Science University, Amman, Jordan

1998/99	Representative of Engineering Faculty in the University Council Applied Science University, Amman, Jordan
1996/97, 1997/98 2005/06	Member of the Faculty Council Applied Science University, Amman, Jordan
2001/02, 2002/03	Member of the editorial board of <i>Jordan Journal of Applied Science</i>

During My work, I was a chairman or a member in the committees that:

- Got the ISO 9001:2000 (EMS) certificate for the engineering college including all its departments in Applied Science University in 2002/2003.
- Implemented general and specific accreditation requirements for the engineering college in Applied Science University for the Jordanian Ministry of Higher Education.
- Developed the Renewable Energy Research Center in Applied Science University.
- Wrote the specifications and supervised equipping the mechanical and industrial department's facilities and their labs in Applied Science University.
- Developed and modified study plans and courses description in the Applied Science University and Najah University, focusing on CAD and practical labs materials.
- Wrote the lab manuals and designed the experiments in Applied Science University.
- Member of many thesis defense committees for Master students.

### **Certifications or professional registrations**

### **ADDITIONAL CAREER EXPERIENCE - PART TIME**

### **SOCIAL AND ORGANIZATIONAL SKILLS**

#### **COMPUTER SKILLS**

MS Word, Mathematica, MatLab, Adobe Illustrator

#### **TRAINING**

#### **AWARDS**

#### **COURSES TAUGHT:**

##### **BACHELOR COURSES:**

Statics, Dynamics, Mechanics of Materials I and II, Finite Elements Methods, Mechanical Vibration Lab, Mechanics of Materials Lab, Machine Design, Mechanical Vibration, Advanced Engineering Mathematics I and II, Automatic Control Systems, Material Testing, Engineering Drawing, Environmental Statistics, Vehicular Brake Systems, Engineering Mechanics.

##### **MASTER LEVEL COURSES:**

##### **PUBLICATIONS (Selection)**

##### **REFEREED JOURNALS:**

1. N. Beithou, **M. Abu-Hilal** 2011 *Jordan Journal of Mechanical and Industrial Engineering* **5**, No.5,471-477. Experimental Energy Study for Domestic Hot Water Storage Tanks.

2. **M. Abu-Hilal** and A. R. Touqan 2010 *Jordan Journal of Mechanical and Industrial Engineering* **4**, 433-442. Conceptual Understanding of Mass and Stiffness Fixed Points of Discrete Vibrational Systems.
3. **M. Abu-Hilal** and N. Beithou, 2007 *Journal of Mechanical Engineering* **58**,30-50. Free transverse vibrations of a triple-beam system.
4. **M. Abu-Hilal** 2007 *Jordan Journal of Applied Science* **9**, 85-97. Amplification factors of beams with general boundary conditions due to a moving constant load.
5. **M. Abu-Hilal** 2006 *Journal of Sound and Vibration* **297**, 477-491. Dynamic response of a double Euler-Bernoulli beam due to a moving constant load.
6. S. Abdallah, **M. Abu-Hilal**, M. S. Mohsen 2005 *Desalination* **183**, 95-104. Performance of a photovoltaic powered reverse-osmosis system under local climatic conditions.
7. **M. Abu-Hilal** 2003 *Archive of Applied Mechanics* **72**, 637-650. Vibration of Beams with General Boundary Conditions due to a Moving Random Load.
8. **M. Abu-Hilal** 2003 *Journal of Sound and Vibration* **267**, 191-207. Forced Vibration of Euler-Bernoulli beams by means of dynamic Green's Functions.
9. H. S. Zibdeh and **M. Abu-Hilal** 2003 *Engineering Structures* **25**, 397-404. Stochastic Vibration of a Laminated Composite Coated Beam Traversed by a Random Moving Load.
10. **M. Abu-Hilal** 2002 *Journal of Sound and Vibration* **254**, 997-1004. Mass and Stiffness Fixed Points of Vibrational Discrete Systems.
11. M. I. Qaisi and **M. Abu-Hilal** 2001 *Journal of Sound and Vibration* **241**, 635-642. Analysis of a Forced Strongly Non-linear Two-Degree-of-Freedom System by Means of The Power Series Method.
12. **M. Abu-Hilal** and M. Mohsen 2000 *Journal of Sound and Vibration* **232**, 703-717. Vibration of Beams with General Boundary Conditions Due to a Moving Harmonic Load.
13. **M. Abu-Hilal** 1998 *Journal of Shock and Vibration* **5**, 199-205. Fixed points of two-degree of freedom Systems.

#### **BOOK:**

**M. Abu-Hilal** 1993 *Verbesserung des Fahrkomforts von Fahrzeugen durch ein Stahlfeder-Motorlager mit spielbehaftetem Feder-Dämpfer-Element*. Aachen: Verlag Shaker, ISBN 3-86111-689-8 (Dissertation thesis in German).

#### **REFEREED CONFERENCES:**

N. Beithou, M. Altaani, M. Al-Hakeem, **M. Abu Hilal**. Proposed Domestic Hot Water Storage System with PLC Control. The Global Conference for Renewables and Energy Efficiency in Desert Regions (GCREEDER-2011), Amman 26-28/4/2011.

M. Mohsen, **M. Abu-Hilal**, M. Abdeljawad, and O. Al-Jurf 1999 *Proceeding of The Third Jordanian Mechanical & Industrial Engineering Conference*. A Novel Design for Stone Hammering Machine 830-8190, Amman, Jordan.

#### **REFERENCES**

Available upon request

---