

MOHAMMAD OMARI, Ph.D.

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EDUCATION

- PhD. in Mechanical Engineering from New Mexico State University (Jun. 2013).
Dissertation title: Evaluation of Changes in Microstructure and Mechanical Performance of Metals via Electrical Resistivity Measurements. GPA (3.85)
- MS. in Mechanical Engineering from New Mexico state University (May 2011).
Concentration in Materials Micromechanics. GPA (3.82).
- MS. in Industrial Automation from Yarmouk University, Jordan (May 2006).
Thesis title: Development of a CAD/CAM system for forging process using finite element method. GPA (88.1/100).
- BS. Mechanical Engineering/Design and Production, Jordan University of Science and Technology, Jordan (July 2001).

RESEARCH INTERESTS

- Composites materials include (Green bio-composites and nanocomposites).
- General area of microstructure-property relations for heterogeneous materials.
- Cross connection properties between elastic moduli and electrical resistivity.
- Dislocations study for metals under static and dynamic loading using both quantitative and qualitative techniques.
- General CAD/CAM and traditional manufacturing processes.

PROFESSIONAL EXPERIENCE

- Assistant Professor, *JUST. ME Dept.* Sep.2016 – Present
- Assistant Professor, *Hashemite University. ME Dept.* Aug.2014 – Sep.2016
- College Assistant Professor, *New Mexico State University. IE Dept.* Aug. 2013– Jun 2014
- Teaching Assistant, *New Mexico State University/Mechanical Engineering Dept.* 2009-2013
- Laboratory Engineer, *Jordan University of Science & Technology/ IE Dep.* 2002-2009
- Production and Quality Engineer, *AEICO LTD CO./ Jordan* Nov.2001-Sep.2002
- Quality Control Engineer and ISO Auditor, *AL-NASER group,* July2001–Oct.2001

PUBLICATION

- Modeling of anisotropic elastic properties of multi-walled zigzag carbon nanotubes, Ahmad Almagableh, **Mohammad A Omari**, Igor Sevostianov. *International Journal of Engineering Science*, 144, 2019, pp. 103-127
- Enhancing the surface hardness and roughness of engine blades using the shot peening process, **Mohammad Omari**, Hamzah Mousa, Faris AL-Oqla, and Mohammad Aljarrah. Accepted in *International Journal of Minerals, Metallurgy and Materials*. Nov1st, 2018.
- Predicting the potential of biomass-based composites for sustainable automotive industry using a decision-making model. F AL-Oqla, **M Omari**, A Al-Ghraibah, *Lignocellulosic Fibre and Biomass-Based Composite Materials* 1, 522
- Predicting the Effect of Nano-Structural Parameters on the Elastic Properties of Carbon Nanotube-Polymeric based Composites. A ALMAGABLEH, FM AL-OQLA, **MA OMARI** *International Journal of Performability Engineering* 13 (1)
- Elastic Behavior of Carbon Nanotubes Reinforced Composites: Micromechanical Modeling A Almagableh, **MA Omari**, AS Awad, *Journal of Applied Research on Industrial Engineering* 4 (3), 199–20
- Evaluation of changes in plastic yields parameters of titanium CP-2 using electrical resistivity measurements. **Mohammad A. Omari**, Tűri Balázs, and Igor Sevostianov. *Int. J. Fract.* Nov. 2013. <http://link.springer.com/article/10.1007%2Fs10704-013-9915-3>
- Estimation of changes in the mechanical properties of stainless steel subjected to fatigue loading via electrical resistance monitoring. **Mohammad A. Omari** and Igor Sevostianov. *Int. J. of Engineering Science*, 2013, 65:40–48. <http://www.sciencedirect.com/science/article/pii/S0020722513000281>
- Evaluation of the growth of dislocations density in fatigue loading process via electrical resistivity measurements. **Mohammad A. Omari** and Igor Sevostianov. *Int. J. Fract.* 2013, 179:229-235. <http://link.springer.com/article/10.1007/s10704-012-9780-5>
- Evaluation of changes in dislocation density in TI-CP2 in the process of quasi-static loading using electrical resistance measurement. Ignatius Yulianto, **Mohammad A. Omari**, and Igor Sevostianov. *Int. J. Fract.* 2012, 175:73–78. <http://link.springer.com/article/10.1007/s10704-012-9698-y>
- Development of a CAD/CAM system for simulating closed forging process using Finite Element Method. Faruq Al-Omari, Mohammad Al-Jarrah, **Mohammad A. Omari** and Mohammed Hayejneh. *Engineering Computations: International Journal for Computer Aided Engineering and Software*, 2009. 26:302-312. <http://www.emeraldinsight.com/journals.htm?articleid=1781048>
- Production Processes Lab. Handout (IE 464), 11 experiments in different manufacturing fields.

TEACHING DIFFERENT COURSES

- Industrial Drawing employs different software.
- Strength of Materials including laboratory.
- Statistics for engineers.
- Engineering Statics.
- Numerical methods for engineers.
- Engineering Instrumentation.
- Engineering Metrology including laboratory.
- Computer Integrated Manufacturing Systems.
- Industrial Automation and Machine Control including laboratory.
- CAD/CAM courses including laboratories.
- Mechanical behavior of materials including laboratory.

EQUIPMENT KNOWLEDGE

Universal Materials Testing Machine, Fatigue Testing Machine, Different Electron Microscopes (SEM and TEM), Optical microscopy, Atomic Force Microscopy (AFM), Lab Volt Robotic arm, CNC Turning and milling machines, X-Y table with servo motors controllers, Siemens PLC with pneumatic stations contains different sensors and actuators, Cutting Forces Dynamometer, many traditional metal machining equipments.

TRAINING COURSES

- Quality Control in Welding Work/ Royal scientific society (2003).
- PLC (Siemens S7 handling & programming) / Engineering Training Center (2004).
- Machining processes using traditional and CNC machines (2004).
- Energy Audit/ National energy research center (2005).
- Mechatronics/ Hashimy University (2005).
- ROBOTICS/ summer university, Lebanon (2005).
- Safety rules inside the industrial labs. (2006).
- Electron Microscopes (SEM and TEM). (2011).

COMPUTER SKILLS

- MS Office (Excel, Word, Power Point).
- Statistical Data Analysis: MINITAB, STATISTICA.
- Scientific Package: Matlab.
- Machine programming: PLC and CNC G-Codes.
- CAD/CAM Packages: Pro/Engineer, AutoCAD, Gibbs CAM, COSMOS, Q-form, Abaqus.