

Bashar Bader Alzuwayer, Assistant Professor of Automotive Engineering

Education:

2005, B.Sc. in Mechanical Engineering, Kuwait University, Kuwait.
2008, M.Sc. in Automotive Engineering, Lawrence Technological University, Southfield, Michigan, USA.
2017, Ph.D. in Automotive Engineering, Clemson University, International Center for Automotive Research, Greenville, South Carolina, USA

Number of years of service on this faculty:

Twelve Years
2006-2008 Master's Degree Scholar
2008-2012 Assistance Teacher
2012-2017 Doctorate Degree Scholar
2017-Present Assistant Professor

Other related experience:

2012-2013 Team leader at Clemson University's International Center for Automotive Research (CU-ICAR), USA
2013-2014 Advanced Powertrain Technologies Researcher, in a collaboration project with Chrysler Group LLC, USA

Teaching interests:

Automotive Powertrain Systems (Internal Combustion Engines and Advanced Transmissions), Mechanical Vibrations, Controls of Mechanical Systems, Modeling and Simulation, Mechanics.

Courses taught at PAAET:

Internal Combustion Engines, Automotive Engines Technology, Power Transmission (1), Power Transmission (2), Automotive Mechanics, Automotive Faults Diagnostics

Research interests:

Modeling and Simulation of Mechanical Systems, Hybrid Vehicles, Advanced Powertrains Technologies (High-Speed Automatic Transmissions, CVT, DCT), Vehicle Drivability and Performance, Optimization and Control of Powertrain Systems, Nonlinear Dynamics.

Principal publications of last five years:

1. CVT Modeling and Simulation: An Optimization Framework for Design and Performance, Ph.D. Dissertation, Clemson University, 2017
2. Alzuwayer, Bashar, et al. *An Advanced Automatic Transmission with Interlocking Dog Clutches: High-Fidelity Modeling, Simulation and Validation*. No. 2017-01-1141. SAE Technical Paper, 2017.
3. Alzuwayer, Bashar, et al. "Model Based Pressure Control of a Push Belt Continuously Variable Transmission." *Modern Mechanical Engineering* 6.04 (2016): 99.
4. Alzuwayer, Bashar, et al. "Modeling and simulation of a series hybrid CNG vehicle." *SAE International Journal of Alternative Powertrains* 3.1 (2014): 20-29.

Scientific and professional societies of which a member:

1. Society of Automotive Engineers, Member
2. Member of Kuwait Society of Engineers.

Honors and awards:

- First place award in Kuwait University Contest for graduation projects 2004/2005
- First place award in Ministry of Awqaf and Islamic Affairs Contest for Kuwait students 2005

Professional service in last five years:

1. Reviewer, SAE International Journal of Passenger Car- Mechanical Systems.
2. Reviewer, Journal of Automobile Engineering
3. Research projects with the automotive industry such as, Chrysler LLC, Delphi Powertrain Systems, Ford Motor Company.

Professional development activities in last five years:

1. Presenter at SAE World Congress, Detroit, Michigan, USA, 2017.
2. Attended Design, Optimization, and Manufacturing of Light Weight Vehicle Structure Conference, Greenville South Caroline, USA, 2015.
3. Attended conference Innovative Technologies for Sustainable Power and Energy Systems, Greenville, South Carolina, USA, 2015.
4. Presenter at Advanced Powertrain Controls Conference, Greenville South Caroline, USA, 2014.
5. Attended SAE World Congress, Detroit, Michigan, USA, 2014.
6. Participation in the evaluation committee at Kuwait National Contest for Science and Engineering, 2018.