**Dr. Haval K. Asker**

**Haval Asker**

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Mechanical Engineer / Applied mechanics

Vibration & dynamics

Dynamic Research Group (DRG), United Kingdom

**Summary**

* I did vibration control research which was partially funded by **Rolls-Royce** to introduce new damping systems based on friction.
* Highly motivated lecturer. Been in the academia and scientific researches for more than 13 years. I have 8 scientific papers.
* My engineering professional and interest areas are:1- applied mechanics. 2- vibration reduction. 3- dynamics of mechanical systems. 4- simulation with finite elements. 5- damping. 6- fibrous structures. 7- dry friction damping (cables and wires).
* Obtained a fully funded scholarship by the **Prime Minister Office of Iraq**.
* I obtained my PhD in mechanical engineering in Sep, 2017 at The **University of Sheffield**, **United Kingdom**.
* Experienced design engineer. I have been a design engineer in a block machine factory for more than 7 years. I am expert in running and maintaining automatic systems. I have managed production lines for 4 years. Supervised and participated in the mechanical maintenance of fully-automated block machine factories.

**Links:**

Google scholar citation: <https://scholar.google.co.uk/citations?user=47E8u_IAAAAJ&hl=en>

Dynamic Research Group (UK): <https://www.drg.ac.uk/people/haval-asker>

Research Gate: <https://www.researchgate.net/profile/Haval_Asker>

Academia: <http://sheffield.academia.edu/HavalAsker>

LinkedIn: <https://uk.linkedin.com/in/haval-asker-a51818b3>

**Experience**

***University Lecturer***

\*April 2004 - Present

**The University of Duhok**- Duhok /Iraq

During my post as a lecturer in the University of Duhok, I have been the module leader for modules such as: *1- Vibrations. 2- Dynamics. 3- Engineering metallurgy. 4- Engineering drawing. 5- Land levelling. 6- Principles of survey. 7- Machinery.5- Computer science.*

I have been a member of exam board for 4 years. I participated in several committees and obtained several Appreciation letters. I presented a number of presentations to the staff of the university covering different engineering subjects.

\*October 2013 – October 2016

**The University of Sheffield** – UK

*1. Advanced experiments and modelling*, 2. *vibrations*, 3. *dynamics of structures and machines*, 4. *mechanics of deformable solids* and 5. *MATLAB*

***PhD researcher, Mech Eng***

October, 2013-October, 2017

**The University of Sheffield** – Sheffield /United Kingdom

My PhD is partially funded by Rolls-Royce and fully funded by the higher committee for education development (HCED).

During my PhD journey in the UK, I taught modules such as: ***Advanced experiments and modelling***, ***vibrations***, ***dynamics of structures and machines***, ***mechanics of deformable solids*** and ***MATLAB***.

Through my study, I applied systematic experiments on dry friction fibrous structures to identify the damping levels obtained from these systems. These experiments followed by numerical models (Ansys) to validate the experimental work. I developed mathematical models to describe the full damping behaviour in more complex structures (multi-stranded wires and cables) that the experiments and numerical work were not able to pursue.

***Design Engineer***

July, 2007-March,2013

Design and maintenance engineer at fully automatic block-machine factory. Maintenance supervisor of the all departments of the factory. The factory comprised many hydraulic and pneumatic systems. Daily, weekly and monthly maintenance schedules were planned. The product line was quality controlled. Many appreciation certificates were received from governmental and private sectors. My role in developing the automatic system of the factory including the mixer, the block-machine, the production line, the oven and the outlet cuber had increased the productivity by 60% to reach 1500 m2/8 hrs.

**​Programming and coding**

I have experience in:1- modelling with finite element package (ANSYS, NASTRAN).2- coding with MATLAB.3- AUTOCAD.4- develop mathematical models for engineering problems.5- Microsoft office (Word, PowerPoint and Excel).

**Publications**

***Thesis:***

**Analysis and Evaluation of multi-stand beams under static and dynamic loading,** Thesis, University of Sheffield, 2017, Haval Kamal Asker.

***Journal papers:***

**Dynamic properties of unbonded, multi-strand beams subjected to flexural loading,** Journal of Mechanical Systems and Signal Processing, 101, 168-181, 2018.Authors: Haval Asker, Jem Rongong, Charles Lord

**Comparison of the mechanical properties of different models of automotive engine mounting,** ARPN Journal of Engineering and Applied Sciences, 2013. Author: Haval Asker

**Stress analysis of standard truck chassis during ramping on block using finite element method,** ARPN Journal of Engineering and Applied Sciences, 2012. Authors: Haval Asker, Thaker Dawood, Arkan Said

**Optimization of vertical disc plow performance under dry farming condition**, University of Duhok Journal, Vol. 17, No. 1 (Agri. And Vet. Sciences), Pp 103-107, 2014. Authors: Hani M. A. Hussein, Haval K. Asker, Thaker S. Dawood.

***Conference papers:***

**Mathematical and numerical evaluation of the damping behaviour for a multi-strand bar,** 6th European Conference on Structural Control-EACS, Sheffield-UK, 2016. Authors: Haval Asker, Jem Rongong, Charles Lord

**Stiffness and loss factor of unbonded, multi-strand beams under flexural deformation,** International Conference on Engineering Vibration, Slovenia, 2015. Authors: Haval Asker, Jem Rongong, Charles Lord

**​Membership**

* ​Member in ASME.
* Member in Engineering Association/Kurdistan/Iraq.
* Member in Engineering Association/Baghdad/Iraq.
* Member in Teachers Association/Kurdistan/Iraq.

**Education**

***PhD Mechanical Engineering 2017***

**The University of Sheffield**/ Sheffield / United Kingdom

I pursued my PhD degree in applied mechanics at the University of Sheffield / Mechanical department / Dynamic Research Group (DRG). I studied the frictional damping behaviour of multi-stranded fibrous systems comprised steel strands. These systems are like a cable or wire structure where the dominant damping source is obtained from the friction between the mating surfaces. I believe that this kind of damping system, which is inexpensive and easy to apply, can be implemented in airplanes structures a special type of composite or in turbine blades.

I developed mathematical models that can predict the damping levels obtained from these systems.

*​****M.Sc. Mechanical Engineering 2002***

**The University of Baghdad**/ Baghdad / Iraq

I completed my M.Sc. degree at the University of Baghdad / Mechanical Engineering department / Applied mechanics. The M.Sc. study was in English language and was of two parts. The first part was a one year course comprised of modules such as: Advanced vibration, Advanced control, Advanced plasticity, Advanced elasticity, Measurements, Advanced stress analysis and Advanced mathematics.

The second part was a research where my study focused on analysing the stresses generated in the race-ring of heavy vehicles. The study had the experimental and the numerical part.

***B.Sc. Mechanical Engineering 1999***

**Al-Mustansiriya University**/ Baghdad / Iraq

I completed my bachelor degree at Al-Mustansiriya University / Mechanical Engineering / Applied mechanics. The study was in English language and comprised some very interesting modules such as: Vibration, Control, Numerical analysis, Management, Theory of machines, Heat transfer, Air conditioning, Internal combustion engines, Heavy digging machinery, Strength of materials and Production and materials.

**Interests**

I like driving in countryside roads in the United Kingdom.

I like swimming.

**References**

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**​Dr. Charles Lord**

Lecturer

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