**Curriculum Vitae**

**Personal Details**

**Name:** Buland Ibraheem Azeez

**Surname:** Dizayi

**Date & Place of Birth:** July 4th.1963, Duhok

**Marital Status:** Married, three children

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**Education**

* 2016 PhD Environmental Engineering, University of Leeds, Leeds, UK.

Carbon-footprint reduction in the UK and road transport emissions mitigation was the fulcrum of my PhD project. It was an award-winning project, in which my collaborative partners, three companies, were awarded by the UK Ministry of Transport. During the course of this work, four years of field and lab work, a heavy-duty truck ran on a blended fuel of 85% used cooking oil and petroleum diesel (PD). This achievement exceeds the EU target of 10% renewable fuel in PD by 2020. All the regulated emissions were reduced dramatically. CO2 was reduced by 98% and PM was nearly eliminated. These results did not compromise the performance and durability of the vehicle

* 1989 MSc Environmental Engineering, University of Baghdad, Baghdad, Iraq.

It was a two-year program, in which particulate emissions emerging from the stakes of Alexandria Rayon Factory was removed by a very economic and practical way. Horizontally mounted deep bed granular filters were thoroughly tested and eventually proposed for the factory. The project also engulfed a more sophisticated and versatile PM collection and sampling methodology.

* 1985 BSc Mechanical Engineering, University of Technology, Baghdad, Iraq.

Four years of hard work, dedication and insistence to achieve the highest level was culminated by 1st degree honours in mechanical engineering. I was ranked the 1st amongst 235 graduates.

**Thesis Title**

PhD thesis: Fuel Spray, Engine Deposits, and Real Driving Emissions Analysis of Heavy Duty Trucks Using Used Cooking Oil as a Fuel.

MSc thesis: The Dynamic Behaviour of Filtration in Fixed Granular Beds.

**Publications**

* Dizayi, B., et al., *Evaluation of the Effect of Fuel Properties on the Fuel Spray and Jet Characteristics in a HGV DI Diesel Engine Operated by Used Cooking Oils.* Applied Mechanics and Materials, 2014. 694: p. 3-12.
* Li, H., Jim Ebner, Peipei Ren, Laura Campbell, Buland Dizayi, Seyed Hadavi., *Determination of Carbon Footprint using LCA Method for Straight Used Cooking Oil as a Fuel in HGVs.* SAE International, 2014(2014-01-1948): p. 8.
* Dizayi, B., et al. *Particulate Matter Emissions from a Heavy-Duty Vehicle Fuelled by Petroleum Diesel and Used Cooking Oil Blends*. in *European Combustion Meeting*. 2015. Budapest, Hungary.
* Seyed Hadavi, Buland Dizayi, Hu Li, and Alison Tomlin. *Emissions from a HGV Using Used Cooking Oil as a Fuel under Real World Driving Conditions*. SAE International 2015 (2015-01-0905).
* Seyed Hadavi, Buland Dizayi, et al., Diesel Cold Start into Congested Real World traffic; Comparison of Diesel, B50, B100 for Gaseous Emissions. SAE international 2013 (2013-01-2528).
* GE Andrews, H Li, AS Hadavi, B Dizayi, AS Tomlin, [*Real world emissions performance of a HDD truck with SCR NOx control*](https://scholar.google.com/scholar?oi=bibs&cluster=18031218845025943446&btnI=1&hl=en)*.* Proceedings-Fifth International Exhaust Emissions Symposium, 2016.

**Employment History**

All the following posts required a combination of teaching and managerial skills, dedication, working as main player in a team of workers and staff members. On the other hand, being a representative of more than 1500 teaching staff members gave me the motivation and strength to fight for their rights and to secure a decent living standard for them. The following are my major occupations during a quarter of a century.

* 2016 lecturer, Department of Mechanical Engineering, College of Engineering, Salahaddin University.
* 2009 Director of Salahaddin University Printing Press.
* 2007 Supervisor of Salahaddin University President’s Office.
* 2005 Assistant Dean of Engineering College, University of Salahaddin.
* 2004 Director of Salahaddin University Printing Press.
* 2002 Member of Salahaddin University Council.
* 1996 Rapporteur of the Department of Mechanical Engineering
* 1992 Assistant lecturer, Department of Mechanical Engineering, College of Engineering, Salahaddin University.

**Teaching Subjects**

The quality of teaching is the way we invest in the future of the region. Therefore, it should be recognized that teaching quality should be in continuous progression with the newer graduates. It is of utmost importance for the teaching staff to believe that the succeeding generation of graduates should be taught, educated and trained in a better way compared to the preceding ones.

The following are the modules which I taught throughout my career:

* Automotive Engineering.
* Environmental Engineering.
* Environmental Impact Assessment.
* Internal Combustion Engines and Air Pollution.
* Fluid Mechanics and Gas Dynamics.
* Air-conditioning Engineering.
* Control Engineering and Measurements.
* Production Principles.

**Training Courses and Conferences**

All the staff members should involve frequently in training programs. These courses polish and upgrade their skills and their teaching and research abilities.

These are the major training courses which I received:

* 2018 Fire risk mitigation and first aid through fire accidents, Salahaddin University, Erbil.
* 2014 Diesel engine emissions, Leeds, UK.
* 2013 Engine emissions measurement, Leeds, UK.
* 2012 Health and safety, Leeds, UK
* 2011 English language course at Leeds University Language Centre, UK.
* 2001 Trained at the Wykham Farrance International (a UK leading Civil Engineering Lab. Equipment manufacturer) facilities and became the installation and commissioning engineer of the company, Ankara, Turkey.
* 2005 Attained Kurdistan economic development course at Koica, South Korea.
* 1998 Teaching methodology, Salahaddin University, Erbil.

**Membership of Professional Bodies**

I had the privilege to have membership in the following societies and syndicates:

* 2017 member of the Kurdish-German friendship society.
* 2012 PhD student membership in the Society of Automotive Engineers (SAE).
* 2007 Member of consulting committee at the Ministry of Environment.
* 2002 Elected as the representative of teaching staff of Salahaddin University.
* 1992 Member of Kurdistan Union of Engineers. Promoted to Consultant Engineer in 2001.
* 1985 Member of the Iraqi Union of Engineers.

**Main Achievements**

* Finding a cheap, efficient and environmental friendly surrogate fuel for petroleum diesel. Heavy duty truck fleet-operators across the UK are using this renewable fuel now.
* Installation and commissioning of 108 laboratory equipment at the universities and central construction laboratories across Kurdistan governorates (Hawler, Duhok and Sulaymani).
* Installation and commissioning of (DANDO 150) diesel powered soil investigation rig for the Engineering Consulting Bureau, Salahaddin university, Erbil.
* Installation and commissioning of engine testing rigs for the I. C. Engines lab. in Mechanical Engineering Department, Salahaddin university.
* Installation and commissioning of Pelton turbine test rig for power generation tests in the department of Civil engineering, Salahaddin university.
* Installation and commissioning of a PID water-level control unit.
* Training of the local staff of engineers and technicians on the aforementioned equipment.
* Presenting a case study, to the KRG PM, for building a thousand residential premises for the university teaching staff. His Excellency the prime minister of KRG granted his consent and the required land. The project came to reality a few years later.