

NURZAKI BIN IKHSAN



Current Position:

Senior Lecturer

&

Coordinator, Malaysia Academy of SME & Entrepreneurship Development (MASMED)

School of Mechanical Engineering
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Academic Qualifications

- **M.Eng (Mechanical Engineering),**
Universiti Malaya 2011
- **B. Eng (Hons) Mechanical Engineering,**
Universiti Teknologi Petronas, 2008

Working Experience

- January 2012- Current, Lecturer, Faculty of Mechanical Engineering, UiTM Shah Alam
- April 2009 – June 2009, Mechanical Design Engineer, Scomi Rail Berhad
- June 2007 – January 2008, Trainee, Mechanical Engineer, CME Technologies Sdn. Bhd.

Research Area

- Mechanical Engineering Design Process
- Design Manufacturing process
- Vehicle Dynamic and Safety
- Computer Aided Design
- Design and Optimization Process

Professional Member

1. Associate Member, Intelligent Transport System Association Of Malaysia, (2017 – Current)
2. Member, The Board of Engineers Malaysia (BEM)

Research and Design Activity/Project

1. Fundamental Research Grant Scheme (FRGS)"*Crushing Behaviour Of Enclosed Tubular Structures For Energy Absorption*", 02-11-2015 - 01-11-2017, 600-RMI/FRGS 5/3 (11/2015).
2. Private Public Research Grant (Megahrich Marketing) Development of Automatic Bubblecrunch Machine, 2019-2021
3. **Capstone Project** (Mechanical Engineering Design course):
2013- Design, Analysis and Fabricate the Single Seated Vehicle.
2014- Design, Analysis and Fabricate the Single Seated Vehicle.
2015- Design, Analysis and Fabricate of Portable Industrial leaf Vacuum Machine 2017-
Design and Analysis of Autonomous Drone
2018- Design, Analysis and Fabricate of 1/3 Scale of Rescue Vehicle.

Academic Teaching Experience

1. Mechanical Engineering Design 2- Capstone Project (2013- current)
2. Mechanical Engineering Design 1- Machine Element, Design Process (2012- current)
3. Dynamics Laboratory (2017)
4. Thermal Laboratory (2017)
5. Computer Aided Engineering (2015)
6. Mechanic of Material (2012)
7. Material Strength Laboratory (2012)

Undergraduate supervision (Main Supervisor)

1. Badrul Bin Borhanudin, Design and Analysis of the Suspension System for a Small Race Car. Julai 2012
2. Nur Syafiqah Binti Mohamad, Design and Analysis of Monorail Switch Beam Movement Mechanism Using Hydraulic System, Jan 2013

3. Nur Hidayah Binti Aminullah, Design and Analysis of Smoothened Plate at the Segmented Switch Beam System, Jan 2013
4. Zulfadhli Bin Ahmad Sobri, Design Of a Rear Suspension System For ARTeC's Two-Seat Urban Car, Jan 2013
5. Mohd Fauzi Bin Mohd Amin, Design of a Front Pushrod Suspension System For ARTeC's Two Seat Urban Car, Julai 2013
6. Aida Mastura Binti Ghazali, Design and Analysis of Monorail Switch Beam Locking Mechanism Using Hydraulic System, Julai 2013
7. Naili Liyana Binti Hamid, Design and Analysis of Offshore Half Height Open Top Basket, Julai 2013
8. Muhammad Asyraf Bin Ibrahim, Design Optimization of the Road Rail Gate, Julai 2013
9. Azel Bin Sulong, Design and Analysis of the Steel Frame Structure for Campervan, Julai 2013
10. Mohd Fadzrul Ilahi Bin Abd Aziz, Modelling of a Rear Passive Suspension System of Solo's Car Using Mscadams-Car, Jan 2014
11. Abdul Aziz Bin Moh Ahruman, Modelling of A Front Passive Suspension System Of Solo's Car Using Mscadams-Car,Jan 2014
12. Tuan Idruss Tarmizi Bin Tuan Roslan, Design and Analysis of an IPMA Race Car Suspension System, Jan 2014.
13. Muhammad Azam Bin Mohd Azawi, Design and Development of Shift Lock System for Superbike,Jan 2014.
14. Abd Hannan Bin Mohd Khairi, Braking Performance Simulation of A Proton Car Using Msc Adams Car,Jan 2014
15. Mohd Ridzwan Bin Ab Nawawi, Braking Performance Simulation of A Bus Using Msc Adams Car, Jan 2014
16. Ahmad Nasruddin Bin Mat Hassan, Design and Analysis of Space Frame Chassis of Caravan for Malaysia Environment, Julai 2014
17. Ahmad Nabil Adly Bin Abd Karim, Optimization Front Wheel Suspension System of SOLO's Car by Using Design of Experiment, Julai 2014
18. **Amal Hakim, Design and Analysis of the Multipurpose Universal Forklift Extender, 2018 (On-Going)**

19. Izham Hamimi, Design and Analysis of the Portable Autonomous Grass Cutting Machine, 2018
20. Haziq Akashah, Design and Analysis of the Portable Universal Debris Cleaning Vacuum for Urban City Use, 2018

Publications

1. **Nurzaki Bin Ikhsan, Ahmad Saifizul Abdullah, Rahizar Ramli** Experimental Validation of Vehicle Dynamic Characteristics of a Virtual Heavy Vehicle Model, Vol SI 4(5), 131-143, 2017, Journal of Mechanical Engineering.
2. **Nurzaki Bin Ikhsan, Ahmad Saifizul Abdullah, Rahizar Ramli**, Preliminary Analysis of Rollover Scenario Considering Overloading Situation, Intelligent Transport System Seminar and Exhibition 2017
3. **Nurzaki Bin Ikhsan, Ahmad Saifizul Abdullah, Rahizar Ramli** , The Effect of Gross Vehicle Weight on The Stability of Heavy Vehicle During Cornering 17th International Conference on Traffic and Transportation Engineering (3568-3572)
4. **Nurzaki Bin Ikhsan, Anuar Alias, Rahizar Ramli**, Suspension Optimization Using Design of Experiment (Doe) Method On Msc/Adams-Insight75:8 (25015) 59-64, 2015, Jurnal Teknologi.
5. **Nurzaki Bin Ikhsan, Anuar Alias, Rahizar Ramli**, Analysis Of The Kinematics and Compliance of a Passive Suspension System Using Adams Car Vol 8, Pp 1293-1301, 2015, Journal of Mechanical Engineering And Sciences (Jmes)

Appointment/Expertise

1. **Coordinator** – Malaysia Academy of SME & Entrepreneurship Development (MASMED)
2. **Reviewer** - *Design Of Adjustable Toe and Camber Angle on Rear Wheels For Vehicle Equipped With Torsion Beam Suspension System*, 4th International Conference on Advance in Mechanical Engineering 2015 (ICAME 2015)
3. **Task Force** – CAPSTONES Project IR 4.0 Fakulti Kejuruteraan Mekanikal
4. **Advisor** – Automotive Research and Testing Centre (ARTeC) Team, Formula SAE ASEAN
5. **Judge** - F1 In School Central Regional Finals 2015

6. **Interviewer Panel** - Program Graduate Internship Programme Fakulti Kejuruteraan Mekanikal UiTM
7. **Interviewer Panel** - Program Basic Offshore Safety Induction Emergency Training (BOSIET)
8. **Special Taskforce Committee** -4th International Conference on Advance in Mechanical Engineering 2015 (ICAME 2015)
9. **Advisor**-Engine Go Green with MRSM Kuala Kubu Bharu
10. **Coordinator** - Soft Skill, Welfare and Career Development FKM UiTM
11. **Deputy Head** - Automotive Research and Testing Centre (ARTeC), IMETA FKM UiTM
12. **Coordinator** - Mechanical Engineering Design 1 (MEC 531) FKM UiTM
13. **Advisor** - Program Kembara Kemanusiaan Merentasi Sempadan Fasa 3 di Kemboja
14. **Technical Advisor** - F1 In School Technology Challenge 2014

Community Involvement (Society/ University/ Student)

1. Committee - Research, Innovation, Symposium & Exposition (RISE) 2015
2. Committee - Pelaksana Pemilihan Perwakilan Pelajar UiTM 2015/2016 FKM UiTM
3. Committee - Jawatankuasa Tatatertib Pelajar Fakulti Kejuruteraan Mekanikal
4. Committee - University-Graduate Employability Engagement Taskforce (U-GET) FKM UiTM
5. Committee - Jaringan Industri/Masyarakat/ Alumni Dan Employability Pelajar FKM UiTM
6. Committee - Tabung Amanah Pembangunan Akademik FKM UiTM
7. Committee - Teknikal FM Malaysia, UiTM Shah Alam
8. Committee - Program 'Industry Outreach' 2014 FKM UiTM
9. Committee - Akreditasi Bengkel (ISO / IEC 17025 Committee Members) FKM UiTM
10. Committee - Penyediaan Dokumen Anugerah Kualiti Naib Canselor (AKNC) FKM UiTM
11. Committee - Outcome Base Education (OBE) FKM UiTM

12. Committee - Jaringan Industri/Masyarakat/ Alumni Dan Employabiliti Pelajar FKM UiTM,

Awards

1. Anugerah Perkhidmatan Cemerlang, UiTM Shah Alam 2014
2. Patent Award, A System and Method for Automatically Alerting Driver of Unsafe Driving at Curved Road Sections, 2015

References

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