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EDUCATION

Master of Science in Sensor Systems Technology
Fachhochschule Karlsruhe, Karlsruhe, Germany - March 2003

Bachelor of Science in Mechanical Engineering
Louisiana State University, Baton Rouge, Louisiana, USA - August 1987

PROFESSIONAL QUALIFICATION

Registered Professional Engineer, Malaysia

Licensed Professional Engineer, USA

PROFESSIONAL SOCIETIES

Member, Institute of Transportation Engineers

COMPUTER SKILLS

Microsoft Office	:	Word, Excel, PowerPoint
Control and Simulation	:	MATLAB Simulink
Programming	:	C++

EXPERIENCE

July 98-Present Universiti Teknologi MARA, Shah Alam, Malaysia

Senior Lecturer, Faculty of Mechanical Engineering

- Conducted lectures and labs on Fluid Mechanics, Engineers in Society, Automotive Engineering, Automotive Service Workshop and Automotive Electrical Systems.

April 97-March 98 Express Rail Link Sdn Bhd, Kuala Lumpur, Malaysia

Systems Engineering Manager

- Managed issues related to the design review, procurement and installation, testing and commissioning of the Kuala Lumpur to KL International Airport railway system stations' facilities.
- Managed issues related to the Operations and Maintenance Plan, Integrated Ticketing System and the ISO 9000 Safety and Quality Assurance Program.

March 94-March 97 Kinta Kellas PLC, Kuala Lumpur, Malaysia

Senior Transportation Engineer

- Headed the Transportation Engineering Department of Pengurusan LRT Sdn Bhd, Kinta Kellas PLC's subsidiary providing project management services to PUTRA's Light Rail Transit System for Kuala Lumpur, Malaysia.
- Prepared feasibility studies and privatization proposals for various roadway and railway projects in Malaysia.

March 93-Dec 93 The Port Authority of New York and New Jersey, New York, USA

Traffic Engineering Task Leader

- In charge of concept planning, design and construction of Newark International Airport's four monorail stations' frontages, parking lots and access roadways.
- In charge of development and analysis of functional plans for existing and future airport facilities.

1990-March 1993 Urbitran Associates Inc., New York, USA

Traffic Engineer

- Utilized transportation modeling software to study the impacts of the proposed Westside Highway alignments on the Manhattan's roadway network.
- Designed traffic signal plans for various locations in Connecticut and Massachusetts.

1988-1990

VN Engineers Inc., Connecticut, USA

Engineer

- Designed traffic signal plans for more than 20 locations in Connecticut.
- Designed traffic management plans to maintain and protect traffic during bridge reconstruction at more than 30 locations in Connecticut.

RESEARCH

“The Effect of Air Intake System Configuration on the Flow Behaviour through a Naturally Aspirated Internal Combustion Engine Intake Restrictor” – Excellence Fund Grant, completed 2013

“Development of a Proton Waja 1.6 liter racing car to compete in the Malaysia Race Series 2006” – UiTM funding, completed 2006

“Low Cost Unmanned Aerial Vehicle (UAV) for Tenaga Nasional Berhad High Tension Cable Inspection – Short Term Research Grant, collaboration with Tenaga Nasional Berhad, completed 2005

“Basic Investigations for Vehicle Semi Automatic Side Parking” – MSc Thesis, Fachhochschule Karlsruhe, Germany, collaboration with Valeo Schalter und Sensoren GmbH, 2003

“Thick Film Humidity Sensors” – MSc Project, Fachhochschule Karlsruhe, Germany, 2003

“Simulation of Antilock Braking System using MATLAB Simulink” – MSc Project, Fachhochschule Karlsruhe, Germany, 2002

“Construction of a Formula SAE racing car” – BSc Project, Louisiana State University, USA, 1987

“Investigation of Superconducting Materials” – BSc Project, Louisiana State University, USA, 1987

PUBLICATION

Refereed Journal Papers

Kamarulbaharin Z.A., Kasolang, S 2015. Flow behaviour analysis along an engine air intake pipe. Jurnal Teknologi Volume 76, Issue 10, 11 October 2015, Pages 65-69. ISSN: 01279696, Index: SCOPUS

Kamarulbaharin Z.A., Rahmat N. 2013. Influence of Acoustical Absorbing Material on the Obstacle Detection Angle of an Ultrasonic Sensor. Applied Mechanics and Materials Volume 393, 2013, Pages 988-992. ISSN: 16609336, Index: SCOPUS

Proceeding Papers (International)

Kamarulbaharin Z. A., Aziz M. A. 2014. Development of a Portable Low Cost Water Purifier Utilising Solar Desalination Technique. 7th International Meeting on Advances in Thermofluids (IMAT 2014), Swiss-Garden Hotel & Residences, Kuala Lumpur, 26-27 November 2014.

Kamarulbaharin Z. A., Zailani R., Burhanordin N. S., Hamid K. H. K. 2010. Influence of Temperature on the Separation Ratio of Crude Palm Oil as Diesel Substitute through Centrifugation Technique at 5000 rpm. 2010 International Conference on Advances in Mechanical Engineering (ICAME 2010), Shah Alam Convention Centre, Shah Alam, 2-5 Desember 2010.

Kamarulbaharin Z.A., Zailani R., Zaki M.F.M., Hamid K.H.K. 2010. Low Viscosity Crude Palm Oil Fuel for Diesel Engines via Centrifugation Technique. International Conference on Sustainable Mobility 2010 (ICSM 2010), Seri Pacific Hotel, Kuala Lumpur, 1-3 Desember 2010.

Wan Mazlina Wan Mohamed, **Zainal Abidin Kamarul Baharin** 2005. Low Cost Unmanned Aerial Vehicle (UAV) for Tenaga Nasional Berhad High Tension Cable Inspection. Unmanned Air Vehicle Systems Twentieth International Conference, 11th April-13th April 2005, Bristol, United Kingdom, pp. 6.1-6.6

COMMITTEE & CONSULTANT

Mitrans Consultant for the “**Financing Model for Operationalising Line 1 Monorail Network System in Putrajaya**”, 2008

Committee Member, “**Jawatankuasa Penasihat Teknikal bagi Bidang Kemahiran Automotif di Pusat Latihan Pengajaran dan Kemahiran Lanjutan**” (CIAST), 2008