



## ROCK BLASTING

**Assoc. Prof. Dr. Edy Tonnizam Mohamad**

Assoc. Prof Dr. Edy graduated from University of Malaya in 1993. His areas of expertise is in Rock Blasting, Geology, Geo hazard And Geo-Disaster Related and Geo environment. Prior to working in UTM, Assoc. Prof Dr. Edy also has two years working experience in the Japanese company, OYO Corporation in Singapore. The company deals in Geological, Geotechnical and Geophysical Instrumentation and Consultation.

One of the main consultation works that he was directly involved with was the collapse of the Highland Towers which occurred way back in 1993. In addition to that, Assoc. Prof Dr. Edy was also involved in the maintenance project of the MRT tunnels, particularly along Tanjung Pagar to Kranji MRT Stations, where cracks occurred in the tunnel and were eventually repaired so as to stop sea water from permeating into the cracked surface of the tunnel.

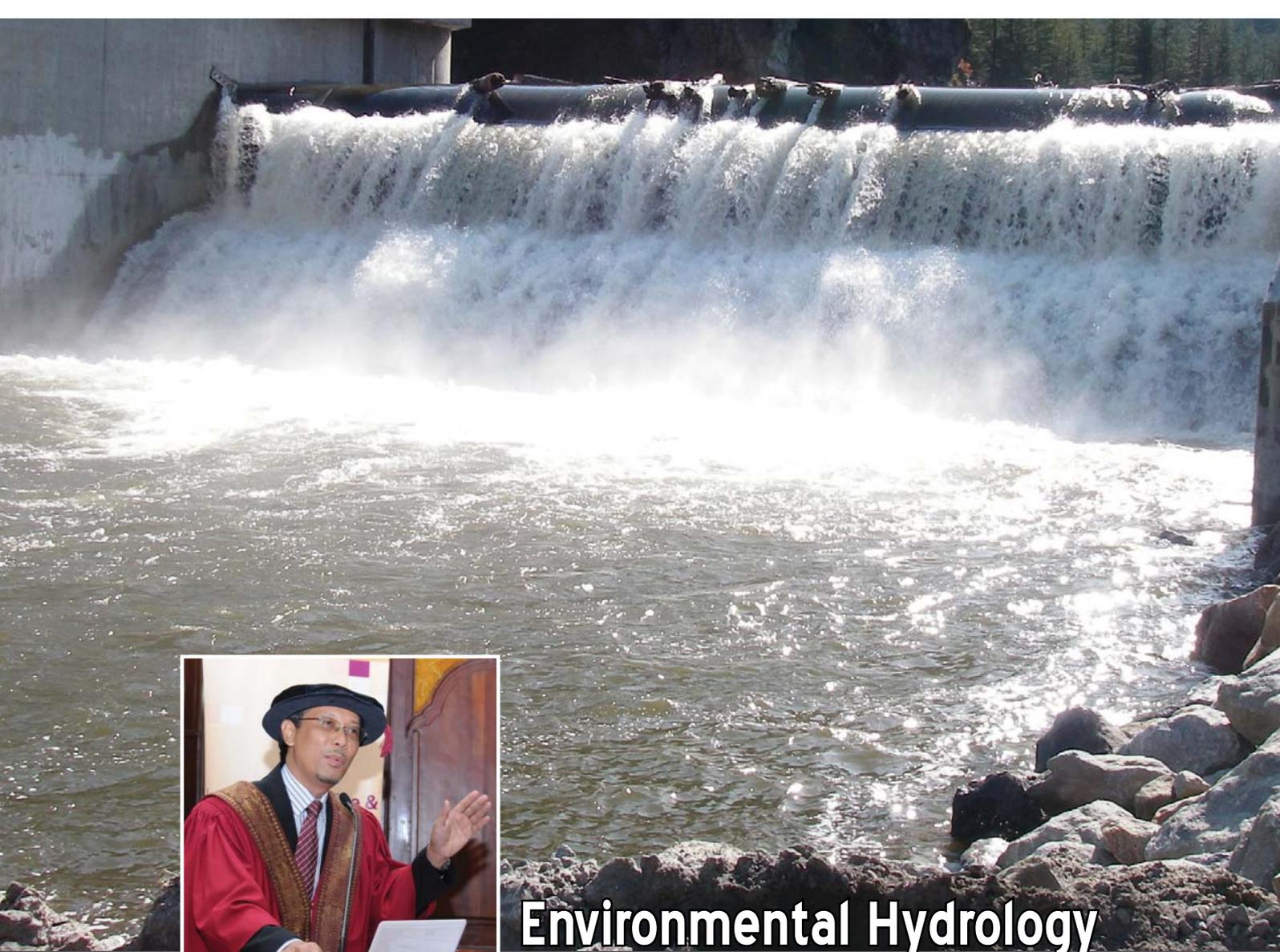
After being back in Malaysia, Assoc. Prof Dr. Edy eventually joined the Sunway Group of Companies in the Quarry Division in 1995 and his last designation was Regional Quarry Manager, managing 8 SungeiWay's quarries in Johor, Melaka, Negeri Sembilan and Pahang. His involvement was on the planning for the quarry development and to ensure efficient production and sales operation of the quarries and premix plant with a turnover of RM 6 million annually.

Assoc. Prof Dr. Edy has experienced working in industries related field for about 7 years. Among his highest achievements was when he successfully completed the licence course and became among the first 40 pioneers in Malaysia who has passed and obtained the Shotfirer licence. The licence has enabled him to handle explosives besides conducting production and construction blasting throughout Malaysia. His experience in the industry has provided the faculty with a good industrial linkage that are undoubtedly beneficial to students and researchers.

Later, he joined UTM as a lecturer in the Department of Geotechnics and Transportation, Faculty of Civil Engineering in year 2000. He was actively involved in research, consultation and in teaching. For his excellence achievement, he has been appointed as a Fellow of Institute of Quarrying (UK), National Fellow of Southeast Asia Disaster Prevention Research Institute (SEADPRI), Registered EIA Consultant (C0339) in Geological, Mining, Blasting and Quarrying, Member of Institute Geologi Malaysia (IGM-0336), Secretary of National Tropical Rock Engineering Research Group (NatRock), Member of International Association of Engineering Geologist (IAEG), Member of International Society of Rock Mechanics (ISRM) and Registered Licenced Shotfirer (D10097 & 630).

He was also appointed by the Selangor State Government to develop the Standard Operation Procedures for Quarries and to consult on the geological condition of LRT proposed track alignment and he was also in the panel for Jabatan Kerja Raya Malaysia (Cawangan Pakar dan Kejuruteraan Awam) as an expert advisor on the Formulation of the Proposed Standard Specification for Jabatan Kerja Raya Malaysia on Common and Hard Material/ Rock Excavation of which the new classification is currently used in the country.

Recently, he was appointed as an expert panel in the field of geology for the Dewan Bahasa and Pustaka, Malaysia. He was also appointed by several private companies to share his expert views on Quarry/Blasting, planning of earth works and excavation, Engineering Geology matters for remedial of slopes, rock material properties and in more than 130 projects. Assoc. Prof Dr. Edy was also appointed as the advisory panel as well as a speaker in faculties of the local university e.g. UiTM, UNITEN, USM and a Member of University Diponegoro, Semarang, Indonesia.



# Environmental Hydrology

**Prof Dr. Zulkifli Yusop**

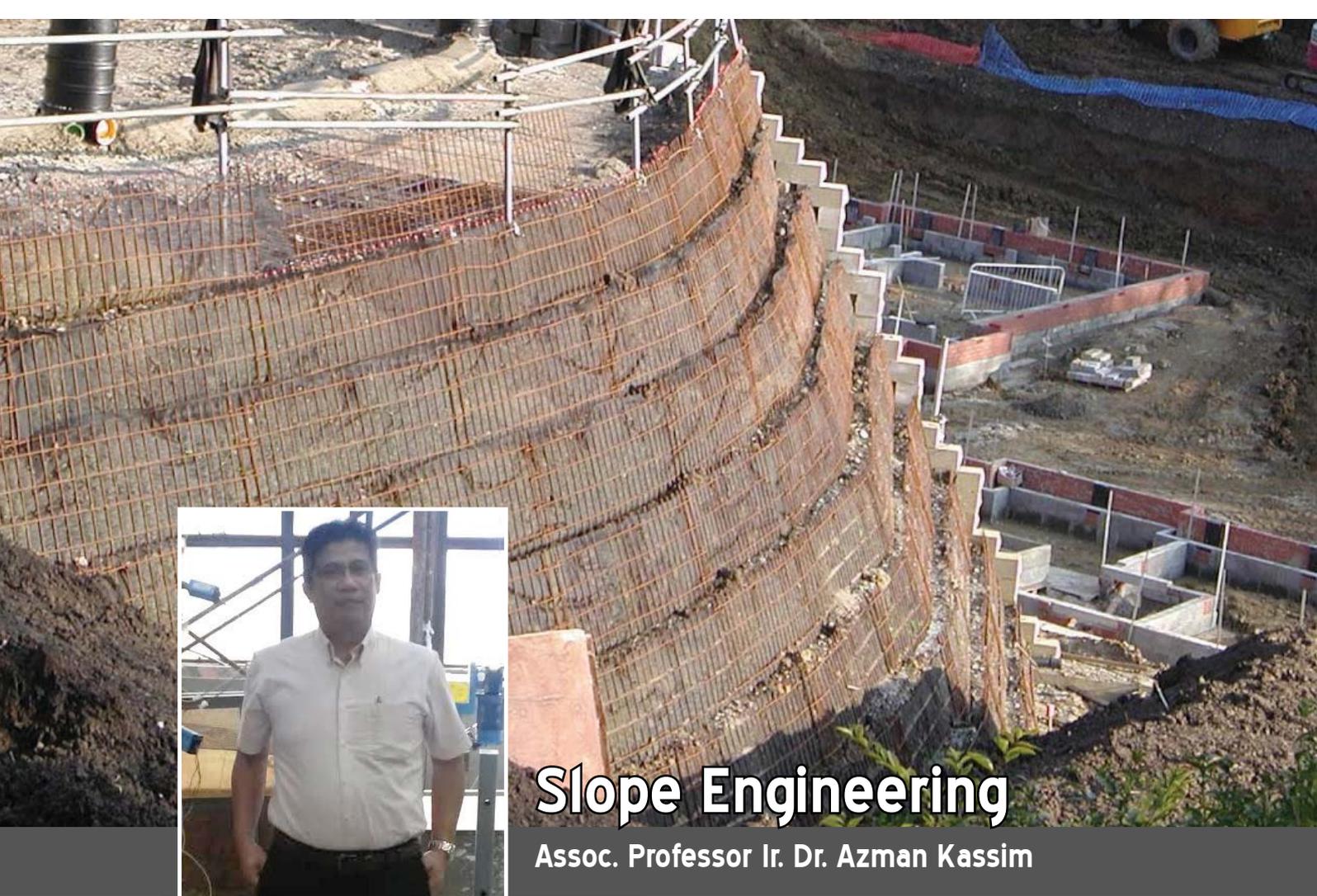
**Prof Dr. Zulkifli Yusop is a Professor in Environmental Hydrology and he currently serves as Dean of Water Research Alliance at Universiti Teknologi Malaysia.**

He obtained his PhD in Forest Hydrology from the University of Manchester in 1996. He was the Chief Editor of Jurnal Kejuruteraan Awam and Malaysian Journal of Civil Engineering and now he is the editor of Water Science and Technology (WST), a journal published by International Water Association.

He was also the Chairman of Public Awareness Committee of the Malaysian International Hydrological Program (MIHP) for 10 years, council member of Malaysian Water Association (MWA), Secretary of the IWA's Specialist Group on Appropriate Technologies for Developing Countries and Research Committee member for Malaysian Hydrological Society.

His present positions include being an Exco member of MIHP, Board of Director Lembaga Urus Air Selangor (LUAS), group leader (Hydrology and Climate Change) of Asia Core Program under the Japanese Society for the Promotion of Science (JSPS), Co-Secretary of IWA's Specialist group on Integrated Water Management, and panel member for various research funds under the Ministry of Education Malaysia (MOEM) and MOSTI.

He received Eco-Frontier Fellowship Awards from the Ministry of Environment, Japan for three consecutive years (2003, 2004 and 2005). In view of his active involvement in championing water issues He was also conferred Fellow of Akademi Sains Malaysia (ASM) in April 2012. His current research mainly focuses on non-point source pollution control, forest and plantation hydrology and climate change impact on water resources.



# Slope Engineering

Assoc. Professor Ir. Dr. Azman Kassim

Associate Prof. Dr. Azman's fields of interest are Slope Engineering, Unsaturated Soil Mechanics and Soil Properties. Ir. Dr. Azman earned his Bachelor of Science in Civil Engineering from University of Miami, United State of America in 1988 and Master of Engineering in Engineering Geology from Universiti Teknologi Malaysia (1996).

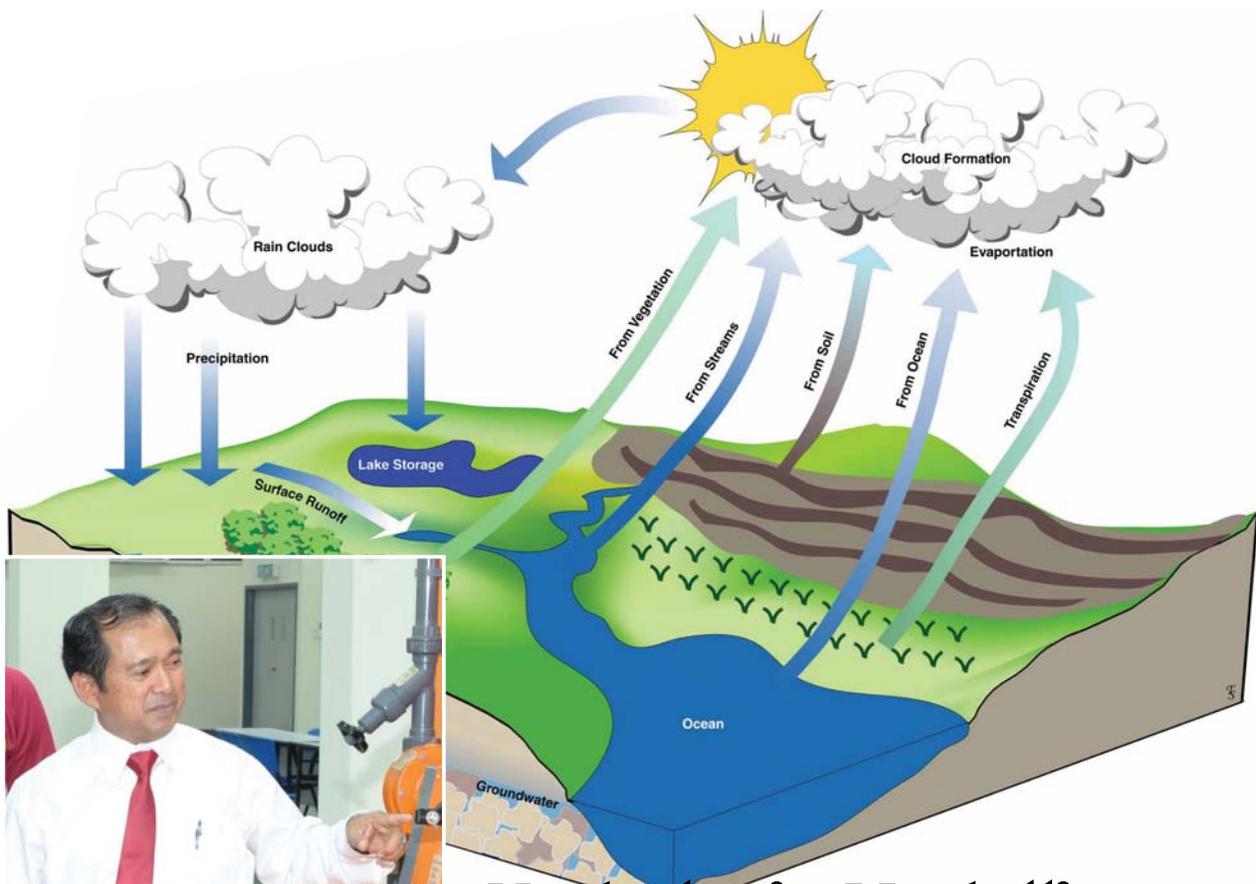
He completed his PhD at Universiti Teknologi Malaysia in 2011. He started his career as a Research Assistant at the Department of Civil Engineering, School of Engineering, University of Miami, Coral Gables, United States of America (Jan. 1988 – Dec. 1988).

He worked briefly as a Civil Engineer before undertaking the job as a Trainee in Maktab Perguruan Raja Melewar, Negeri Sembilan (Option in English Language) from July 1989 to Sept. 1989 and then started his affiliation with Faculty of Civil Engineering, UTM in 1989.

Dr. Azman has conducted extensive research on unsaturated soil mechanics to solve geotechnical problems associated with tropical residual soil slope.

He is currently a Professional Engineer, registered by the Board of Engineer Malaysia (BEM) since 2006, a Corporate Member of Institution of Engineers Malaysia (2010), and a Member of Associate Asean Engineer (2013). He has published over 40 journals and conference research papers and has supervised more than 15 post graduate students.

Presently, Dr. Azman's research focused on bringing unsaturated soil mechanics into slope engineering practice. Unsaturated soil mechanics has developed rapidly over the past few years and is quickly implemented into routine geotechnical engineering practice. The most common example of the application of unsaturated soil mechanics involves the interaction between soil and the climate imposed above the ground surface. The rainfall and evaporation from the ground surface produce a moisture flux boundary condition that often results in adverse performance of engineered structures such as highways and buildings.



## Hydrologic Modelling

Associate Professor Dr. Sobri Harun

Sobri Harun is an expertise in Hydrologic Modelling and Water Resources include the application of Artificial Neural Network, Evolution Algorithm, Expected Maximization Algorithm and Statistical Methods. Started working at UTM as an Assistant Lecturer in 1987. He obtained his B.Sc. in Civil Engineering from University of Salford, Manchester in 1986. In 1990, he completed his MSc. in Engineering Hydrology at Imperial College of Science, Technology and Medicine, London and obtained his PhD in 1999 from UTM.

He has experienced served several position at faculty level such as Head of Hydrology Laboratory from 1987 to 1989, Manager Civil Engineering Laboratory from 1999 to 2006 and Head of Department from 2006 to 2011. He assisted the faculty on the Outcome Based Education (OBE). He has published 11 articles in book chapters, 42 Journal papers, and 63 conference papers. There are several publications in ISI journal include Journal of Hydrologic Engineering ASCE and at present he has obtained cumulative impact factor 9.87.

His experience in consultancy started from year 1988 and until 2012. He has taken part in several consultancy projects with Department of Irrigation and Drainage Malaysia, Department of Environment, Water Supply Department and also private sectors. He is responsible on more than 20 research projects and he was the head of 9 research projects.

The group in the Patching of Missing Rainfall data has received several awards include Gold Award and Very Best Award at Malaysian Technology Expo (MTE) Putra World Trade Centre 2007 and Silver Medal at INPEX Pittsburgh USA 2007. The group has been obtained registration number for Patent Filing and Intellectual Property of the method proposed.

Fortunately, his student Marlinda Abdul Malek also receive the Gold Award for the best Phd thesis in conjunction with the World Water Day 2010 from the Deputy Prime Minister, Y.A.B. Tan Sri Muhyiddin Yassin. His effort to make known UTM to the world by initiating the First International Conference on Water Resources (ICWR2009) held in Langkawi in 2009 with 110 presented papers and 200 total participants.



The next effort was organizing the 2nd ICWR 2012 in conjunction with UNESCO-IHP Regional Steering Committee Meeting of Southern and the Asia Pacific in November 2012.

This programme was the collaborative effort between UTM, DID, Humid Tropic Centre, Universiti Tenaga Nasional, Suruhanjaya UNESCO Malaysia, Natural Resources and Environment Ministry, Japanese Trust Agency and International Hydrological Programme. Sobri Harun serves as the chairperson of the organizing committee for ICWR2009, ICWR2012 and ICWR2015.

The ICWR2012 lead him to international connection with Kyoto University, DID, UNESCO Malaysia, UNESCO Jakarta Office and other well known academicians from Australia, New Zealand, Europe and several Asian countries.

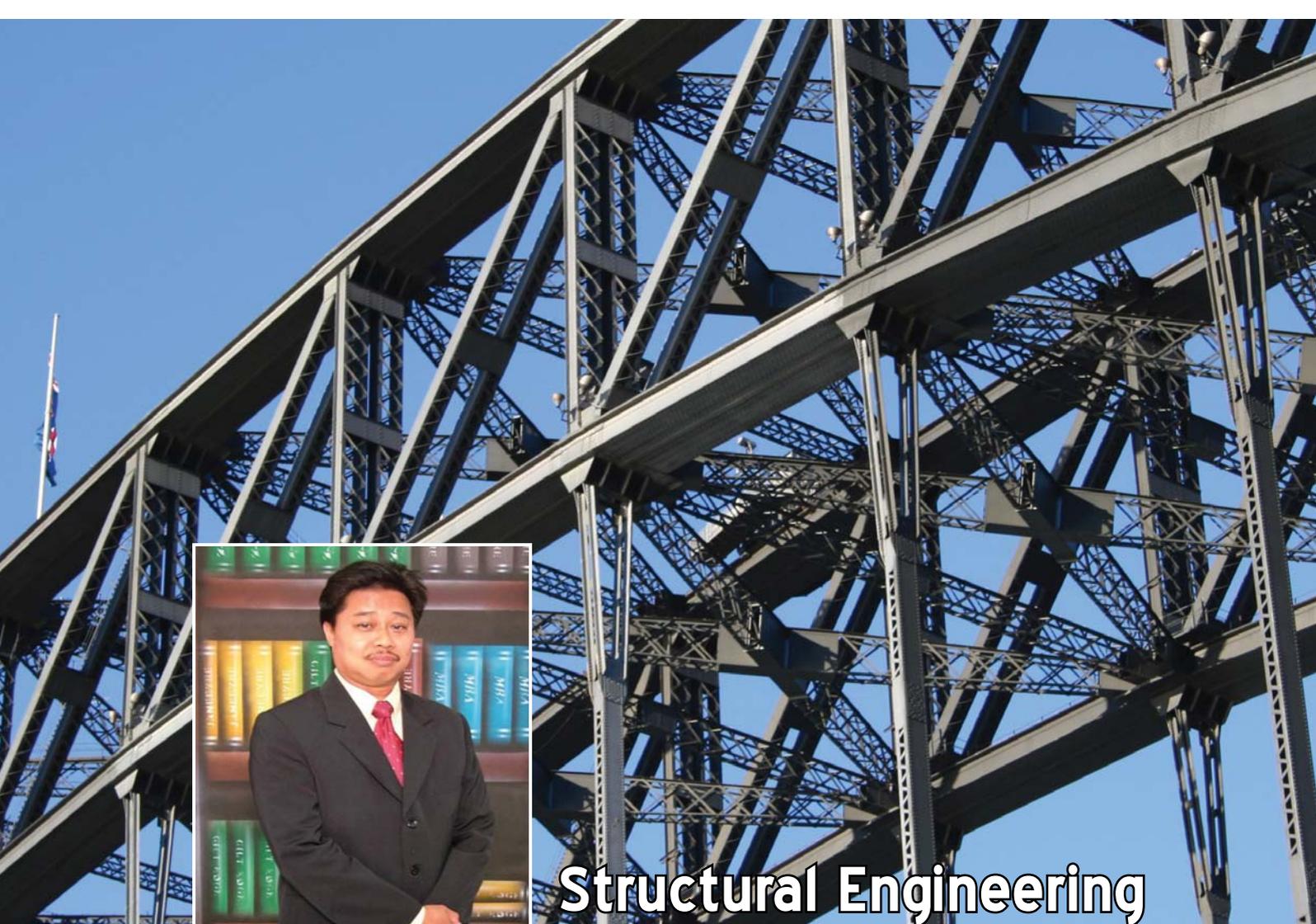
He has regularly appointed as one of the panel assessor for the national best thesis in conjunction of annual World Water Day. He is participating as reviewer and editorial board with several journal publications include the international journal.

He has been given responsibility to be examiner (internal and external) and chairman of viva session for both Phd and Master candidates from several universities in Malaysia.

The Malaysian Quality Assurance Agency has appointed him as the course programme evaluator for several Public and Private Institutions of Higher Learning.

Dr. Sobri Harun has been served as Associate Professor since 2002 and as an academician for 26 years was seriously active in research works. Dr. Sobri has been actively worked in the field of Hydrology and Water Resources. He has strong research interest in the field of hydrological modelling, reservoir management and climate change impact on water resources.

Since the worst flood event in 2006 at Kota Tinggi, Johor his expertise was frequently being shared by Malaysian media include Berita Harian, Utusan Malaysia, New Strait Times, Sinar Harian, National Television TV3 and Astro Awani. He was invited recently as a panel member for Rancangan Soal Jawab by TV3 and Rancangan Malaysia Hari Ini to share his knowledge on reservoir management with Malaysian.



# Structural Engineering

Prof. Ir. Dr. Mahmood Md Tahir

Prof. Ir. Dr. Mahmood Md Tahir is a steel structure expert who is currently the Director of UTM Construction Research Centre at the Faculty of Civil Engineering, Universiti Teknologi Malaysia (UTM). He graduated with a PhD from University of Warwick, United Kingdom in 1997.

He is active in research work and also in publication where his works were published in the Malaysian and international journals. He also has presented papers in seminars and conferences and published more than 100 journals and proceedings in both national and international levels.

His field of expertise is in structural engineering, a field dealing with the analysis and design of structures that support or resist loads.

Structural engineering is usually considered a specialty within civil engineering, but it can also be studied in its own right.

His current responsibilities include research and consultancies in specialized areas related to the composite beam constructions and structural steel design. He also has a great interest in the field of durability of concrete, sustainable construction materials and forensic structural engineering. He and his team are now working on Interlocking Brick System which are produced locally as Industrialized Building System.





# Wastewater Treatment and Water Quality

ASSOC. PROF. DR. AZMI BIN ARIS

Dr. Azmi completed his B.Sc. in Civil Engineering at the University of Southern California, USA in December 1987. He obtained his Masters of Engineering at Clarkson University, USA in January 1994 and his PhD at UMIST, UK (now known as University of Manchester) in December 2004. After completing his Bachelors degree, he worked for about one and a half year at CTL Environmental Services in Los Angeles before returning to Malaysia in 1989. His academic career at UTM started in February 1990 as Assistant Lecturer at the Faculty of Civil Engineering and was assigned to the Department of Environmental Engineering. He was promoted as Lecturer in January 1994, as Senior Lecturer in May 2007 and as Associate Professor in September 2009.

Dr. Azmi was appointed as Deputy Director of Institute of Environmental and Water Resource Management (known as IPASA) in October 2009 until August 2011 and became the Head of Environmental Engineering Department in September 2011 until now. He is currently a member of several professional organizations that include International Water Association (IWA) and Malaysian Water Association (MWA). In MWA, he served as a member in the International, Research and Education Committee from July 2007 to March 2009 and currently as a member in Research and Training Committee in Malaysian Water Academy (MyWA) (a subsidiary of MWA) since 2011. In January 2013, he was appointed as an Associate of Academy Sciences of Malaysia (ASM) for a period of 2

years.

Dr. Azmi's fields of interest are Water and Wastewater Treatment and Water Quality Management. He has headed and involved in many research projects (totaling to about RM 6 million). The research projects are funded by either government, through UTM, Ministry of Education (MOE) and Ministry of Science, Technology and Innovation (MOSTI) or by private agencies and companies.

Dr. Azmi is also actively involved in consultancy projects with government and private agencies including Department of Environment, Malaysia (DOE), National Hydraulic Research Institute Malaysia (NAHRIM), Academy Sciences of Malaysia (ASM), FELDA, SAJ Holdings and SYABAS. Many of the projects are of national level as they provide input to government policy and decision-making. These include Development of Malaysia Environmental Performance Index (EPI) (2012-2014), Water Resources Study at Gugusan Felda Sahabat, Lahat Datu for FELDA (2012), Mega Science Framework Study for Sustained National Development – Water Sector for ASM (2010), Study on the Potential of Rainwater Utilisation in Supplementing Water Demand in Industries for NAHRIM (2010), Terengganu River Basin Environmental Management Plan Study for DOE Malaysia (2000), Development of Groundwater Quality Monitoring Network in Malaysia for DOE Malaysia (1996) and Study of Toxic and Hazardous Waste Disposal Sites for DOE Malaysia (1995).

To date, Dr. Azmi has about 100 publications in the form of articles in refereed journals, conference proceedings and technical reports.