

Curriculum Vitae (March 2013)



Receiving the Merdeka Award 2009 for Outstanding Scholastic Achievement from the Prime Minister of Malaysia, 19 October 2009

PROF. DATO' SERI IR. DR. ZAINI BIN UJANG

SSTM, PJJN, DSNS, DNS, PPT, AMP (Harvard), Ph.D. (Environ. Eng.) (Newcastle), M.Sc. (Environ. Eng.) (Newcastle), B.Chem.Eng. (UTM), Hon. Fellow ASEAN Eng. (AFEO), F.I.Chem.E. (UK), F.A.Sc. (M), Fellow Royal Physiographic Society (Sweden), FIWA (UK), FCMarEng (IMAREST), P.Eng. (M), C.Eng. (UK Engineering Council), C.Sci. (UK Science Council), C.W.E.M. (UK), MIEM

Prof. Dato' Seri Zaini Ujang is well-known for his contributions as a professional environmental engineer, academic leader, innovator, essayist and environmental thinker in Malaysia. He is the first recipient of the most prestigious Merdeka Award 2009 for Outstanding Scholastic Achievement and the youngest ever Vice-Chancellor appointed in the history of public university in Malaysia, at the age of 43. He has been conferred the Darjah Seri Setia Tuanku Muhriz Yang Amat Terbilang (SSTM) award by His Royal Highness Yang Di-Pertuan Besar Negeri Sembilan in conjunction with the Birthday of the Yang Di-Pertuan Besar Negeri Sembilan on 14 January, 2013. He has been conferred the Panglima Jasa Negara (PJJN) award by His Majesty Yang Di-Pertuan Agong in conjunction with the Birthday of the Yang Di-Pertuan Agong on 2 June, 2012. He is the "Tokoh Maal Hijrah 1433H" of Negeri Sembilan 2011. The *New Straits Times* daily described him as a "Malaysian Water Icon" in 2004. BERNAMA, the Malaysian national news agency, in an exclusive interview in 2006, introduced him as an "environmental ideologue". This is in recognition of his outstanding contribution to research, teaching and advocacy works related to the environment, especially on waste and wastewater management, policy formulation and technology development. He is currently a Visiting Professor at Massachusetts Institute of Technology (MIT).

Prof. Zaini obtained his B.Eng. (Chemical Engineering) from UTM, and MSc and PhD in environmental engineering from the University of Newcastle, UK. He is also an alumni of Harvard Business School for Advanced Management Program. He started his academic career in UTM in 1988, and is known to be an exemplary, multi-tasking academic and opinion leader, particularly in research and development, innovation and entrepreneurship, postgraduate studies and policy formulation. His academic experience portfolio encompasses strategic and corporate leadership, institutional restructuring, innovation ecosystem, and research profiling. He was also responsible for various national initiatives in higher education in the late 1990s during his tenure as Special Officer to the Minister of Education then, with special tasks on higher education policy, particularly on corporatization of public universities, formulation of private universities and academic R&D strategic portfolio. Since 2009, he has developed and published concepts related to "new academia" which integrates various components of experiential learning, scientific entrepreneurship and value innovation.

He also initiated various research collaboration between UTM and prestigious universities such as Harvard, MIT, Imperial College, Cambridge and Oxford. He is currently leading initiatives

with two top professors of MIT, Professor Lawrence Susskind on Sustainable Cities and Professor Anthony Sinskey on Industrial Biotechnology. He also initiated the establishment of Oxford-UTM Centre for Industrial and Applied Mathematics and has been working closely with Imperial College London on Energy Futures.

His professional expertise covers water and wastewater engineering, integrated ecosystem management, industrial ecology, as well as corporate environmental strategy. He is an international academic figure in water and environmental engineering particularly related to tropical ecosystem, and is regularly invited to deliver keynote addresses in international conferences to provide expert advice as visiting professor and consultant, and to serve many advisory bodies and prestigious committees.

Since October 2008, he leads the oldest technical university in Malaysia and South East Asia, Universiti Teknologi Malaysia (UTM history dated back since 1904) as Vice-Chancellor (equivalent to President in the context of American and Japanese universities). He also sits on various boards such as the Chemical Companies of Malaysia (CCM), Institute of Sultan Iskandar for Urban Habitat and High Rise Buildings, private universities, Multimedia Technology Enhancement Operations Sdn Bhd (METEOR) and Chair of Proton Technology Advisory Council (PTAC), a leading car manufacturer in South East Asia. In addition, he serves in various committees on innovation in Malaysia such as the National Blue Ocean Strategy and National Innovation Award Select Committee.

He has recently received the Fellowship Award by the Royal Physiographical Society, now known as The Academy of Science, Medicine and Technology, Sweden. Currently, Zaini is Fellow of Academy of Science Malaysia, Honorary Fellow of ASEAN Engineers, and Fellow Institute of Chemical Engineers (FIChemE, UK). He is also Senior Advisor to the Prince Khalid bin Sultan Chair on Water Research, King Saud University, Saudi Arabia. He was appointed as Chairman of Environmental Quality Council, Malaysia from 2009-2012, the national agency regulating environmental control and management, and policy initiatives. His vast expertise and wide experience qualify him to be appointed as Member, National Commission on Water Services (SPAN, <http://www.span.gov.my>) since its establishment in February, 2007-2011, to regulate water services industry in Malaysia.

In addition, he has just been appointed as Fellow of International Water Association (IWA). He was elected Vice-President of the International Water Association (IWA) London (2004-2006), and serves as the Deputy President, Malaysia Water Association (2007-2011). Prior to being IWA Vice-President, he served on the IWA Strategic Council (2000-2004) and was Chair of the IWA Specialist Group on Developing Countries (2004-2008), a member of the IWA Publication Committee (2000-2004) and chair of four IWA conferences. He also initiated the IWA Water Development Congress 2011 in Kuala Lumpur. He was the Chairman of the IWA Conference & Exhibition on Water & Wastewater Management for Developing Countries (October 2001 and 2007), and IWA Conference on Environmental Biotechnology (December 2003), and served as a member of international technical committees, including World Water Congress 2000 to 2008.

His outstanding professional qualification includes being a Chartered Engineer (Engineering Council, UK), a Chartered Scientist (UK Science Council), a Chartered Water & Environmental Manager (CIWEM, UK), a Professional Engineer (Chemical Engineer, Board of Engineers, Malaysia). **He received the ASEAN Federation of Engineering Organisation (AFEO) Honorary Fellowship in 2011 for outstanding services to the engineering profession.** He received Fellow with registration as a Chartered Marine engineer (*FCMarEng (IMAREST)*). He was the sole recipient of the prestigious Malaysia Water Award 2004 (Research), the Outstanding Young Malaysian Award 2004 (Academic Leadership) and Anugerah Melayu Cemerlang (Akademik) (Excellent Malay Award) 2006. In July 2011, he received a special award for contribution to

business education by Asia's Best Business School for his initiatives to develop "new academia" by integrating technical and scientific components to entrepreneurship and innovation. To date he has received more than 20 awards and medals in various categories related to research, publication and citations. He has been conferred the Darjah Dato' Setia Negeri Sembilan (2007), Darjah Setia Negeri Sembilan (2005) and Pingat Pekerti Terpilih (1998) by the DYMM Yang Dipertuan Besar Negeri Sembilan.

Career

Prior to his appointment as UTM Vice-Chancellor since October 2008, he served as Deputy Vice-Chancellor (Research and Innovation) of the university. He was the Dean, UTM Faculty of Chemical and Natural Resources Engineering from July 2006 to March 2007. His outstanding professional and leadership skills were also demonstrated during his tenure as the Director, Institute of Environmental & Water Resource Management (IPASA), UTM from 2001-2006. He has extensive experience in formulating and implementing strategies towards positioning UTM as Malaysia's premier university in engineering and technology, an Entrepreneurial Research University and winning national award for Intellectual Property Awards for 2007, 2009 and 2010. He drives various initiatives to position UTM as an academic research and innovation hub such as the formation of Research Alliances, KPI-based management and establishment of university-industry partnership through Iskandar Malaysia Research Centre (IMREC) and Iskandar Malaysia Academic Partnership (IMAP). He also headed the ICT committee of Malaysian Higher Education Institutions 2007-9. His management style is widely appreciated, especially for his participatory commitment and team building approach and his role as a strategic planner, team player and academic mentor. His significant role in transforming UTM into a research and graduate-focused university is proven with UTM currently having the highest number of postgraduate students in the region involved in cutting-edge research and impactful as well as value-driven innovation in science, technology and engineering.

Prof. Zaini is also instrumental in establishing the UTM Endowment Fund and outsourcing research and innovation funds, from both local and international agencies. Besides the Malaysian Ministry of Science, Technology and Innovation (MOSTI), he has strong research affiliations with the Netherlands Tropical Research Foundation (WOTRO), the European Commission, the Swedish International Development Corporation (SIDA), the Japan Society for the Promotion of Science (JSPS), the Rockefeller Foundation and leading universities in the United Kingdom, Denmark, Sweden, the Netherlands, Italy, Japan, Australia, Saudi Arabia, Qatar, Indonesia, South Korea, Switzerland and the United States.

He has registered more than 20 intellectual property rights jointly owned with his co-workers and former students, and has commercialised six research products including (a) StormWater Filter (b) Software for Wastewater Treatment Plant Design Advisor (WASDA), (c) Hybrid Membrane Bioreactor (d) River Bank Infiltration System (e) Software on Environmental Health Risk Assessment (RISKAS) and (f) Software on Integrated Solid Waste Management Plan (ISWAM). He is in the process to commercialise a software on the Cost Estimation of Water and Wastewater Facilities (COWAS) and Aerobic Granule Production for Activated Sludge Processes.

Publications

He has published more than 250 technical papers (more than 50 published in indexed international journals), 30 books, and several book chapters, many research monographs and technical reports on environmental engineering, and more than 1,000 articles on environment, innovation and higher education. Despite his busy schedule as the UTM Vice-Chancellor, he regards publication as a priority and still publishes technical journal papers in ISI-indexed journals such as *Bioresource Technology*, *Water Science Technology* and *Desalination*. He co-

authored the best-seller textbook with Prof. Mogens Henze on *Municipal Wastewater Management for Developing Countries* (IWAP, London, 2006), and co-edited a WEMS series on *Environmental Biotechnology*. He was appointed Member of the Editorial Board, *Water Science & Technology* (impact factor 1.24 in 2007, Publisher: IWA Publishing, London), *WST Water Supply, Water and Environmental Management Series* (IWA Publishing) and *Membrane Water Treatment* (Korea, Techno-Press).

Advisory services

He has been involved in many high profile projects as a Technical Consultant and Corporate Advisor, such as Malaysia's environmental performance index (EPI) and megascience in water sector, since 2009; arbitration case with Singapore on the reclamation of the Johor Straits, water pricing with Singapore and provide technical assistance to developing countries. He was the Principal Consultant for the Master Plan Development of River Rehabilitation in the city of Johor Bahru, formulation of the National Master Plan for the implementation of Cleaner Production (CP) practices, Master Plan for Lake Eutrophication Management in Malaysia, and contributed to the development of scientific laboratories and pilot plants of Environmental Bioengineering and Biotechnology, including Membrane Bioreactors, Constructed Wetlands and Sequencing Batch Reactors. He is also instrumental in establishing university-industry partnership particularly with Proton Holdings, CCM Berhad and IWK. In 2005, he was appointed Chairman of the Technical Committee to advise the State Government of Negeri Sembilan to overcome the water crisis in Seremban. Since 2000, he was appointed the Principal Consultant for the implementation of various environmental initiatives on water supply, sewerage, river rehabilitation and industrial ecology. He has also been appointed as consultant to water-related issues with Taibah University, Saudi Arabia. He was appointed head of a research-consulting team to study ground water in the holy city of Madinah, Saudi Arabia since 2009.

Prof. Zaini is also an avid reader, a motivator, prolific writer and essayist. He writes a weekly column in Malay dailies (*Utusan Malaysia* 1988-1998 and *Berita Harian* 2004-2011). In addition, as an IT-savvy person, he is very adept with IT, and embraces technology and the new media. His website (<http://www.utm.my/vc>) received more than 2 million hits within 24 months after his appointment as the UTM Vice-Chancellor. He has substantial experience in media strategy and has received wide coverage in the media for his outstanding contribution in his area of expertise. His professional and academic opinions on water and environmental management have been regularly quoted in print and electronic media. He is also actively involved in environmental education and public awareness programmes through the NGOs, public lectures and writing on environment and sustainability issues.

As for his interest, Prof. Zaini is keen in horse riding and cycling, spending his time in the evenings riding across the beautiful and serene Skudai landscape. He took part and sometimes won in horse endurance competitions at various levels. He is husband to Dr. Zainah Moktar, a medical doctor-turned-health advisor and author of books on healthy living; and father to Siti Fatimah (20), Aishah (19), Muhammad Arif (11) and Maryam (11).

PROF. DATO' SERI IR. DR. ZAINI UJANG

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Last Updated: 28 March 2013

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PERSONAL DETAILS

Academic: Professor of Environmental Bioengineering and Water Sustainability

Administration: Vice-Chancellor, Universiti Teknologi Malaysia, 81310 Johor Bahru Campus, Johor, MALAYSIA

- Other responsibilities:
- Chairman, UTM Senate
 - Chairman, UTM Management Committee
 - Chairman, University Management Group
 - Chairman, UTM Procurement Committee
 - Chairman, UTM Endowment Trustee
 - Chairman, UTM Promotion Committee
 - Member, UTM Board of Directors
 - Deputy Chair, UTM Institute of Sultan Iskandar (ISI) for High Rise Buildings & Urban Habitat
 - Deputy Chair, UTM School of Professional & Continuing Education (UTM-SPACE)
 - Head, Consultancy projects
 - Head, Research projects
 - Supervisor to postgraduate students
 - **Chairman, Environmental Quality Council (EQC), Malaysia**(1 April -31 March 2015)
 - Member, National Water Services Commission (SPAN) 2007-2011
 - Board Member, Council of Examination, Malaysia (MPM)
 - Board Member, METEOR
 - Board Member, Chemical Companies of Malaysia (CCM)

Date Appointed: 6 August, 1988 as UTM tenured academic staff

Date/Place of Birth: 3 March, 1965 / Kampung Inas, Johor, Negeri Sembilan, Malaysia

Citizenship: Malaysian (IC 650303-05-5207)

Languages: Malay (excellent), English (excellent), Indonesian (excellent), Arabic (reading)

- Major awards:
- **Darjah Seri Setia Tuanku Muhriz Yang Amat Terbilang (SSTM), 14 January 2013**
 - **Darjah Panglima Jasa Negara (PJN), 2 June 2012**
 - **Anugerah Tokoh Maal Hijrah 1433 Negeri Sembilan 2011**
 - **Merdeka Award - Outstanding Scholastic Achievement 2009**
 - Darjah Dato' Setia Negeri Sembilan (DSNS) 2007
 - Anugerah Melayu Cemerlang (Akademik) 2006
 - **Malaysia Water Award (Research) 2004**
 - **The Outstanding Young Malaysian Award** (Academic Leadership) 2004
 - **Rockefeller Foundation** (Fellowship for Bellagio Team Residency, Italy, 2003)
 - **International Collaboration Award** (Inst.Teknologi Surabaya, Indonesia,2008)

- Other awards:
- Contribution to Education Award, Asia's Best Business School 2011 @ Singapore
 - Darjah Setia Negeri Sembilan 2005
 - Pingat Pekerti Terpilih (Negeri Sembilan) 1998
 - Anugerah Maulid Rasul Negeri Sembilan (Kuala Pilah) 2007
 - Anugerah Penghargaan Kertas Kerja Jurnal Kebangsaan UTM 2006
 - Gold Medal, Institute of local higher education (IPTA) R&DExpo 2005
 - **Special ICT Award, IPTAR&DExpo 2005**
 - UTM Excellent Research Award (Team) 2004
 - UTM Excellent Service Award 1996, 2004
 - Publication Award 2004, Faculty of Civil Engineering, UTM
 - Malaysian Public Service Department (PSD) Scholarship 1994-96 (Ph.D.)
 - Malaysian PSD Scholarship 1990-91 (M.Sc.)

- Malaysian PSD Scholarship 1983-88 (B.Eng.)
- Japanese International Co-operation Agency (Academic visit to Japan, 1986)
- British Council CICHE Awards for Academic Exchange 1999-2000 (Middlesex Univ)
- CEO-TokyoUniversity Award for Academic Exchange 2000
- British Council CICHE Awards for Academic Exchange 2001-4 (Cranfield Univ)
- Japanese Society for Promotion of Science (Fellowship at Kyoto Univ, 1993, 2001-3)

Hobby: Wide-range reading, essay writing, cycling, FB and book collection

Sports: Horse endurance (40 km and 20 km events)

Marital Status: Married with four children (3 daughters – Fatimah, Aishah, Maryam - a son, Arif)

Wife: DATIN DR. ZAINAH BINTI MOKTAR, Medical Doctor
(Holistic health, dermatology, anti-aging, health consultant and book author)

CAREER PROFILE

- Academic leader (speciality on directing organization on research and innovation, ICT, asset management and infrastructure development)
- Professor of environmental bioengineering for undergraduate and postgraduate studies
- Policy advisor to the Malaysian Government as Chairman of Environmental Quality Council (EQC)
- Policy maker as Commissioner of National Commission of Water Services (SPAN), Malaysia
- Wide experience in advanced training, consultancy, research
- Author of academic publications
- High profile networking among academics and industries, both local and international levels
- Skillful in project management, financial planning and corporate negotiation
- Wide exposure in marketing, commercialization, project implementation, appraisal and human resource management.
- Public relation strategist in media as a newspaper columnist, tv commentator and freelance writer on environmental (and higher education) issues.
- Skilfull in lateral and vertical public relations.
- Excellent in public speaking and communication.

CAPABILITIES

- Policy making. Chairman of Environmental Quality Council (EQC) Malaysia. Member, National Council Water Services (SPAN) and contribute water policy formulation. Member of the Office of the Minister of Education (1997-98). Involved in strategic planning and management for corporatization of public universities and formulation of private colleges and universities. Media strategy and penetration. Management of various programs on R&D and internationalization.
- Academic administration. UTM Vice-Chancellor (similar position to University Rector or President in the US or Europe), Deputy Vice-Chancellor (Research and Innovation) and Dean of Faculty of Chemical Engineering and Natural Resources (FKKKSA); UTM Senate member. Involved in strategic planning particularly on internationalisation and world-class status; financial and administrative; academic and non-academic matters. Research and publications committee member; Heading a center of excellence on water and environmental management. Head Focus Group on Environmental Technology. Branding of academic institution and institutional transformation.
- Academic leadership. Heading UTM Senate, a faculty and a center of excellence on water and environmental management in UTM. Vice President of International Water Association, and Chairman of IWA Specialist Group on Water and Waste Management for Developing Countries. Chairman of various academic and technical committee, conferences and technical assignment at both national and international levels. Deputy President, Malaysia Water Association.
- Lecturing in environmental science and engineering for undergraduate and postgraduate courses, specialising in water and wastewater treatment, membrane technology, clean technology, river rehabilitation, particularly issues related to developing countries. Invited as visiting professor at various universities in Europe, Middle East and Asia.
- Facilitator of professional development programs for professionals and business leaders in the area of environmental management and water resources under WET Program (Water Executive Training) and SWET Program (Solid Waste Executive Training) both at local and international events.

- Ph.D. & M.Sc. research supervision. Supervising more than 14 PhD and 50 Mastersstudents; and two Post-Doctoral fellows.
- Chartered engineer / Professional engineer / Chartered Environmental and Water Manager. Conducting professional advisory services on consultancy basis for UTM Innovation and Consultancy Unit.
- Chartered Scientist. Heading and conducting scientific research
- Writing and communication skills, and public speaking.
- Public relation and networking among professionals, businessmen, bureaucrats and public figures.
- Media strategy using conventional and new media outlets.
- Software developer on simulation and modelling on wastewater treatment plants design advisory (WASDA), risk assessment systems (RISKAS), air pollution design advisory system (AIPAD), integrated solid waste management plan (ISWAM) and costing for water and wastewater facilities (COWAS)..
- Computer modelling on water quality control, particularly ASIM, WEST, AQUASIM and MINTEQ-A2.
- Licensed-computer modeler using WEST package for surface freshwater, water and wastewater treatment modeling and simulation. Principals: HEMMIS (Belgium) & University of Gent.

ACADEMIC BACKGROUND

2009	Advanced Management Program (AMP) Harvard Business School, Harvard University
1997-8	Master of Management (Human Resource Management) Universiti Teknologi Malaysia*
1994-96	Doctor of Philosophy (Environmental Engineering) Title of Thesis: <i>Treatment and Reclamation of Heavy Metals in Electroplating Wastes by Reverse Osmosis Membranes**</i> Supervisor: Professor G.K. Anderson, Newcastle University, England
1990-91	Master of Science (Environmental Engineering) Title of Dissertation: <i>Treatment of High-Ammonia Leachate by Rotating Biological Contactors***</i> Supervisor: Professor M.B. Pescod, Newcastle University, England
1983-88	Bachelor of Chemical Engineering (Hons.) Universiti Teknologi Malaysia

* Incomplete because of my transfer to Johor Bahru from Kuala Lumpur

** Completed within 2 years 8 months. A record for UTM academic staff at that time.

*** Award for the best project of M.Sc. Dissertation.

TECHNICAL EXPERTISE

(My technical expertise has been chronologically developed through my formal training and professional involvement, particularly through my research and consultancy services. About 40% of my professional time is devoted to research and advisory services on membrane technology, 40% of bioprocess for wastewater treatment, and the rest on other subject matters as shown below. Recently, since 2007 I had developed interest and expertise on sustainability, innovation, advanced management and leadership).

- Membrane Technology for Water & Wastewater Treatment:- *Low-Pressure-Driven Membrane System; Membrane bioreactor; membrane fouling and process design*
- Biological Wastewater Treatment:- *Granular Activated Sludge, Wastewater Characterization, Industrial Wastewater, PHA Production & Modeling, Nutrient Removal, Nutrient Recovery*
- Hazardous Waste Management:- *Reclamation, Reuse & Recycle, Waste to Wealth*
- River rehabilitation and modeling:- *Design, Control & Modeling, Policy and Management*
- Sustainability:- *Design concept, Developing Structure and System, Control & Modeling*
- Industrial Ecology:- *Waste Minimization, Pollution Prevention, Water Pinch Technology*
- **Sustainability Policy and Strategy** – *Business model, policy Formulation, Standards, Environmentalism, Water tariff and financing models, Water sustainability, Conservation, Waste to Wealth, Sustainable Tax*

- **Innovation:** – *business model, sustainability, leadership and university-led innovation.*

PROFESSIONAL MEMBERSHIPS / FELLOWSHIPS

Chartered or professional status:

Honorary Fellow, ASEAN Engineering Federation, 2011

Chartered Engineer, Engineering Board (United Kingdom), 2003.

Chartered Scientist, Science Council (United Kingdom), 2004.

Chartered Water and Environmental Manager (CIWEM, United Kingdom), 2003

Professional Engineer - PE12466 (Board of Engineers, M'sia), 2005 - now

Fellow of the Institute of Chemical Engineering (IChemE) (United Kingdom) (No. 99911067), 2008 - now

Fellow of the Academy Sciences of Malaysia (FASc (M), 2009 - now

Fellow, Malaysian Institute of Management (FMIM), 2010

Licensed EIA (Environmental Impact Assessment) **Consultant** (Dept. of Environment, M'sia) 2007

Registered Member, Environmental Professionals Register of M'sia, ENSEARCH, 1996.

Professional membership with non-chartered status:

Member, Institution of Engineers, Malaysia, 2005 - now

Member, International Water Association, 1995. (Vice President 2004-6)

Member, Malaysian Water Association, 2000. (Vice President 2005-7, Deputy President 2007-9)

Vice-President and Member, Harvard Business School Alumni Club of Malaysia, 2010 - now

Member, American Society for the Advancement of Science, 2003

Member, Malaysian Institute of Management, Malaysia, 2003. Upgraded to Fellow 2010

Member, Malaysian Institute of Chemical Engineers, Malaysia, 1990.

Member, Water Environment Federation (USA), 1996

Member, American Society for Engineering Education (329738), 30 May 2010-30 May 2011

PROFESSIONAL AFFILIATIONS AND RECOGNITIONS (Selected)

Academic Publications

Editor, *Journal of Water Science & Technology*, published by the International Water Association (IWA) (previously known as International Association on Water Quality, IAWQ). London (2000 -)

Editor, *Journal of Water Science & Technology - Water Supply*, IWA. London (2000 -)

Editor, *Water and Environmental Management Series*, IWA. London (2003 -)

Editor, *Membrane Water Technology*. Techno-Press, Korea (2009 -)

Senior Advisor, Prince Khalid bin Sultan Chair on Water Research, University of King Saud, Riyadh Saudi Arabia (2009 -)

PhD Examiner, University of Murdoch, Australia, 2003

PhD Examiner, University of Newcastle Upon Tyne, United Kingdom, March 2007

PhD Examiner, University of the Punjab, Lahore, Pakistan, June 2008 & March 2008

(Appointment to serve local Malaysian universities to review promotion for Professorship, and as PhD and MSc examiner, since 1997 are not shown here. Approximately 3 reviews and 3 PhD theses annually)

Special Committee on Innovation and Higher Education

Member, National Blue Ocean Strategy, Chaired by the Chief Secretary to the Malaysian Government. Consultant: Prof Chan Kim (author of Blue Ocean Strategy, HBS Press). 2011

Member, Select Committee for the Prime Minister Innovation Award. Chaired by the Chief Secretary to the Malaysian Government. 2010. 2011.

Chairman. Proton Technology Advisory Council. Members: Prof Nick Collins (Cambridge), Ricardo Botas (Imperial College), Osamu Ono (Meiji), Curtis Carlson (Stanford) 2010-now.

Chairman. Committee on Critical Agenda Project on Academia. Ministry of Higher Education.

Member and participant (highly selective by invitation). The Science and Technology in Society, Kyoto, Japan. 2010.2011 (attended by Nobel Laureates, top policy makers, scholars and opinion leaders)

Speaker and participant in many high-impact national and international seminars, conferences, roundtables and meetings on innovation and higher education.

Special Committee on Environmental Engineering and Water Sustainability

Speaker and organizer, MIT-Harvard-Tufts Workshop on Water Diplomacy. Boston, USA, April 2011

Chairman. Malaysia Environmental Quality Council. 2009-now

Member, National Commission on Water Services (SPAN). 2007-2011

Co-Chair. Committee of R&D and New Products. National Commission on Water Services. 2007-2011

Co-chairman. UTM-MIT Research Collaboration on Industrial Biotechnology (together with Prof. Tony Sinskey of MIT) 2010-now.

Chairman. TECHNOFUND Project on Zero Emission for Palm Oil Mill Effluent (POME). Ministry of Science, Technology and Innovation. 2008-2011.

Chairman. Technical Committee on Environmental Performance Index. Ministry of Natural Resources and Environment. 2009-2011.

Member, International Technical Committee. ASPIRE-International Water Association Asia Pacific Conference. Tokyo Oct 2-6, 2011.

Member. International Advisory and Technical Committee. Water Reuse Conference. International Water Association. Turkey 2011.

Member and co-author. Global Technical Report on Sewage Sludge Management. International Water Association. 2010-11.

Chairman. Technical Committee on Halal Chemicals in Water Industry. SIRIM Berhad. 2010-2011.

Chairman, Specialised Group on Water and Waste Management for Developing Countries, International Water Association. 2004-8.

Technical Chairman, IWA International Conference on Water & Wastewater Management for Developing Countries, Kuala Lumpur, May 2007.

Chairman, IWA International Conference on Water & Wastewater Management for Developing Countries, Kuala Lumpur, 6-8 Nov 2001.

Chairman, IWA International Conference on Environmental Biotechnology, Kuala Lumpur, Dec 2003.

Chairman of technical committee, ASIAWATER 2004, MWA, Kuala Lumpur, April 2004.

Chairman of technical committee, ASIAWATER 2006, MWA, Kuala Lumpur, April 2006.

Chairman, IWA Int. Conf. Water Mgmt & Tech. in Developing Countries, K.Lumpur, 14-16 May 2007.

Chairman, IWA Int. Conference on Water & Wastewater Treatment Plants, K.Lumpur, 2008.

Committee Member, Publication Committee, Int. Water Association, London (2000-2005).

Committee Board Member, Specialized Group on Membrane Technology for Environmental Management, International Water Association. 1994-2001.

Secretary, Specialised Group on Water and Waste Management for Developing Countries, International Water Association. 2000-2002.

Member, Publication Committee (WST), IWA World Water Congress.2002, Berlin, Germany

Member, Publication Committee (WST), IWA World Water Congress.2004, Marakesh, Morocco

Member, Publication Committee (WST), IWA World Water Congress.2006, Beijing, China

Member, Publication Committee (WST), IWA World Water Congress.2008, Vienna, Austria.

Member, Int. Advisory Committee, 2nd IWA-ASPIRE Conference, Perth, Australia, Sept 2007.

Member, Int. Advisory Committee, IWA Conf. on Membrane Technology, Cranfield, UK, April 2007.

Member, International Program Committee, International Specialised Conference on Sequencing Batch Reactor, IWA, Queensland, Australia, 11-13 February 2004.

Chairman of Scientific Committee, International Conference on ASIAWATER 2004, MWA & IWA, The Mines Exhibition and Conference Centre, Kuala Lumpur, 30-31 March 2004.

Member, Int. Program Committee, International Conference on Membrane Technology and Water Environment, IWA, Seoul, South Korea, 7-10 June 2004.

Member, Int. Program Committee, International Specialised Conference on Water and Wastewater Management for Developing Countries, IWA, Zimbabwe, 28-30 July 2004.

Member, Int. Advisory Committee, First IWA-ASPIRE Conf., Singapore, 10-15 July 2005.

Member, Int. Advisory Committee, IWA Conf. on Small Water & Wastewater Plants, Spain, 2008.

Head, Regional Committee for South East Asia, Specialised Group on Water and Waste Management for Developing Countries, International Water Association. 1996-2000.

Member, International Program Committee, International Specialised Conference on Membrane Technology in Environmental Management, IWA, Tokyo, Japan, 8 – 11 Nov 1999.

Member, International Program Committee, International Specialised Conference on Membrane Technology for Wastewater Reuse, IWA, Israel, 12-15 Sept 2001.

Member, International Program Committee, International Specialised Conference on Advanced Oxidation, IWA, Hong Kong, June 2002.

Member, International Program Committee, International Specialised Conference on Small Water and Wastewater Treatment Plants, IWA, Istanbul, Turkey, Sept 2002.

Member, International Program Committee, International Specialised Conference on Water and Wastewater Management for Developing Countries, IWA, Bangalore, India, December 2002.

Member, International Program Committee, International Specialised Conference on Asia Water Quality (ASIAQUAL 2003), IWA, Bangkok, Thailand, Sept 2003.

Committee Member, UN Environment Programme, Malaysia Steering Committee (UNEP-MATREM), 1996.

Visiting Fellow, Department of Environmental & Sanitary Eng., Kyoto University, 1993, 2000, 2001.

Member, Cabinet Task Force Committee on Biotechnology, Ministry of Science, Technology and Environment, Malaysia, 1991-92.

Visiting Fellow & Network Member, Centre for Environmental Studies, Institute of Strategic and International Studies (ISIS Malaysia), 1991-93.

Member, Executive Board Member & Member of Editorial Board, Environmental Research & Management, Malaysia (ENSEARCH), 1991.

CAREER PATH & EXPERIENCE

(I have been actively involved in various levels of academic and administrative positions, and serving both local and international organizations. My core competency is leadership with emphasis on efficiency and effectiveness in management-by-objective using various tools such as KPIs, creating conducive learning organization, innovation, wide-range-scenario planning and execution, and team work development. My emphasis is more towards execution of strategy and mid-term planning. At the early stage, my career path has been tailored more towards professional-based assignments, especially related to research and advanced training, and management of academic community, as well as professional advisory. My philosophy is to undertake challenging assignments, and providing the best service to the nation and academic community. My vision is to be an innovative and internationally outstanding professor, and providing dynamic academic leadership to scientific and professional community).

Oct'08 – now **Vice-Chancellor**
Universiti Teknologi Malaysia
New initiatives: Research University, Research Alliances: **K-Economy, Transportation, Nanotechnology, Biotechnology, Water, Sustainability, Infocom, Materials and Manufacturing, Construction, Cybernetics and Energy.** UTM Endowment Fund. KPI-based management system; empowerment, innovation and creativity; UTM Branding Unit; UTM Holdings restructuring; UTM Innovation Centre; UTM Reading Station; UTM Professors' Council, Scholars' Inn, New research centres: **UTM Iskandar Malaysia Research Centre (IMREC), UTM Iskandar Malaysia Academic Partnership (IMAP), UTM Centre of FiqhScience and Technology (CFIRST), UTM Centre of Psychometrics, UTM**

Centre for Sports Technology, UTM Centre for Rainwater Harvesting Technology (under review). New faculties/schools: UTM Razak School on Engineering and Advanced Technology, UTM Perdana School on Science, Technology and Innovation Policy, UTM Faculty of Petroleum Engineering and Renewable Energy; UTM Faculty of Islamic Civilization; UTM Language Academy; UTM School of Advanced Informatics and UTM School of Nuclear Energy. Major University Alliances: MIT-UTM collaboration in 2010 in industrial biotechnology. Imperial College London-UTM collaboration in sustainable technology 2011. UTM-Meiji University on advanced engineering and business studies 2010. UTM-Kyoto University collaboration on sustainable city 2011. UTM-Proton Holding collaboration on automotive technology 2010. UTM-CCM collaboration on chemical technology 2011. Major achievements: Research University status (May 2010); National Intellectual Property Awards (2010, 2009 and 2007); Merdeka Award 2009 (2 categories: (1) Outstanding Academic Achievements – Zaini Ujang and (2) Science, Technology and Health – Halimaton Hamdan); Readers' Digest Trusted Brand (Higher Education in Malaysia) 2010; Ranked 320 in World University Rankings 2009 by QS-THE; Ranked 346 in 2008 etc. Ranked first in Malaysia based on 4ICU World University Ranking 2011.

2009 (Nov) Promoted to Administration Staff Special Grade (Staff/Turus III)

Feb'07–Sept'08 **Deputy Vice-Chancellor (Research and Innovation) (Professor Grade B)**
Universiti Teknologi Malaysia

Task: Chairing more than 60 committees in UTM related to the following portfolios: ■ Research strategy and management ■ Innovation and commercialization ■ Human resource development ■ Occupational Health, Environment and Safety ■ Publication ■ ICT ■ Corporate affairs ■ Commercial arms ■ Strategic physical development ■ Laboratory services etc. ■ Asset Management ■ Chair ICT Committee of local public universities ■ Member, Evaluation Committee for Anugerah Akademia Negara, etc ■

July'06-Feb'07 **Dean**

Faculty of Chemical and Natural Resources Engineering(FKKKSA), UTM

Task: ■ Academic leader and CEO of the Faculty. Outsourcing and managing financial grants for academic purposes. Responsible for all academic, financial and administrative aspects of the Faculty, i.e. 129 full-time academics, 72 administrators, technical and clerical staff. The Faculty consists of 5 departments (chemical engineering, petroleum engineering, polymer engineering, bioprocess engineering and gas engineering) and 3 centre of excellence (Chemical Engineering Pilot Plant, Centre for Gas Technology and LIPID). Number of students: <2000 which consists of 20% postgraduate students.

■ Principal Investigator on research projects from public, private sector and external/international grants; supervisor of Post-Doctoral fellows, 5 PhD and more than 10 MSc students.

■ Develop alumni relationships and international academic co-operation at centre-level.

■ Take part in many policy formulation committees on environment policy and higher education at national level. Providing advisory/consultancy services to both private and public agencies.

■ Senior Fellow at UTM Institute of Environmental & Water Resource Management.

2002 Professor of Environmental Bioengineering (Grade C)

2001-2006

Director

UTM Institute of Environmental & Water Resource Management (IPASA)

Task: Academic leader and CEO of the Institute. Outsourcing financial grants for research, and providing advisory/consultancy services to both private and public agencies. Responsible for all academic, financial and administrative aspects of IPASA, i.e. one of 23 centers of excellence within UTM. Manage/coordinate 15 full-time academic staff (including 2 Professors, 13 Associate Professors), 5 administrators, and more than 30 researchers. Received more than 20 visiting professors and graduate students' research attachment from various countries, mainly Europe, every year. Realigned IPASA into 3 market-focused activities i.e. (a) water and wastewater technologies, (b) sustainable environmental management and (c) integrated water resource management; and added Integrated Waste Management Program in 2003.

Principal Investigator on IRPA, private sector and external/international grants; supervisor of 4 Post-Doctoral fellows, 5 PhD and more than 50 MSc students. Developed alumni relationships and international academic co-operation at centre-level. Invited to take part in many policy formulation committees on environment and higher education at national level. Chair of R&D Committee for Malaysia Water Association, Secretary and Secretariat Manager to the International Water Association (IWA) Specialist Group on Water and Waste Management for Developing Countries and Member of IWA Strategic Council Member. Editorial board member of IWA journal of *Water Science and Technology* (WST) and *Water and Environmental Management Series* (WEMS).

- 2001-2006 **Head
Focus Group on Environmental Technology, UTM**
Task: Coordinate activities related to research and professional services in UTM, across various departments. Provide inputs to UTM Management on current trends and research opportunities in this area. Assisting UTM staff to bid for research grants at national and international levels. Evaluation of research proposals.
- 2003-now **Member, Senate of UTM**
Task: Decision making for academic-related programs and issues in UTM.
- 1999-2001 **Deputy Director (R&D)
UTM Institute of Environmental & Water Resource Management**
Task: Outsourcing contract research and consultancy projects. Management of resources in UTM in relation to environmental projects, especially for research and consultancy. Outsourced and managed a minimum of RM3 million projects annually.
- 2000 -2002 **MUCED Centre Manager for UTM**
Malaysian University Consortium for Environment & Development (MUCED) in collaboration with Danish Cooperation for Environment & Development (DANCED)
Task: Outsourcing and management of a grant from Danish Government – DKr5 millions (around **RM2.5 million**) - for academic and research collaboration.
- 1999- **Coordinator, Postgraduate Program: – M.Eng. (Environmental Engineering)**
Task: Coordinate a postgraduate program. Marketing. Management of human and financial resources.
- 1997-1998 **Special Officer/Advisor to the Minister of Education** (secondment)
Minister's Office, Ministry of Education
Task: Advise and assist the Minister on higher education policies and implementation, particularly on corporatization of public universities, formation of private universities, R&D infrastructures and policy. Assignment includes assisting the Minister to communicate with Vice Chancellors and international renown professors on specific issues related to higher education; writing policy speech for the Minister on higher education and corporatization of public universities, and formation of private universities; and preparation of statements to be made in Parliament.
- 1996 - **Associate Professor in Environmental Engineering (Grade DG54)
Department of Environmental Engineering, UTM**
Lecture on: Water & wastewater treatment, water quality, solid and hazardous waste, air pollution, environmental management, environmental 14modelling
- 1994-1996 **PhD Student**, University of Newcastle upon Tyne, England.
- 1991-93 **Lecturer, Department of Environmental Engineering, UTM**
Lecture on: Water & wastewater treatment, water quality, solid and hazardous waste, air pollution, environmental management.
- 1991-93 **Lecturer & Head of Laboratory**, Department of Environmental Engineering, UTM.
Lecture on: Water and wastewater treatment & air pollution

- 1992 Three month **fellowship** at the Centre for Environmental Studies, Institute of Strategic and International Studies (ISIS Malaysia).
- 1990-91 **M.Sc. Student**, University of Newcastle upon Tyne, England.
- 1988-90 **Assistant Lecturer/Tutor**, Depart. of Environmental Engineering, UTM.
- 1988 **Research Assistant**, Depart. of Chemical Engineering, UTM.
(May-July) Subject: *Survey on the prospect of chemical industry in Malaysia.*
- 1987 **Trainee Engineer**, Ranhill Bersekutu, Kuala Lumpur.
(April-June) Subject: *Liquefied petroleum gas reticulation.*
- 1986 **Trainee Engineer**, Sabah Gas, Labuan.
(April-May) Subject: *Methanol production plant.*

VISITING PROFESSORSHIP, EXAMINER, INVITED SPEAKER (INTERNATIONAL)

University of Newcastle, UK. 1997, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2011
Oxford University, UK, 2004, 2005, 2006, 2009, 2011
 Cranfield University, UK, 2000, 2001, 2002, 2003
 University of Middlesex, UK, 1999, 2000, 2001
University of Tokyo, Japan. 1999, 2000
University of Kyoto, Japan. 1993, 2000, 2001, 2004.
 Osaka Sankyo University, Japan, 2004
 Musashi Institute of Technology, Japan, 2000, 2001
 Tokyo Institute of Technology, Japan, 2004
 University of Lund, Sweden, 2008, 2009
University Technical of Denmark, 1997, 1998, 2000, 2001, 2002, 2006, 2008, 2009, 2011
Delft Technical University, The Netherlands, 2003, 2004, 2005
Lund University, Sweden. 2007, 2008, 2009, 2010, 2011
 University of Aalborg, Denmark, 1999, 2000, 2001
 Bari Technical University, Italy. 2006
National University of Singapore, 2002, 2004, 2008
 Taibah University, Madinah, Saudi Arabia, 2009, 2010, 2011
 King Saud University, Riyad, Saudi Arabia, 2009
 Nanyang Technological University, Singapore, 2004
 Murdoch University, Australia, 2004
 University of the Punjab, Pakistan, 2008
 Institut Teknologi Surabaya, 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2008
 Institut Teknologi Bandung, 2000, 2001
 International Water Association, 1996 – now
 American Water Works Association, 2007
 Rockefeller Foundation, 2003
 Japan Society for the Promotion of Science, 1993, 2000, 2001, 2004
 Danish University Consortium for Environment & Development. 1998, 1999, 2000, 2001
 British Council, UK. 1999, 2000, 2001, 2002

ATTENDING SPECIAL TRAINING PROGRAMS (SINCE 2010)

- Jan. 2013 HBS Strategic Negotiations : Dealmaking for the long term, Harvard Business School Campus, Boston USA. (13-18.1.2013)
- Sept. 2012 US Government International Visitor Leadership Program in US, USA (24.8-17.9. 2012)

- Febr. 2012 Risk Management for Corporate Leaders: Integrating Best Practices for Superior Strategy Execution, Harvard Business School, USA. (5-10 Febr. 2012)
- Febr. 2011 Harvard Business School, Boston USA
Authetic Leadership Development
- June 2011 MIT-Harvard-Tufts, Boston USA
Water Diplomacy Workshop
- July 2011 Harvard Business School Alumni Club of Malaysia, Kuala Lumpur
Senior Management Development Program
- April 2011 Mandatory Accreditation Programme for Directors of Public Listed Companies
Bursatra Sdn Bhd (a subciduary of Bursa Malaysia)
Kuala Lumpur
- June 2010 American Society for Engineering Education Conference
Louisville, Kentucky USA
- Oct 2010 Seventh Forum of Science and Technology in Society
Kyoto, Japan
- Oct 2010 2010 International Presidential Forum
Korean Advanced Science and Technology (KAIST), Seoul
- Oct 2010 2010 GEDC Conference on Water Sustainabilaity and Engineering Education
Global Engineering Deans Council
Singapore
- Nov 2010 6th QS-Apple Asia Pacific Professional Leaders in Education Conference
Strengthening Intellectual Ecosystem for Innovation in Higher Education
Singapore

SPECIAL APPOINTMENTS

International

- 2007-2011 **Coordinator and Key Resource Person** (Summer School Program) Denmark Technical University. Task: To develop strategies and implementation plan to conduct summer school programs for European students in Malaysia.
- 2007-2011 **Coordinator.** International Academic Partnership with Lund University. Sweden. Counterpart: Prof Gustaf Olsson
- 2004-2006 **Vice President. International Water Association** (IWA, based in London). Task: To develop strategies and implementation plan to increase membership and participation of water professionals in the world, particularly among developing countries.
- 2002-2004 **Member. Strategic Council of the International Water Association** (IWA, based in London). Task: The highest committee in the organization, consists of professionals from 80 countries. The Council member meet twice a year, and deciding on the direction and policy of the organization.
- 2000-2005 **Member, Publication Committee.** IWA London. Members: Prof. Mogens Henze (Denmark Technical University), David Dixon (Univ of Melbourne), Prof Ralf Ottendahl (Unv of Berlin), Prof Mark van Loosdrecht (Delft Univ of Technology, the Netherlands) & Zaini Ujang (UTM).

- 2000-2011 **Editorial Board Member.** IWA Journal of *Water Science & Technology*. IWA Publishing, London.
- 2003-2005 **Editorial Board Member.** IWA Journal of *Water and Environmental Management Series*. IWA Publishing, London.
- 2006-2007 **Author of Chapter 6 (“Wastewater Management System”, with Prof. Mogens Henze.** A project by UNESCO on publication of *Urban Water Management*. (coordinated by UNESCO-IHE Delft, The Netherlands.
- 2000-2004 **Secretary.** Specialist Group on Water and Waste Management for Developing Countries. International Water Association, London. Expected to become Chairman in September 2004.
- 2002- **Co-editor (with Prof. Mogens Henze). IWA Book Series on Sustainable Technology for Developing Countries.** IWA Publishing, London (Three books on the first phase: Municipal Wastewater Management for Developing Countries ■ Integrated Solutions for Industrial Pollution Control in Developing Countries ■ River Rehabilitation in Developing Countries)
- 2000-4 **Member of International Task Force.** IWA Task Group on Environmental Engineering Education. Member: E. Mongenroth (Univ of Illinois @ Urbana-Champaign, USA - Chairman), Mogens Henze (Denmark Technical University), Willi Gujer (EAWAG, Switzerland), Tom Sthepenson (UK), Takashi Mino (Tokyo Univ, Japan), Tom Bishop (Univ of Cincinnati, USA) & Zaini Ujang (UTM).
- 2001-3 **Vice Chairman.** IWA Group for Management Affairs. London.
- 2000-now **Paper reviewer** for the following journals:
Water Research (Pergamon and IWA Publishing, London)
Water Science and Technology (IWA Publishing, London)
Urban Water (Pergamon)
- 2003-4 **Member of International Advisory Committee.** IWA Conference on Sequencing Batch Reactor. Queensland, Australia, February 2004.
- 2001-2 **Member of International Advisory Committee.** IWA Conference on Small Water and Wastewater Treatment Plants. Istanbul, Turkey, September 2002.
- 2001 **Chairman,** IWA International Conference for Environmental Biotechnology, Kuala Lumpur, December 9-10, 2003.
- 2001 **Panel Writer.** UNESCO Life Support Encyclopedia on Hazardous Waste Management for Developing Countries. Paris (completed in January 2002, published in 2004).
- 2001 **Head and Coordinator.** Joint Research Program on Water Resource Management under DANCED funding for Danish, Malaysian, Thai and South African universities.
- 2001 **Coordinator,** Preparation of Research Proposal on Zero Emission Technologies
Task: Outsourcing a research grant from Green Aid Program (Ministry of Industry and International Trade, Japan). Amount: RM2 million.
- 2001 **Chairman,** IWA International Conference for Water and Wastewater for Developing Countries, Kuala Lumpur, October 29-31, 2001.
- 2001 **Editor-in-Chief,** IWA Proceedings on Water & Wastewater Management for Developing Countries. IWA, Kuala Lumpur, October 29-31, 2001.
- 2001 **Co-Chairman.** Technical Committee for WEFTEC Asia Pacific (Water Environment Technology) Conference, Kuala Lumpur, May 2002. Water Environment Federation (US-based), Atlanta.

- 2001 **Member of International Advisory Committee.** IWA Conference on Membrane Technology for Wastewater Reuse. Israel, September 2001.
- 2001-2 **Member of International Advisory Committee.** IWA Conference on Water Management for Megacities. Hong Kong, April 2002.
- 2001-2 **Member of International Advisory Committee.** IWA Regional Conference 8th *IWA Asia-Pacific Regional Conference* (Asian Waterqual 2003), International Water Association, October 2003.
- 2001-2 **Member of International Advisory Committee.** IWA Conference on Ozonation. Hong Kong, July 2002.
- 2001-6 Paper reviewer.
 - *World Water Congress*, Beijing, China (September 2006).
 - *World Water Congress*, Marrakech, Morocco (September, 2006).
 - *World Water Congress*, Melbourne, Australia (April, 2002).
 - *World Water Congress*, Berlin, Germany (15-19 October, 2001).
- 2000-10 Keynote speakers at prestigious local and international conferences, such as
 - **Merdeka Award Lecture Series 2009** (Malaysia)
 - IWA Young Water Professionals Conference, Kuala Lumpur, March 2010.
 - Prince Khalid bin Sultan Chair on Water Reuse, Riyad 2009
 - AWWA-IWA Conference on Small Water System, Baltimore, USA, Feb 2007
 - International Conference on Disaster Management, Jakarta, Indonesia (Dec 2006)
 - International Conference on Energy and Environment, Universiti Tenaga Nasional (UNITEN) Malaysia. 28-30 August 2006
 - International workshop on river rehabilitation. Surabaya, Indonesia (May 2005)
 - IWA Conference on Environmental Biotechnology: Applications in Water and Wastewater for the Tropics, Kuala Lumpur (December 2003).
 - IWA Conference on Water and Wastewater Management for Developing Countries, Kuala Lumpur (October 2001).
 - IWA Conference on Environmental Engineering Education. Zurich, Switzerland (September 2003).
 - Regional Conference on Environmental Technology & Management, ITB, Indonesia (January 2002).
 - International Seminar on Industrial Pollution Control. Inst. Teknologi Surabaya, Indonesia (November 2000).
- 2000-2009 Visiting Professor. Institut Teknologi Surabaya, Indonesia.
- 2000 Member of IWA Strategic Council, International Water Association, 2000-4.
- 2000 Moderator of conference proceeding (63 selected papers to be published in *Wat.Sci.Tech.*). 7th *IWA Asia-Pacific Regional Conference* (Asian Waterqual '99), International Water Association, 18-20 October 1999, Taipei, Taiwan.
- 2000 Moderator of conference proceeding (90 selected papers to be published in *Wat.Sci.Tech.*). *IWA Conference on Wetland System for Water Pollution Control*, International Water Association, November 2000, Florida USA.
- 2000 Moderator of conference proceeding (40 selected papers to be published in *Wat.Sci.Tech.*). 3th *IWA Conference on Waste Stabilization Ponds*, International Water Association, Sept 2000, Morocco.
- 2000 Paper reviewer (6 papers). *IWA First World Water Congress*, Paris. 3-7 July, 2000.
- 1999 Chairman, *Regional Seminar on Medical Waste Management*. Co-organizers: UTM & The United States – Asian Environmental Partnership Program. 19-21 Oct, 1999.

1998 Paper reviewer (5 papers). *IAWQ Biennial Conference on Water Quality International*, Vancouver, Canada. July, 1998

National

- 2009-2012 **Chairman**, Environmental Quality Council (EQC) Malaysia (1 April 2012 – 31 March 2015)
- 2012 -2013 **Member**, System, Product & Material and Research & Development Committee, National Water Services Commission (SPAN) (26.3.2012-1.4.2013)
- 2007- 2011 **Commissioner**, National Commission on Water Services (SPAN)
- 2009-2011 **Vice Chairman**, System, Product & Material and Research & Development Committee, National Water Services Commission (SPAN)
- 2010- **Vice President** Harvard Business School Alumni Club of Malaysia
- 2009-2010 **Chairman**, Critical Agenda for the National Higher Education Strategic Plan (PSPTN), Ministry of Higher Education: Academia (30 Sept. 2009 – 31 Oct. 2010)
- 2010 - **Chairman of Group Process**, Halal Requirements for the Manufacturing of Chlor-Alkali and Coagulant Product, Sirim Berhad (April 2010)
- 2011, Jan 10 **Non-Independent Non Executive Director** of Chemical Company of Malaysia Berhad
- 2011 **Nominee Director of Permodalan Nasional Berhad** in Chemical Company of Malaysia Berhad.
- 2011 **Representing Malaysia** for the **Transitional Finance Committee of the United Nations Framework Convention on Climate Change (UNFCCC)**, 24 January, 2011
- 2005-2007 Deputy President, Malaysian Water Association (MWA).
- 2005-2007 Vice President. Malaysian Water Association (MWA).
- 2003-2007 Exco (research and development committee). Malaysian Water Association
- 2006 Chairman and course leader: *Environmental Health Risk Assessment*, Kuala Lumpur, July 26-27, 2006. IPASA-UTM
- 2006 Course Leader, *Workshop on Membrane Technology V*, Kuala Lumpur. February 2006. IPASA-UTM
- 2006 Course Leader, *Workshop on New Design Procedures for Biological Wastewater Treatment Plants*, Kuala Lumpur. March 28-29, 2006. IPASA-UTM
- 2006 Course Leader, *Workshop on Advanced Drinking Water Treatment*, Kuala Lumpur. 12-13 April 2006. IPASA-UTM
- 2006 Course Leader, *Workshop on Automation and Instrumentation of Wastewater Treatment Plants*; IPASA-UTM, 14-15 Nov 2006.
- 2006 Course leader, *Workshop on Epidemiology for Public Health Engineers and Scientists*. 5 & 6 December 2006, Melaka, Ministry of Health
- 2003-2004 Workshop leader, Training program on wastewater treatment and zero emissions technologies. Malaysia Institute of Environment (EiMAS), Department of Environment, MOSTE

- 2002-2004 Workshop leader, Training program on membrane technology for water and wastewater treatment. Malaysia Water Association
- 2001-3 Sub-Member, Academy Sciences of Malaysia. Committee on Environmental Management.
- 2002-4 Chairman, workshops, seminar and technical meetings on sustainable sanitation, odor control, water and wastewater engineering, river rehabilitation and cleaner production. UTM.
- 2001 Chairman, *National Seminar on Immersed Membrane Technology*. UTM & Tokyo Inst. of Technology (Japan), Skudai. November 2001.
- 2000 Chairman, *National Seminar on Environmental Modeling*. UTM & Malaysian University Consortium on Environment & Development (MUCED), UTM Skudai. December 2001.
- 2001 Head. Top-Down Research Program on Zero Emissions for Small and Medium Scale Industries. Proposal submitted to the Ministry of Science, Technology and Environment.
- 2001 Head. Preparation of Proposal Paper on Advanced Environmental Engineering Laboratory. UTM, January 2001.
- 2001 Chairman, *National Seminar on Immersed Membrane Technology*. UTM & Musashi Inst. of Technology (Japan), Skudai. August 2000.
- 2000 International Committee Member, *6th International Conference on Pollution in Metropolitan Cities*. Co-organizers: Environmental Mgmt & Research Ass. Of Malaysia-UTM. March 20-23, 2000.
- 2000 Chairman, *National Short Course on Modeling of Biological Wastewater Processes*. Inst. Env. & Water Resource Mgmt.-UTM, 3-5 April, 2000.
- 2000 Chairman, *National Short Course on Molecular Microbial Ecology in Water and Wastewater Applications*. Inst. Env. & Water Resource Mgmt.-UTM, 3-5 April, 2000.
- 1999 Paper reviewer (11 papers) & International Committee Member, *Specialized International Conf. On Membrane Technology in Environmental Management*. Co-organizers: International Water Association & Tokyo University, Nov'99.
- 1999 Chairman, *National Seminar on Advanced Wastewater Treatment*. Co-organizers: UTM, Environmental Mgmt & Research Ass. of Malaysia & Danish Cooperation for Environmenta & Development, 28-30 January, 1999.
- 1999 Chairman, *National Short Course on Industrial Air Pollution Control*. Co-organizers: UTM & Middlesex University (UK). 9-10 June, 1999.
- 1999 Chairman, *National Short Course on Clean Technology for Industrial Applications*. Organizer: UTM. 6-7 July, 1999.
- 1999 Chairman, *National Short Course on Membrane Technology for Environmental Control*. Organizer: UTM. 8 July 1999.
- 1999 Chairman, *National Short Course on Sludge Management*. Organizer: UTM. 18-19 August, 1999.
- 1999 Chairman, *Regional Short Course on Sewer as a Physical, Chemical & Biological Reactor*. Organizer: UTM. 7-9 September, 1999.
- 1999 Chairman, *Specialized Short Course on Geochemical Equilibrium Model (MINTEQ-A2)*: Organizer: UTM. 27-29 Oct, 1999.

- 1994-1998 Magazine Columnist, *Dewan Masyarakat*, Dewan Bahasa & Pustaka, Malaysia.
Subject: Environmental and educational issues.
- 1988-98 Newspaper Columnist, *Utusan Malaysia*, Utusan Melayu (Malaysia) Berhad.
Subject: Environmental and educational issues.
- 1993 Academic Consultant, Kolej Islam Melaka
Subject: Technology and Business Studies
- 1993 Head and Founder-Editor *Ensiklopedia Sains & Teknologi*.UTM & Dewan Bahasa & Pustaka.
- 1993 Secretary, *National Seminar on Environmental Control Technology*, UTM Kuala Lumpur.
- 1993 Secretary, *Short Course on Environmental Engineering for Non-Environmental Engineers*, UTM, Kuala Lumpur.
- 1993 Secretary, *Short Course on Solid & Hazardous Wastes Mgmt*, UTM, JB.
- 1993 Visiting Fellow, Department of Environmental and Sanitary Engineering University of Kyoto, Japan.
- 1992-1993 Editorial Consultant, *Dewan Kosmik* (Scientific Magazine), Dewan Bahasa dan Pustaka, Malaysia. Subject: Environmental issues
- 1992-1993 Magazine Columnist, *Dewan Siswa*.Dewan Bahasa&Pustaka, Malaysia
Subject: Environmental issues
- 1991-92 Environmental Consultant, Magazine Depart., Dewan Bahasa & Pustaka, M'sia
Subject: To promote environmental awareness through mass media in conjunction with Rio Summit Conference.
- 1991-92 Visiting Fellow, Centre for Environmental Studies, Institute of Strategic and International Studies (ISIS Malaysia)
Subject: The impact of environmentalism on the system of education.
- 1992-93 Member, Cabinet Task Force on National Communication Policy Ministry of Information, Malaysia. Subject: Environment and mass media
- 1988-1993 Committee Member and book editor, Unit of Academic Publication, UTM.
- 1986 Deputy Head, Malaysian students delegation to Japan under Friendships Programme for the 21st. Century, JICA-JPA.

PUBLICATIONS

(As **Editor**, *Journal of Water Science & Technology*, published by IWA, London (since 2000) with impact factor 1.24 in 2007, I have to review and moderate around 50 articles annually. On top of that I am also serving other refereed international journals. My emphasis in publication now is on international refereed-journals and refereed-proceedings. On average I have published more than 15 papers annually since 1996. In addition, I contribute on weekly basis for a column dedicated for environmental issues, called MINDA LESTARI in Berita Harian daily 2004-2011.

Refereed International Journals.

1. Salmiati, Mohd Razman Salim, Zaini Ujang and Shamila Azman. (2012). Potential Application of Sewage Sludge as Soil Amendment. *International Proceeding of Chemical, Biological and Environmental Engineering Vol. 35. ISBN 978-981-07-2428-3. 66-67*

2. Mohd Razman Salim, Alia Damayanti, Salmiati, Zaini Ujang and Muhamad Ali Muhammad Yuzir. (2012). The effects of flux variation and enhancing chemicals on biofouling of MBR treating palm oil mill effluent. *International of Conference on Challenges in Environmental Science & Engineering (CESE 2012)*. 9-13 September 2012. Melbourne, Australia.
3. M.F.Md. Din, S.C. Huey, Salmiati, M.A. Ahmad, M. Ponraj, Z. Ujang and S. Chelliapan. (2012). Raw material resource for biodegradable plastic production from cafeteria wastes. *Journal of Scientific & Industrial Research*. **71**, 573-578.
4. M.F.Md. Din, M. Ponraj, Z. Ujang, M.v. Loosdrecht, Salmiati, S. Chelliapan, V.Zambare, and G. Olsson (2012). Development of Bio-Rec[®] system for polyhydroxyalkanoates (PHA) production and its storage in mixed cultures of palm oil mill effluent (POME). *Bioresource Technology*. doi: <http://dx.doi.org/10.1016/j.biotech.2012.08.036>
5. Sune Balle Hansen, Stig Irving Olsen and Zaini Ujang (2012). Greenhouse Gas Reductions Through Enhanced Use of Residues in the Life Cycle of Malaysian Palm Oil Derived Biodiesel. *Bioresource Technology* **104**, 358–366.
6. Nor-Anuar A., Ujang Z., van Loosdrecht M.C.M., de Kreuk M.K. and G. Olsson (2012). Strength Characteristics of Aerobic Granular Sludge *Wat.Sci.Tech.* **65** (2) 309 - 316.
7. Abdulllah N., Ujang Z., Yahya A. (2011). Aerobic granular sludge formation for high-strength agro-based wastewater treatment. *Bioresource Technology*. **102**. 6778-6771.
8. Safaai NSM, Noor ZZ, Ujang Z and Talib J (2011). Projection of CO₂ emission in Malaysia. *Environ. Progress & Sustainable Energy* (DOI 101002/ep.10512).
9. Damayanti A., Z. Ujang, M. R. Salim (2011). The Influenced of PAC, Zeolite, and *Morenga oleifera* as Biofouling Reducer (BFR) on Hybrid Membrane Bioreactor of Palm Oil Mill Effluent (POME). *Bioresource Technology*. **102**. 4341-4346.
10. Nasef MM, Saidi H, Ujang Z, Dahlan KZM (2010) Adsorption of Co(II), Cu(II), Ni(II), Pb(II) and Ag(I) ions from aqueous solutions using crosslinked polyethylene-graft-polystyrene sulfonic acid membrane prepared by radiation grafting, *Journal of Chilean Chemical Society*. **55** (4) 421-427.
11. Damayanti A., Ujang Z, Salim MR and Olsson G. (2010). Respirometric Analysis of Activated Sludge Models from Palm Oil Mill Effluent. *Bioresource Technology*, **101**. 144-149.
12. Salmiati, Z. Ujang, M.R. Salim, G. Olsson (2010). COD Fractionation of Palm Oil Mill Effluent (POME): Typical Treatment, Biodegradability and Modeling. *Sustain. Environ. Res.* **20**(6).353-359.
13. Damayanti A., Z. Ujang, M.R. Salim (2009). Finding of Coefficients and Oxidizable Palm Oil Mill Effluent (POME) For Activated Models (ASMs) *Malaysian Journal Civil Eng.* **21**(1). 32 – 41.
14. Salmiati, Z. Ujang and M.R. Salim. (2008). Microbial Community Analysis with High PHA Storage Capacity from Palm Oil Mill Effluent (POME) *Water Malaysia Magazine*, Issue no.17. September 2008.
15. Nor-Anuar A., Ujang Z., van Loosdrecht M.C.M., and de Kreuk M.K. (2008). Development of Aerobic Granular Sludge (AGS) Technology for Domestic Wastewater Treatment in Hot Climates. *Water Malaysia*. December 2008.
16. Nor-Anuar A., Ujang Z., van Loosdrecht M.C.M., and de Kreuk M.K. (2007). Settling Behaviour of Aerobic Granular Sludge (AGS) *Wat.Sci.Tech.* **56** (7) 55-61
17. Razak A.R.A., Ujang Z. And Ozaki H. (2007). "Removal of endocrine disrupting chemicals (EDCs) using low pressure reverse osmosis membrane". *Wat.Sci.Tech.* **56** (8) 161-168.
18. Salmiati, Ujang Z., Salim M.R., Md Din M.F. and Ahmad M.A. (2007). Intracellular biopolymer production using mixed microbial cultures from fermented palm oil mill effluent (POME). *Wat.Sci.Tech.* **56** (8) 179-185.

19. Aris A., Mokhtar N., Muslim R., Ujang Z. and A-Majid Z. (2007) "Treatment of acidic Water of Bekok River using open lime stone channel". *WST-Water Supply*, **4**(7) 145.
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INTELLECTUAL PROPERTY

1. System for Obtaining Biodegradable Polymers
PI 2008 4843, UTM Patent (Malaysia)
2. Extraction Method for Recovering Polhydroxyalkanoates
PI 2008 3142, UTM Patent (Malaysia)
3. Process of Aerobic Granular Sludge (AGS) Development for Domestic Wastewater Treatment in Hot Climates :
PI 2008 2734, UTM Patent (Malaysia)
4. Technical Design of Cyclic Aerobic Granular Sludge Bioreactor(CAgSBio) as a Compact, Slender and High Vertical Reactor for Domestic Wastewater Treatment in Hot Climates :
PI 2008 2928, UTM Patent (Malaysia)
5. Mixing Criteria Development for Aerobic Granular Sludge (AGS) Bioreactor Operation
PI 2008 2929, UTM Patent (Malaysia)
6. Procedures Development for Evaluation of Aerobic Granular Sludge (AGS) Physical Strength
PI 2008 2930, UTM Patent (Malaysia)
7. Stormwater Filter System
PI 2006 1156, UTM Patent (Malaysia)
8. Bioplastic Raw Materials Production from Palm Oil Waste
PI 2007 1650, UTM Patent (Malaysia)
9. Wastewater Treatment Plant Design Advisor (WASDA) Version 4.1
©2008/146/236, UTM Copyright (Malaysia)
10. Industrial Waste Management Using Cleaner Production Approach
©2007/39/81, UTM Copyright (Malaysia)
11. Water Technology as a Strategic Industry
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12. 10 ECO-Principles of Highly Effective Environmental Strategy and Sustainable Productivity
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13. Health Risk Assessment Software (RISKAS)
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15. Module on Membrane Technology for Water Industry Applications
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19. Wastewater Treatment Plant Design Advisor System Software (WASDA).
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MY 03-00376, UTM Industrial Design (Malaysia)

CONTRACT RESEARCH

Research Title: Zero emission using integrated membrane bioreactor for palm oil mill effluent (POME) Sponsor: Technofund (Ministry of Science, Technology and Innovation) Malaysia
Start: Oct 2007-2009. Head: Zaini Ujang. Value: RM3.5 million

Research: Megasicnce in water sector
Sponsor: Akademik Sains Malaysia
Start: 2009-2010. Head: Zaini Ujang. Value: RM300,000

Research: Groundwater increase in Madinah, Saudi Arabia
Sponsor: Madinah Water Directorate
Start: 2009-2011. Head Zaini Ujang. Value: USD1 million

Research Title: Innovative Decision Making for Sustainable Management of Water in Developing Countries
Sponsor: European Commission. Head: Zaini Ujang
Value: Euro 212,000 (Total Euro1.7 millions to be shared among 11 partners – **Oxford**, Vienna, Bari, Lund, ITS Indonesia, IIT India and Society for Nepal Public Health Engineering) (Jan 2005-Dec 2008)

Research Title: Membrane bioreactor for palm oil mill effluent
Sponsor: e-Sains (Malaysia Ministry of Science, Technology & Innovation)
Head: Zaini Ujang . Value: RM150,000 (Dec 2007-Nov 2008)

Research Title: Raw water quality improevmt using river bank infiltration system
Sponsor: SAJ Holding Sdn Bhd
Head: Zaini Ujang. Value: RM170,000 (Start, January 2006)

Research Title: Hybrid membrane for palm oil mill effluent
Sponsor: Sakti Suria
Head: Zaini Ujang. Value: RM50,000 (Start, January 2005)

Research Title: Membrane technology for water reclamation (2003-2004).

Sponsor: Veolia (France) Water Systems
 Head: Zaini Ujang
 Value: RM500,000 (Start, June 2003)

Research Title: Membrane bioreactors for palm oil mill effluent (2002-2004).
 Sponsor: Kubota Corporation and Chiyoda Kohan (Japan)
 Head: Zaini Ujang
 Value: RM50,000 (Start, August 2003)

Research Title: Biotransformation of organics in sewer under anoxic conditions (2002-2004).
 Sponsor: IRPA Ministry of Science, Technology & Environment
 Head: Zaini Ujang. Value: RM236,000 (Start, June 2003)

Research Title: Upgrading of waste stabilization ponds (2002-2004).
 Sponsor: Indah Water Konsortium
 Head: Zaini Ujang & Prof. Mohd Azraai Kassim
 Value: RM62,000 (Start, June 2002)

Research Title: Application of immersed membrane for high quality water production (2002-2004).
 Sponsor: IRPA Ministry of Science, Technology & Environment
 Head: Zaini Ujang. Value: RM200,000 (Start, January 2002)

Research Title: Constructed wetlands for landfill leachate treatment (2002-2004).
 Sponsor: IRPA Ministry of Science, Technology & Environment
 Head: Zaini Ujang & Razman Salim. Value: RM250,000 (Start, January 2002)

Title: Application of zeolite-immersed membrane bioreactor for high purity water production (2002-2005).
 Sponsor: Top Down IRPA Ministry of Science, Technology & Environment
 Head: Zaini Ujang & Alias Mohd Yusof. Value: RM750,000 (Start, January 2002)

Research Title: Application of membrane bioreactor for domestic wastewater treatment (2001-2003).
 Sponsor: Swedish International Development Agency (SIDA)
 Head: Zaini Ujang. Value: USD76,000 (Started, February 2001)

Research Title: Biodegradation plastic production from palm oil mill effluent (POME) (2001-2004)
 Sponsor: The Netherlands Foundation for the Advancement of Tropical Research under WOTRO Program (Jointly conducting with the Prof. Mark van Loosdrecht, Delft University of Technology)
 Value: Euro100,000 (Started May, 2001).

Research Topic: Hydrodynamic and microbial study on baffled waste stabilization pond for municipal wastewater treatment (2000-2002)
 Sponsor: Ministry of Science, Technology & Environment (IRPA)
 Head: Zaini Ujang. Grant: RM115,000

Research Topic: Microbial ecology of sulfate reducing bacteria analysed by PCR and FISH for odor control in membrane bioreactor (2000-2002)
 Sponsor: Ministry of Science, Technology & Environment (IRPA)
 Head: Zaini Ujang. Grant: RM124,000

Research Topic: Flat sheet membrane bioreactor for advanced wastewater treatment. (2000-2002)
 Sponsor: Kubota & Musashi Institute of Technology, Japan.
 Value: Membrane unit (inkind, around RM30,000)

Research Topic: Hollow-fibre membrane bioreactor for advanced wastewater treatment. (2000-2002)
 Sponsor: Mitsubishi & Tokyo University, Japan.
 Value: Membrane unit (in kind, around RM30,000)

Research Topic: Wastewater treatment plant performance evaluation and upgrading using ASIM (2001-2002)
 Sponsor: Indah water Konsortium and Technical UniversityDenmark
 Head: Zaini Ujang & Prof. Mogens Henze. Grant: RM200,000

Research Topic: Biodegradable plastic production from palm oil mill effluent (2001-2005)
 Sponsor: WOTRO, The Netherlands
 Head: Zaini Ujang & Prof. Mark van Loosdrecht. Grant: Euro100,000

Research Topic: Enhancement of solid-liquid separation in biological wastewater treatment plant (2001-2002)
 Sponsor: Indah water Konsortium & Delft University of Technology (The Netherlands)
 Head: Zaini Ujang & Prof. Mark van Loosdrecht. Grant: RM200,000

Research Topic: Sewer as bioreactor (1999-2002)
 Sponsors: DanishUniversity Consortium on Environment & Development and, UiTM and UTM
 Head: Zaini Ujang & Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark)
 Grant: RM300,000

Research Topic: Prevention and cleaning of membrane biofouling for water and wastewater treatment application (1999-2000).
 Sponsor: Ministry of Science, Technology & Environment (IRPA)
 Head: Zaini Ujang. Grant: RM114,000

Research Topic: Cost-Effective Upgrading Techniques of Waste Stabilization Ponds (1999-2000).
 Sponsor: Indah Water Consortium
 Head: Zaini Ujang. Grant: RM125,000

Research Topic: Respirometric Analysis of Municipal Wastewater:- Control and Modeling of an Activated Sludge Process (1999-2000).
 Sponsor: Research Management Centre, UTM
 Head: Kamarul Asri Ibrahim & Zaini Ujang. Grant: RM20,000

Research Topic: Immersed Membrane Reactor for Drinking Water Production (1999-2000)
 Sponsor: ResearchManagementCenter, UTM
 Head: Zaini Ujang. Grant: RM20,000

Research Topic: Bacterial Removal in Water Treatment using Membrane Filtration (1999-2000)
 Sponsor: ResearchManagementCenter, UTM
 Head: Zaini Ujang. Grant: RM20,000

Research Topic: Industrial Sawdust Reclamation and Reuse in Agricultural Land (1999-2000)
 Sponsor: Steadtler (M) Sdn. Bhd.
 Head: Zaini Ujang. Grant: RM30,000

Research Topic: Development of an Action Plan on Water Management System in UTM Skudai Campus for Reclamation and Reuse Program
 Sponsor: ResearchManagementCenter, UTM
 Head: Zaini Ujang . Grant: RM15,000

Research Topic: Development of Mass Balance and Qualitative Inventory of Water Management System in UTM Skudai Campus for Reclamation and Reuse Program
 Sponsor: ResearchManagementCenter, UTM and DenmarkTechnicalUniversity
 Head: Zaini Ujang & Prof. Mogens Henze. Grant: RM50,000

Research Topic: Characterization of natural organic matter in raw water for drinking water production (2000-2001)
 Sponsor: Research Management Centre, UTM
 Head: Dr Zulkifli Yusop & Zaini Ujang. Grant: RM18,000

Research Topic: Development of a novel ceramic membrane for water treatment (2001)
 Sponsor: Research Management Centre, UTM
 Head: Norhayati AHmad & Zaini Ujang. Grant: RM20,000 (vot 71661)

Research Topic: Biofilm System for Treating Industrial Wastes, 1991.

Sponsor: Palm Oil Research Institute, Malaysia (PORIM)
Head: Dr Mohd. Azraai Kassim. Grant: RM100,000

Research Topic: RBCs for Treating Hospital Wastes, 1992.
Sponsor: Research and Consultancy Unit, UTM
Head: Zaini Ujang . Grant: RM10,000.

Research Topic: Regrowth of Bacteria in Water Distribution, 1992-94.
Sponsor: Ministry of Science, Technology and Environment, Malaysia (IRPA).
Head: Associate Profesor Dr Che Nyan. Grant: RM350,000

Research Topic: The Impact of Environmentalism to the System of Education, 1991
Sponsor: Institute of Strategic and International Studies (ISIS Malaysia)
Head: Zaini Ujang. Grant: RM8,000.

Research Topic: Treatment & Reclamation of Metals in Plating Industry by Reverse Osmosis Membranes. 1994
Sponsor: Acumem-ICI Ltd., Britain. Value: (In kind - membrane units and experimental rig; around USD10,000)

POST-DOCTORAL AND POST-GRADUATE SUPERVISIONS

Post-Doctoral

Student: Dr Pierre le Clech (PhD from Cranfield University, UK)
Program: Post-Doctoral
Topic: Critical flux in membran bioreactor
Status: Started, January 2003. Completed, July 2003.

Student: Dr Eddy Soedjono (PhD from BirminghamUniv, UK)
Program: Post-Doctoral
Topic: Wetlands and biotechnology for wastewater applications
Status: Started, February 2003. Completed, March 2004.

Doctoral

Student: Prof. Dr. Suhaimi Abdul Talib
Degree: Ph.D. Co-Supervisor: Professor Thorkild H-Jacobsen (Aalborg University, Denmark)
Topic: Sewer as a Physical, Chemical & Biological Reactor
Status: Started, July 1999. Completed, October 2002.
(Suhaimi was appointed Professor in Universiti Teknologi MARA, UiTM in 2007. He is my first student became a full professor)

Student: Dr. Sri Adelina Sari
Degree: Ph.D. Co-Supervisor: Dr Umi Khaltum Ahmad
Topic: Arsenic speciation and characterization in Malaysia
Status: May 2002 – Sept 2006. Completed

Student: Dr. Mohd Fadhil Md Din
Degree: PhD. Topic: PHA accumulation from palm oil mill effluent
Co-supervisor: Prof. M.C.M. van Loosdrecht, Delft University of Tech., The Netherlands
Status: Started, October 2002. Completed 2006.

Student: Dr Aznah Nor Anwar
Degree: PhD. Topic: Aerobic granulation
Co-supervisor: Prof. M.C.M. van Loosdrecht, Delft University of Tech., The Netherlands
Status: Started, January 2005. Completed: 2008.

Student: Dr Salmiati Yunus
Degree: Ph.D. Topic: PHA production and extraction. Co-supervisor: Prof. Razman Salim
Status: Started, June 2005. Completed 2008.

Student: Ms Alia

Degree: Ph.D. Topic: Mircobial ecology of hybrid MBR for palmoil mill effluent. Co-supervisor: Prof. Razman Salim

Status: Started, Sept 2006. Completed 2011.

Student: Mr. Zulkifli Ahmad

Degree: Ph.D. Topic: Hybrid MBR for palmoil mill effluent

Status: Started, June 2005

Student: Ms Farah Aini Dahlan

Degree: Ph.D.

Topic: Granular activated sludge

Status: Started, December 2007

Student: Ms Norhashima

Degree: Ph.D.

Topic: Integrated water management. Co-supervisor: Dr Zulkifli Yusop

Status: Started, July 2006-2010

Student: Mr. Adhi Yuniarto

Degree: Ph.D.

Topic: Zero emission in palm oil mills. Co-supervisor: Dr Zainura

Status: Started, December 2007

Student: Ms Myzairah Hamdzah

Degree: PhD. Co-supervisor: Prof Mohamad Mahmod Al Nasef. Topic: Ion exchange resin from waste materials. Start July 2009.

Student: Sune Balle Hansen Degree: PhD. Co-supervisor: Prof. Arne Wangel (Denmark Technical University). Topic: Life cycle assessment of palm oil: Setting up a life cycle inventory with special focus on soil carbon degradation, waste reuse and global warming emissions. Start August 2009.

Student: Norhayati Abdullah

Degree: PhD. Co-supervisor: Prof. Tom Curtis (Newcastle University, UK). Topic: Biotransformation of aerobic granulation of wastewater. Start July 2009.

Student: Ng Choon Aun

Degree: PhD

Co-Supervisor: Prof Tony Fane, University of New South Wales, Australia

Topic: Simultaneous organics and nutrient removal in intermittent aeration membrane bioreactors

Status: Started, October 2002. Continue his study in NTU Singapore in 2003.

Student: Mr. Effendy Mohd Yusni

Degree: Ph.D.

Co-Supervisor: Professor Chris A. Buckley (Natal University, South Africa)

Topic: Sequencing Batch Membrane Bioreactor

Status: Started, July 1999 (Terminated, unsatisfactory performance)

Student: Mr. Bowo Marsono

Degree: Ph.D.

Co-Supervisor: Dr Mohd Razman Salim

Topic: Simultaneous organic and nutrient removal in MBR

Status: Started, September 2001 (Terminated, health reason)

Masters

Student: ZulkifliMd Rani

Degree: M.Eng. (Environmental Engineering) Research

Co-supervisor: Dr Zainura

Topic: Zero emission in pal oil industry

Status: Started, December 2007

Student: Azri A. Razak

Degree: M.Eng. (Environmental Engineering) Research (Part time)

Co-supervisor: Prof. H. Ozaki (Osaka Syango University, Japan)

Topic: Low pressure reverse osmosis for EDC removal

Status: Started, July 2005 Submitted June 2008

Student: Ms Fadzlin Md Sairan

Degree: M.Eng. (Environmental Engineering) Research (Part Time)

Co-supervisor: Prof. Mohd Razman Salim

Topic: Development of Decision Support System WASDA for Design of Wastewater Treatment Plant

Status: Started, June 2003. Submitted 2008.

Student: Ms Siti Norafizah Ab Aziz

Degree: M.Eng. (Environmental Engineering) Research

Co-supervisor: Dr Maketab Mohamed. Topic: Uncertainty and sensitivity analysis for river water quality modeling in tropical rivers. Status: Started, June 2003. Terminated.

Student: Ms Myzairah Hamdzah

Degree: MEng (Environmental Engineering) Research. Co-supervisor: Prof H. Ozaki, Osaka Sangyo University, Japan. Topic: Low pressure membrane for removal of micopollutants. Status: Started, Nov 2003. Completed

Student: Ms Rohani Razak

Degree: MEng (Environmental Engineering) Research

Topic: PHA accumulation from POME. Status: Started, Nov 2003

Student: John Steele

Degree: M.Sc. (Environmental Engineering) Taught course NewcastleUniversity

Co-supervisor: Prof. Ken Anderson. Topic: Investigation into centralised and decentralised wastewater treatment systems with specific reference to Johor Bahru. Period: April-September 2004

Student: Beate Cristgen

Degree: M.Sc. (Environmental Engineering) Taught course NewcastleUniversity

Cosupervisor: Dr C. Whiterrall. Topic: The effects of depth and flowrate on waste stabilisation pond performance. Period: April-September 2004

Student: Rosie Dunlop

Degree: M.Sc. (Environmental Engineering) Taught course NewcastleUniversity

Cosupervisor: Dr Sallis. Topic: Production and field evaluation of low-technology ceramic potable water filters in the JB region, Malaysia. Period: April-September 2004

Student: Adam Rolf

Degree: M.Sc. (Environmental Engineering) Taught course NewcastleUniversity. Cosupervisor: Prof GK Anderson. Topic: Critical flux in membrane bioreactors for palm oil mill effluent. Period: April-September 2004

Student: James Keating

Degree: M.Sc. (Environmental Engineering) Taught course NewcastleUniversity

Cosupervisor: Prof GK Anderson. Topic: Sranular slude development in a sequencing batch reactor using palm oil mill effluent in a tropical country. Period: April-September 2004

Student: Mr Ng K.S.

Degree: M.Eng. (Environmental Engineering) Research. Topic: Arsenic removal using immersed membrane filtration. Status: Started, October 2002.

Student: Mr Leonard Lim Lik Puih

Degree: MEng (Environmental Engineering) Taught Course. Topic: Hydraulic performance of membrane bioreactors for POME treatment. Status: Started, Nov 2003. Completed

Student: Ms Ong Peck Ting
Degree: MEng (Environmental Engineering) Taught Course
Topic: Pilot studies on anoxic process in sewer network. Status: Started, Nov 2003. Completed

Student: Ms Yong Ee Ling
Degree: MEng (Environmental Engineering) Taught Course
Topic: Anoxic process in sewer network using respirometry. Status: Started, Nov 2003. Completed

Student: Mr Lee Tan Fook
Degree: MEng (Environmental Engineering) Taught Course. Topic: Constructed wetlands for leachate treatment. Status: Started, Nov 2003. Completed

Student: Mr Ng Choon Aun
Degree: M.Sc. (Environmental Engineering) Taught Course. Topic: Comparative study on removal of heavy metals in MBR and MBR-PAC. Status: Completed, April 2002.

Student: Noor Fitrah Abu Bakar
Degree: M.Sc. (Environmental Engineering) Taught Course
Topic: Leachate treatment in membrane bioreactor. Status: Completed, November 2001

Student: Mr Rory Padfield
Degree: M.Sc. (Environmental Eng) Taught Course. Topic: Rainwater harvesting – socio-economic and technical. Co-Supervisor: Prof Ken Anderson. Newcastle Univ. UK. April-Sept 2003.

Student: Mr Oliver Harrison
Degree: M.Sc. (Environmental Engineering) Taught Course. Topic: Upgrading of waste stabilization ponds. Co-Supervisor: Dr Charlotte Weatherell. Newcastle Univ. UK. April-Sept 2003.

Student: Ms Laura Crossley
Degree: M.Sc. (Environmental Engineering) Taught Course, Co-Supervisor: Prof Ken Anderson. Co-Supervisor: Prof Ken Anderson. Newcastle Univ. UK. April-Sept 2003.

Student: Mr Gareth Williams
Degree: M.Sc. (Environmental Engineering) Taught Course. Co-Supervisor: Prof Ken Anderson. University: Civil Engineering, Univ. of Newcastle. Status: Started, April 2003, Completed, Sept 2003.

Student: Mr Daniel Speight
Degree: M.Sc. (Environmental Engineering) Taught Course. Co-Supervisor: Prof Ken Anderson. Newcastle Univ. UK. April-Sept 2003.

Student: Ms Hannah Morgan
Degree: M.Sc. (Environmental Engineering) Taught Course. Topic: Constructed wetlands for heavy metals removal. Co-Supervisor: Prof Ken Anderson. Newcastle Univ. UK. April-Sept 2003.

Student: Mr Innocent Tyolo
Degree: M.Sc. (Environ Eng) Taught Course. Topic: Membrane bioreactor for advanced wastewater treatment. Co-Supervisor: Prof Ken Anderson. Newcastle Univ. UK. April-Sept 2003.

Student: Ms Pauline Ryan
Degree: M.Sc. (Environ Eng) Taught Course. Topic: Urban run-off speciation and control in Malaysia. Co-Supervisor: Prof Ken Anderson Newcastle Univ UK. April-Sept 2002.

Student: Miss Rachel Meade
Degree: M.Sc. (Environ Eng) Taught Course. Topic: PHA accumulation in membrane bioreactors. Co-Supervisor: Prof Ken Anderson. Newcastle Univ. UK. April-Sept 2002.

Student: Mr Chris Arias
Degree: M.Sc. (Environ Eng) Taught Course. Topic: Application of WEST for river rehabilitation in Malaysia. Co-Supervisor: Prof Ken Anderson. Newcastle Univ. UK. April-Sept 2002.

Student: Mr Sune Neve

Degree: M.Sc. (Environmental Engineering) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark). Topic: Nitrogen removal in SBR. Status: August-Dec 2001.

Student: Ms Mitte Hansen

Degree: M.Sc. (Environmental Engineering) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark). Topic: Nitrogen removal in SBR. August -Dec 2001.

Student: Ms Brigitte Andersen

Degree: M.Sc. (Environ Eng) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark). Topic: Nitrogen removal in SBR. Status: August-Dec 2001.

Student: Ms Mia Jahn

Degree: M.Sc. (Environmental Engineering) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark)

Topic: Arsenic pollution in an ex-tin mining pools. Status: August -December 2001.

Student: Ms Linda Reiben

Degree: M.Sc. (Environ Eng) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark). Topic: Arsenic pollution in an ex-tin mining pools. August-Dec 2001.

Student: Ms Lene Wilmertz

Degree: M.Sc. (Environ. Eng.) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark). Topic: Wastewater characterization in WSP. August -Dec 2000.

Student: Mr Morten Haugaard Thomsen

Degree: M.Sc. (Environ. Eng.) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark). Topic: Wastewater characterization in WSP. August-Dec 2000.

Student: Mr Claus Lubeck Christensen

Degree: M.Sc. (Environ. Eng.) Taught Course. Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark) Topic: Wastewater characterization in WSP. August -Dec 2000.

Student: Mr Asborjn Haaning

Degree: M.Sc. (Environmental Engineering) Taught Course
Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark)
Topic: Wastewater characterization in sewer. Status: August -December 2000.

Student: Klavs Frederiksen

Degree: M.Sc. (Environmental Engineering) Taught Course
Co-Supervisor: Professor Thorkild Hvitved-Jacobsen (Aalborg University, Denmark)
Topic: Wastewater characterization in sewer. Status: August -December 2000.

Student: Mrs. Dewi Rianti

Degree: M.Sc. (Environmental Engineering) Research. Co-Supervisor: Dr Mohd. Razman Salim
Topic: SBR in Membrane Bioreactor. July 2000-January 2003.

Student: Mr Khor Swee Loong

Degree: M.Sc. (Environmental Engineering) Research. Co-Supervisor: Dr Mohd. Razman Salim. Topic: Simultanous Organic and Nutrient Removal in Membrane Bioreactor. July 2000-Sept 2002.

Student: Ms Ting Lik Foong

Degree: M.Sc. (Environmental Engineering) Taught Course
Co-Supervisor: Dr Umi Kalthum Ahmad. Topic: Characterization of Natural Organic Matter in Raw Water for Drinking Water Production. Status: Started, July 2000. Completed, December, 2000.

Student: Mr. Tan ChingTiong

Degree: M.Eng. (Environmental Engineering) Research. Co-Supervisor: Dr Mohd. Razman Salim. Topic: Effect of the Use of Baffles on the Performance of Waste Stabilization Ponds. January 2000-Oct 2003.

Student: Mr Jonathan Aw

Degree: M.Eng. (Environmental Engineering) Research. Topic: Microbial Removal in Immersed Membrane Filtration for Drinking Water Production. July 2000-Sept 2002.

Student: Mr Ng Swee Siang

Degree: M.Eng. (Environmental Engineering) Research. Topic: Biofouling Prevention and Control in Membrane Bioreactor. Status: Started, January 2000. Completed, Sept 2002.

Student: Miss Yong Fei Thiam

Degree: M.Eng. (Environmental Engineering) Research. Co-Supervisor: Dr Noor Aini Abdul Rashid. Topic: Enzymatic cleaning for microfiltration membrane. July 2000-Sept 2002.

Student: Mr. Wong Chee Loong

Degree: M.Eng. (Environmental Engineering) Research. Co-Supervisor: Dr Zainuddin Abdul Manan. Topic: Wastewater Minimization in Textile Industry. January 2000-January 2002.

Student: Ms Kamisah Mohamed

Degree: M.Sc. (Environmental Engineering) Research. Co-Supervisor: Dr Mohd. Razman Salim. Topic: Immersed Membrane Filtration for Cooling Water Recycling. Status: Started, July 1999.

Student: Ms Tina Mundeling Nielsen

Degree: M.Sc. (Environ. Eng.) Taught Course. Co-Supervisor: Professor Jens Chr. Tjell (Denmark Technical University). Topic: Health Risk Assessment of Arsenic in Ex-Tin Mining Pools. Feb-July 1999.

Student: Mr Silas Blak Mogensen

Degree: M.Sc. (Environ. Eng.) Taught Course. Co-Supervisor: Professor Jens Chr. Tjell (Denmark Technical University). Topic: Health Risk Assessment of Arsenic in Ex-Tin Mining Pools. Feb-July 1999.

Student: Mr. Morten Larsen

Degree: M.Sc. (Environmental Engineering) Taught Course. Co-Supervisor: Prof. Mogens Henze (Denmark Techn. Univ.). Topic: Development of Mass Balance and Qualitative Inventory of Water Mgmt System in UTM. Skudai Campus for Reclamation and Reuse Program. Status: Sept-Dec 1999.

Student: Mr. Rommel Hughes

Degree: M.Sc. (Environmental Engineering) Taught Course. Topic: Treatment of Heavy Metal by RO Membrane. Co-Supervisor: Prof. G.K. Anderson. University: Depart. of Civil Engineering, Univ. of NewcastleUK. Status: Completed, 1995.

Student: Miss Tsoumani Ourania

Degree: M.Sc. (Environmental Engineering) Taught Course. Topic: Treatment of Textile Wastes by RO Membrane. Co-Supervisor: Prof. G.K. Anderson. University: Depart. of Civil Engineering, Univ. of NewcastleUK. Status: Completed, 1995.

Student: Hanizam Awang

Degree: M.Sc. (Environmental Engineering) Taught Course. Topic: Evaluation of EIA Procedures in Developing Countries: A Case Study in Malaysia. Co-Supervisor: Ms Lilian Evison. University: Depart. of Civil Engineering, Univ. of NewcastleUK. Status: Completed, 1996

Student: Mrs. Syarifah Yaakop

Degree: M.Eng. (Environmental Engineering) Research
Co-Supervisor: Dr. Mohd. Azraai Kassim. Topic: Baffled Reactors for Treatment of Domestic Wastes. University: Depart. of Environmental Engineering, UTM. Status: Completed, 1994.

Student: Mrs. Zubaidah Yusuf

Degree: M.Eng. (Environmental Engineering) Research. Topic: Regrowth of Bacteria in Distribution System. University: Depart. of Environmental Engineering, UTM. Status: Started, July 1992. Incomplete, December 1992.

POST-GRADUATE TEACHINGS / INSTRUCTIONS

1. Subject: Introduction to Environmental Engineering
Course: M.Eng. (Environmental Engineering), MKS
2. Subject: Wastewater Engineering
Course: M.Eng. (Environmental Engineering), MKS
3. Subject: Advanced Wastewater Engineering
Course: M.Eng. (Civil – Environmental Management), MAW
4. Subject: Environmental Quality Modeling
Course: M.Eng. (Environmental Engineering), MKS
5. Subject: Clean Technology & Pollution Prevention Engineering
Course: M.Eng. (Environmental Engineering), MKS1213
6. Subject: Environmental Monitoring & Sampling
Course: M.Eng. (Civil – Environmental Management), MAW1943
7. Subject: Industrial and Hazardous Waste Management
Course: M. Eng. (Civil – Environmental Management), MAW 1933
8. Subject: Wastewater Engineering Design
Course: B.Eng. (Civil – Environmental), SAS
9. Subject: Water Quality Management
Course: B.Eng. (Civil – Environmental), SAS

INVITED PUBLIC LECTURES / PROFESSIONAL SEMINAR / WORKSHOP / etc

Invite Speaker: K.Kumarasivam Endowment Fund Memorial Public Lecture – Value Creation in Environmental Sustainability: The Case of Urban Rivers, Tournament Room, KLGCC Bukit Kiara, Kuala Lumpur MALAYSIA, July 7, 2011

Speaker: INTAN Executive Talk on Enculturing Innovation: The Seven Pillars Auditorium, INTAN Bukit Kiara, Kuala Lumpur MALAYSIA, June 9, 2011

Keynote Address: Sustainability and modeling between academia and value creation, Fourth International Conference on Modeling, Simulation & Applied Optimization (ICMSO2011), Hotel Impiana, Kuala Lumpur MALAYSIA, 19 April 2011.

Special Talk: UTM Sustainable Campus, Senat Hall, UTM Bahru Malaysia, March 16, 2011

Lecture on Culturing Innovation, Biotech Research Centre, Tripoli Libya, January 18, 2011.

Presenter: Transformation of Postgraduate Education in Malaysia, 4th International Conference on Postgraduate Education "Globalisation and Liberalisation Postgraduate Education", Bintang Hall CITITEL Mid Valley, KL MALAYSIA, November 28, 2010

Ahli Panel: Forum Pembinaan Sebuah Negara Bangsa, Seminar Pemimpin Muda Malaysia, Dewan Bankuet, Parliment Malaysia, MALAYSIA, November 25, 2010

Leadership Discourse - Engines of Innovation, Banquet Hall, UTM Johor Bahru, Nov 15, 2010

Presenter: Culturing Innovation, The Ministry of Health Malaysia Innovation Day Perdana Hall B, PICC Putrajaya, MALAYSIA, November 10, 2010.

4th Merdeka Award Lecture Series: Water Mismanagement? the Politics of Polluted Urban Rivers, Dewan Budaya, Universiti Sains Malaysia, Penang MALAYSIA, Oct.ober 22, 2010

Presenter: Water Sustainability for Engineering Education, GEDC Energy & Water Sustainability Workshop, Simpor Ballroom, Marina Sands Bay, Convention Centre & Expo SINGAPORE, Oct. 20, 2010.

Presenter: Value Creation in Environmental Sustainability, Seminar on Environmental Awareness and Action Plans for a Better World", Grand Hall IKIM, Kuala Lumpur Malaysia, 28 July 2010.

Presentation: Transformation of University - The Case of UTM: From technical school to research university, Pyramid Tower Hotel Kuala Lumpur MALAYSIA, 13 July 2010.

Presentation: Harnessing Renewable Energy for Sustainable Development, Ministry of Finance, Putrajaya MALAYSIA, 6 July 2010.

Plenary Session: *Budaya integriti dan idealisme mahasiswa, Kongres Integriti Pemimpin Mahasiswa 2010*, PICC Putrajaya MALAYSIA, 11 May 2010.

Merdeka Award Lecture Series: 'Water War? The Science and Politics of Water Management', Recital Hall, Universiti Malaysia Sabah MALAYSIA, 16 April 2010

Seminar on Education for MARA Professional College and MARA College, *Pengantarabangsaan Pendidikan dan Anjakan Paradigma Pendidik*, Seminar Pendidikan Kolej Profesional MARA dan Kolej MARA 2010, German Malaysian Institute (GMI), Bangi Selangor, MALAYSIA, 3 April 2010.

Environmental Performance Index (EPI): An overview, Workshop on Development of Environmental Performance Index, MNRE Putrajaya MALAYSIA, 16 March 2010

Merdeka Award Lecture Series: Value Creation in Water Sustainability, Chancellor Hall, Universiti Teknologi Petronas, Tronoh Perak, MALAYSIA, 3 March 2010.

Luncheon Talk: Building and Sustaining Research Culture, Universiti Teknologi Petronas, Tronoh Perak, MALAYSIA, 3 March 2010

Keynote Speech: 'Value Creation in Water Research', First IWA Malaysia Young Water Professionals Conference (IWAYWP 2010), Seri Pacific Hotel, Kuala Lumpur, MALAYSIA, 2 March 2010

Merdeka Award Lecture Series - A Scholarship Voyage: Academic Iconism, Innovation Ecosystem and Water Sustainability, International Campus Kuala Lumpur, MALAYSIA, 9 February 2010.

Keynote Address: The Roles of the Centre of Fiqh Research Science and Technology (CFIRST) to address issues related to fiqh science and technology, Fiqh Science and Technology National Symposium (FST '09), Johor Bahru MALAYSIA., 11 December 2009.

Inaugural ASM Lecture: Blue, Green and Brown: The evolution of water, Seminar Hall, Academy of Sciences Malaysia (ASM), Kuala Lumpur MALAYSIA, 5 December 2009.

Keynote Address: Value creation in water sciences: An insight on new pollutants, water chemistry and sustainability, First Conference on Water Chemistry and Health: Quality Water for Health (CWCH1), Putrajaya Marriott Hotel, Putrajaya MALAYSIA, 24 November 2009.

Guest Speaker: Monitoring and Evaluation of Public R&D: The experience of UTM, S&T Management Training Course for OIC Countries, Le Meridien, Kuala Lumpur MALAYSIA. 18 Nov. 2009.

Keynote Address, Water Safety Plan: An insight on new pollutants, water chemistry and sustainability, International Symposium of Forensic Science and Environmental Health, PWTC Kuala Lumpur, 10 Nov. 2009

Keynote Speaker, Mengangkasa Pengajian Tinggi Masa hadapan – Menjangkau Bintang Meraih Mercu, Seminar Percambahan Pemikiran Islam: Dimensi 7 Prinsip Universiti APEX, Minden USM, 9 Jun 2009

Keynote Address: Water Sustainability & Strategic Initiatives: A Proposed Water Industry Roadmap 2010-2020, PWTC Kuala Lumpur, 19 May 2009

Keynote Speech: Membrane In Bioprocess Engineering: The case of sustainable water management, International Conference Membrane S&T, Kuala Lumpur, 14 May 2009

Keynote Speaker, Environmental Performance Index (EPI) Perspectives, Strategies and Policy, Hotel Equatorial, Bangi, Selangor, Malaysia, 14 April 2009

Keynote Speaker, Water Industry Roadmap: An Academic Perspective, Fourth PETRONAS Water Technology Conference, Kuala Lumpur, 10 Febr. 2009

Keynote Speaker, Islamic Economy Congress 3 (KEI-3), Putra World Trade Centre, Kuala Lumpur, 12 Jan 2009

Keynote Address, Research Culture Between Academic and Industrial Innovations, UTM Skudai, 23 Dec 2008

Keynote Address, Water sustainability framework: From water catchment to water tariff, Water Sustainability Framework, Kuching, Sarawak, 18 Dec 2008

Keynote Speaker, Advances in wastewater technology: Great ideas at laboratory benches, ICEEMAT 2008, PWTC, Kuala Lumpur, Malaysia, 11 Dis 2008

Course Leader, *Workshop on Industrial Waste Biotreatment*. IPASA, Kuala Lumpur, 20-21 Nov 2007.

Participant and paper presenter, *World Water Congress*, International Water Association, Beijing, China, 10-14 Sept 2006.

Keynote Speaker, International Conference on Disaster Management, Ministry of Works, Jakarta Indonesia, December 2006.

Chairman and course leader: *Environmental Health Risk Assessment*, Kuala Lumpur, July 26-27, 2006.

Chairman of technical committee, *Asia Water 2006*, Kuala Lumpur. March 2006.

Course Leader, *Workshop on Membrane Technology V*, Kuala Lumpur. February 2006.

Course Leader, *Workshop on New Design Procedures for Biological Wastewater Treatment Plants*, Kuala Lumpur. March 28-29, 2006

Course Leader, *Workshop on Geochemical Speciation Model*, Kuala Lumpur. April 2006.

Keynote speaker, Int. Conf. water rehabilitation, Inst. Teknologi Surabaya, Indonesia. 16-17 May 2006

Plenary speaker, International Conference on Energy and Environment, UNITEN. 28-30 August 2006

Chairman of technical committee, *Water Malaysia 2005*, Kuala Lumpur. April 2005.

Course Leader, *Workshop on River Rehabilitation: Principles, Tech. & Applications*, K.Lumpur. April 2005.

Course Leader, *Workshop on Membrane Technology IV*, Kuala Lumpur. Sept 2005.

Course Leader, *Workshop on Lake Management and Rehabilitation*, Kuala Lumpur. Oct 2005.

Course Leader, *Workshop on Sludge Anaerobic Digestion*, Kuala Lumpur. March 2005.

Course Leader, *Workshop on River Rehabilitation: Principles, Tech. & Applications*, K.Lumpur. July 2004.

Course Leader, *Workshop on New Technologies for Cost-Effective Landfill Management*, Johor Bahru 28 June 2004 and Kuala Lumpur, 7 July 2004.

Course Leader, *Workshop on Membrane Technology Wastewater Treatment and Reuse*, Surabaya, Indonesia, 12-13 February 2004.

Conference chairman (scientific committee), *ASIAWATER 2004*, Kuala Lumpur, 30-31 March 2004.

Keynote speaker & conference chairman, *IWA Conference on Environmental Biotechnology: Applications in Water and Wastewater for the Tropics*, Kuala Lumpur, 9-10 December 2003.

Course Leader & Chairman, *Workshop on Sustainable Sanitation for Wastewater Treatment and Reuse*, Kuala Lumpur, 11-12 December 2003.

Course Leader & Chairman, *National Seminar on Membrane Technology II*. Malaysian Water Association & UTM. Kuala Lumpur, Sept 2003.

Keynote speaker & conference chairman, *IWA Conference on Water and Wastewater Management for Developing Countries*, Kuala Lumpur, 29-31 October 2001.

Speaker and participant, Rockefeller Foundation Team Residency on Membrane Technology for Sustainable Sanitation. April 2003, Bellagio, Italy.

Keynote speaker, IWA Conference on Environmental Engineering Education. Zurich, Switzerland, Sept 2003.

Course Leader and Chairman, *National Workshop on Small Wastewater Treatment Plants*, UTM Kuala Lumpur, 6-7 March 2003.

Course Leader, *IPASA Seminar on Membrane Bioreactor*, UTM Skudai, 21 March 2003

Invited speaker, *Seminar on Water Environment Asia*, Tokyo University, Japan. 25 March 2003

Course Leader and Chairman, National Workshop on Zero Emissions, EIMAS Bangi, Malaysia. 17-18 April 2003.

Course Leader, *Workshop on Membrane Technology for Water and Wastewater Applications*, UTM Kuala Lumpur, 10-11 July, 2003

Speaker and Chairman of the Scientific Committee, *LUCED International Conference on Environmental Management*, Putrajaya, Malaysia, 4-6 August 2003

Key Speaker, National Workshop on Water Quality Improvement in Rivers and Marine Environment, Melaka, Malaysia. 13-16 August 2003

Speaker, *Cleaner Production Workshop in Food Industry*, UPM Serdang, Malaysia August 2003

Keynote speaker, *Regional Conference on Environmental Technology & Management*, Inst. Teknologi Bandung, Indonesia, 9-10 January 2002.

Invited speaker, Membrane Technology Seminar, IESE-Nanyang Technological University, Singapore, 19-20 Nov 2002.

Invited speaker, Membrane Technology Workshop, IESE-Nanyang Technological University, Singapore, 19-20 Nov 2002.

Paper presenter, *MUCED Workshop on Trends in Solid Waste Management – Towards Waste Minimization*. MUCED, Crystal Crown Hotel, 7-9 May 2002.

Paper presenter, *Second World Engineering Congress*, IEM, Kuching, 22-25 July, 2002.

Chairman and paper presenter, *IPASA-MUCED Workshop on Automation and Control of Wastewater Treatment Systems*. UTM Skudai, 3-4 June 2002.

Paper Presenter & Chairman, *National Seminar on Immersed Membrane Technology II*. UTM & Tokyo Inst. of Technology (Japan). UTM Skudai Campus, November, 2001.

Paper Presenter & Chairman, *National Seminar on Environmental Modeling*. UTM & MUCED (Funded by Danish Cooperation for Environment & Development). UTM Skudai Campus, November, 2001.

Keynote Speaker, *International Seminar on Industrial Pollution Control*. Inst. Teknologi Surabaya, Indonesia, November 2000.

Group Leader and Participant, International Workshop on Joint Research Program Between Danish, Malaysian, Thai and South African. Danish University Consortium for Environment and Development, Copenhagen, December 2000.

Paper Presenter & Chairman, *National Seminar on Immersed Membrane Technology*. UTM & Musashi Inst. of Technology (Japan). UTM Skudai Campus, August, 2000.

Paper Presenter & International Committee Member, *6th International Conference on Pollution in Metropolitan Cities*. Co-organizers: Environmental Mgmt & Research Ass. Of Malaysia-UTM. March 20-23, 2000.

Paper Presenter & Chairman, *National Short Course on Modeling of Biological Wastewater Processes*. Inst. Env. & Water Resource Mgmt.-UTM, 3-5 April, 2000.

Paper Presenter & Chairman, *National Short Course on Molecular Microbial Ecology in Water and Wastewater Applications*. Inst. Env. & Water Resource Mgmt.-UTM, 3-5 April, 2000.

Paper Presenter, Paper reviewer (5 papers). *First World Water Congress*. Organizer: International Water Association, Paris, July 2000.

Paper Presenter. *Establishment & Evaluation of Advanced Water Treatment Technology Systems using Functions of Complex Microbial Community*. Organizer: Tokyo University, Tokyo, March 2000.

Paper Presenter, Paper reviewer (11 papers) & International Committee Member. *Specialized International Conf. on Membrane Technology in Environmental Management*. Co-organizers: International Water Association & Tokyo University, Nov'99.

Chairman & Paper presenter. *National Seminar on Advanced Wastewater Treatment*. Co-organizers: UTM, Environmental Mgmt & Research Ass. of Malaysia & Danish Cooperation for Environment & Development, 28-30 January, 1999.

Chairman & Paper presenter. *National Shortcourse on Industrial Air Pollution Control*. Co-organizers: UTM & Middlesex University. 9-10 June, 1999.

Chairman & Paper presenter. *National Shortcourse on Clean Technology for Industrial Applications*. Organizer: UTM. 6-7 July, 1999.

Chairman & Paper presenter. *National Shortcourse on Membrane Technology for Environmental Control*. Organizer: UTM. 8 July 1999.

Chairman & Paper presenter. *National Shortcourse on Sludge Mgmt*. Organizer: UTM. 18-19 August, 1999.

Chairman & Paper presenter. *Regional Shortcourse on Sewer as a Physical, Chemical & Biological Reactor*. Organizer: UTM. 7-9 September, 1999.

Chairman & Paper presenter. *Regional Seminar on Medical Waste Management*. Co-organizers: UTM & The United States – Asian Environmental Partnership Program. 19-21 Oct, 1999.

Participant, *International Seminar on Learning for the 21st. Century*, Arthur Andersen, Illinois, April 1997.

Participant, Academic Tour to Simon Fraser University, Stanford University & UCLA on Multimedia Application for Virtual University Concept, Canada & USA, April 1997.

Paper Presenter, *Seminar on Health and Environ.*, Ministry of Health, Kedah, Feb. 1997.

Paper reviewer (5 papers) & Paper presenter. *IAWQ Binneal Conference on Water Quality International*. Vancouver, Canada. July 1999.

Paper Presenter. *IAWQ 2nd International Symposium on Wastewater Reclamation and Reuse*. Crete, Greece. October 17-20, 1995.

Paper presenter. *IAWQ Binneal Conference on Water Quality International*. S'pore, July 1996.

Participant, *Short Course on Research Methodology*, Department of Public Services, Malaysia (JPA) & UTM, Johor Bahru, 1993.

Paper Presenter, Departmental Seminar, Department of Environmental & Sanitary Engineering, Univ. Kyoto, Japan, 1993.

Paper Presenter & Participant, *Leadership Regional Seminar on Environmental and Urban Management in South-East Asia*, UTM, Johor Bahru, 1993.

Paper Presenter & Participant, *Seminar Membina Masyarakat Pencinta Alam Sekitar*, International Islamic Univ., Kuala Lumpur, 1993.

Paper Presenter, Organising Committee & Participant, *Short Course on Environmental Engineering for Non-Environmental Engineers*, UTM, Kuala Lumpur, 1993.

Paper Presenter, Organising Committee & Participant, *National Seminar on Environmental Control Technology*, UTM, Kuala Lumpur, 1993.

Participant, *Seminar on Environmental Auditing: Methods & Techniques*, ENSEARCH, K.Lumpur, 1992.

Paper Presenter & Participant, *International Conf. on Environmental Protection and Control Technology*, IAWRC & ENSEARCH, Kuala Lumpur, 1992.

Paper Presenter & Participant, *National Seminar on Civic Education: Youth and Environment*, Inst. for Policy Studies, Penang, 1992.

Paper Presenter & Participant, *UPP Seminar on R&D*, UTM, Johor Bahru, 1992.

Participant, *Kursus Bina Negara Perdana Pertama*, Biro Tata Negara, Port Dickson, 1992.

Paper Presenter, *Seminar on University & Intellectual Tradition*, ASASI & UTM, Johor Bahru, 1992.

Paper Presenter & Participant, *Konvensyen Keprihatinan Isu-Isu Pelajar: Alam Sekitar*, National Ass. of Muslim Students, Malaysia (PKPIM), Kuala Lumpur, 1992.

Paper Presenter & Participant, *National Annual Seminar of Ass. of South-East Asia Inst. of Higher Learning (ASAIHL)*, UTM, Kuala Lumpur, 1991.

Paper Presenter & Participant, *5th. National Symp. on Chemical Analysis*, Univ. Malaya, Kuala Lumpur, 1991.

Paper Presenter & Participant, *16th. National Sem. of Biochem. Ass. of M,sia*, UTM, JB, 1991.

Paper Presenter & Participant, *7th. National Symp. of Chemical Engineers, Malaysia (IChEM)*, Univ. Kebangsaan Malaysia, Kuala Lumpur, 1991.

Paper Presenter & Participant, *National Seminar on KBSM*, UTM, JB, 1989.

Paper Presenter & Participant, *3rd. National Symp. on Chem. Analysis*, UTM, JB, 1989.

Participant, *National Workshop on Urban Green*, Univ. Malaya & DBKL, KL, 1989.

Paper Presenter, Organising Committee & Participant, *National Seminar on Water & Wastewater Management*, UTM, Kuala Lumpur, 1989.

CONSULTANCY AND ADVISORY SERVICES (From 1998 onwards only)

Project Title: Advisory services on industrial effluent compliance

Client: M-SMM Sdn Bhd (subsidiary to Sumitomo Corporation, Japan). Responsibility: Consultant.

Period: Dec 2006 (3 months)

Project Title: EIA for Idemitsu plant in Pasir Gudang

Client: Idemitsu. Responsibility: Head of consultancy project. Period: Oct 2005 – March 2006

Project Title: Carbon credit scheme for palm oil mills

Client: International Carbon Credit Sdn Bhd and Felda. Responsibility: Wastewater engineering expert

Period: July 2006 - now

Project Title: Detailed EIA project for reclamation of land for Ranca-Ranca port, Labuan

Client: Maritime Department, Malaysia Ministry of Transport

Responsibility: Principal consultant. Period: July 2006 - now

Project Title: Arbitration on wastewater treatment plant design and construction

Client: Genting Sanyen Sdn Bhd. Responsibility: Expert witness. Period: Oct 2005 – February 2007

Note: To provide professional judgement on detail design of the wastewater treatment plants

Project Title: Design of hybrid membrane bioreactor for palm oil mill effluent treatment

Client: Sakti Suria Sdn Bhd. Responsibility: Designer of MBR system. Period: July 2005 – Dec 2006

Note: To provide detail design of the MBR system

Project Title: Design of biogas anaerobic system for palm oil mill for Golden Hope Plantation

Client: Sakti Suria Sdn Bhd. Responsibility: Designer of anaerobic biogas production pilot plant. Period:

Oct– Dec 2005

Note: To provide detail design of the biogas system

Project Title: Design of Hi-Kleen design system using WASDA

Client: PJ Bumi Berhad. Responsibility: Designer of the system. Period: July – Sept 2005

Note: To provide system to design the treatment plants

Project Title: Master plan for water development in Negeri Sembilan

Client: State of Negeri Sembilan. Responsibility: Chairman of the technical report preparation

Period: Sept – Dec 2005

Note: To propose alternatives to overcome water crisis in Seremban

Project Title: Due diligence on the 8+1 Technologies in InventQjaya Sdn. Bhd.

Client: SIRIM Berhad. Responsibility: Technical expert of membrane technology. Period: May – July 2005

Note: To provide comments on the level of technology

Project Title: Study on the Pollution Prevention and River Cleaning Project for Sungai Segget & Tebrau, Johor Bahru.

Client: Malaysia Department of Environment. Responsibility: Director of Project

Value: RM2.03 million. Status: October 2001-October 2002

Note: Principal Consultant and head of project management team, as well as developing master plan for sewerage catchment and wastewater treatment plants. Emphasis on sustainable sanitation and decentralised wastewater treatment approach.

Project Title: Study on Odor Control and Management

Client: Hualon Corporation (M) Bhd. Responsibility: Head of Project

Value: RM50,000. Status: November 2003-May 2004

Note: Principal consultant and head of project management and determination of origin of odor problems, and providing engineering design for odor control in wastewater treatment plant.

Project Title: Study on Cleaner Production Master Plan Implementation in Malaysia

Client: Malaysia Department of Environment. Responsibility: Director of Project

Value: RM320,000. Status: October 2002-October 2003

Note: Principal consultant and head of project management, and developing master plan for industrialised wastewater treatment plants for reuse and recycling of treatment waste materials. The emphasis was on industrial ecology and zero emission approaches.

Project Title: Cost-effective of upgrading of waste stabilization ponds.

Client: Indah Water Konsortium. Responsibility: Head of Project

Value: RM62,500. Status: Completed, April 2000

Note: Principal consultant and head of project management, and developing a new design for upgrading WSP using baffles and wetlands. The emphasis was on ecological sustainable sanitation approach.

Project Title: EIA Study for Mixed Development Project in Lot 53091/2, Kluang, Johor

Client: Tenaga Professional (Johor) Sdn. Bhd. Responsibility: Head of Project

Value: RM48,000. Status: August 2003-April 2004

Project Title: Feasibility study on reclamation project at Tanjung Kling, Malacca.

Client: Kolej Islam Melaka. Responsibility: Head of Project

Value: RM50,000. Status: Completed, 1998

Project Title: Air monitoring (every three month for three years)

Client: Steadtler (M) Sdn. Bhd., Johor Bahru. Responsibility: Head of Project

Value: RM38,400. Status: Ongoing, since 1999

Project Title: Upgrading of solid-liquid separation in water treatment plant.

Client: Sibu Water Board, Sarawak. Responsibility: Head of Project

Value: RM13,000 . Status: Completed, December 1999

Project Title: Cost-effective of upgrading of waste stabilization ponds.

Client: Indah Water Konsortium. Responsibility: Head of Project

Value: RM62,500. Status: Completed, April 2000

Project Title: EIA and hydraulic studies for Dangga Bay Project, Johor Bahru.

Client: Ekovest Project Management Sdn. Bhd., Johor Bahru. Responsibility: Head of EIA Project

Value: RM195,000. Status: Completed. February 2001.

Project Title: EIA for the Development of ResearchCenter for Freshwater Fisheries, Jelebu, N. Sembilan

Client: JKR Head Quarters. Responsibility: Head of Project

Value: RM140,000. Status: Completed, March 2001.

Project Title: Action Plan on Water Management System in UTM Skudai Campus, Johor

Client: UTM. Responsibility: Head of Project

Value: RM30,000. Status: Completed, January, 2001.

Project Title: Solid and Hazardous Waste Management & Advanced Water Treatment

Client: Genesis Technology, Sarawak. Responsibility: Head of Project

Value: RM21,500. Status: Completed, November 2000

Project Title: Industrial Wastewater Treatment

Client: Genesis Technology, Sarawak. Responsibility: Head of Project

Value: RM11,500. Status: Completed, 1999

REFEREES:

Prof. Dr. Ir. Mohd. Azraai Kassim

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