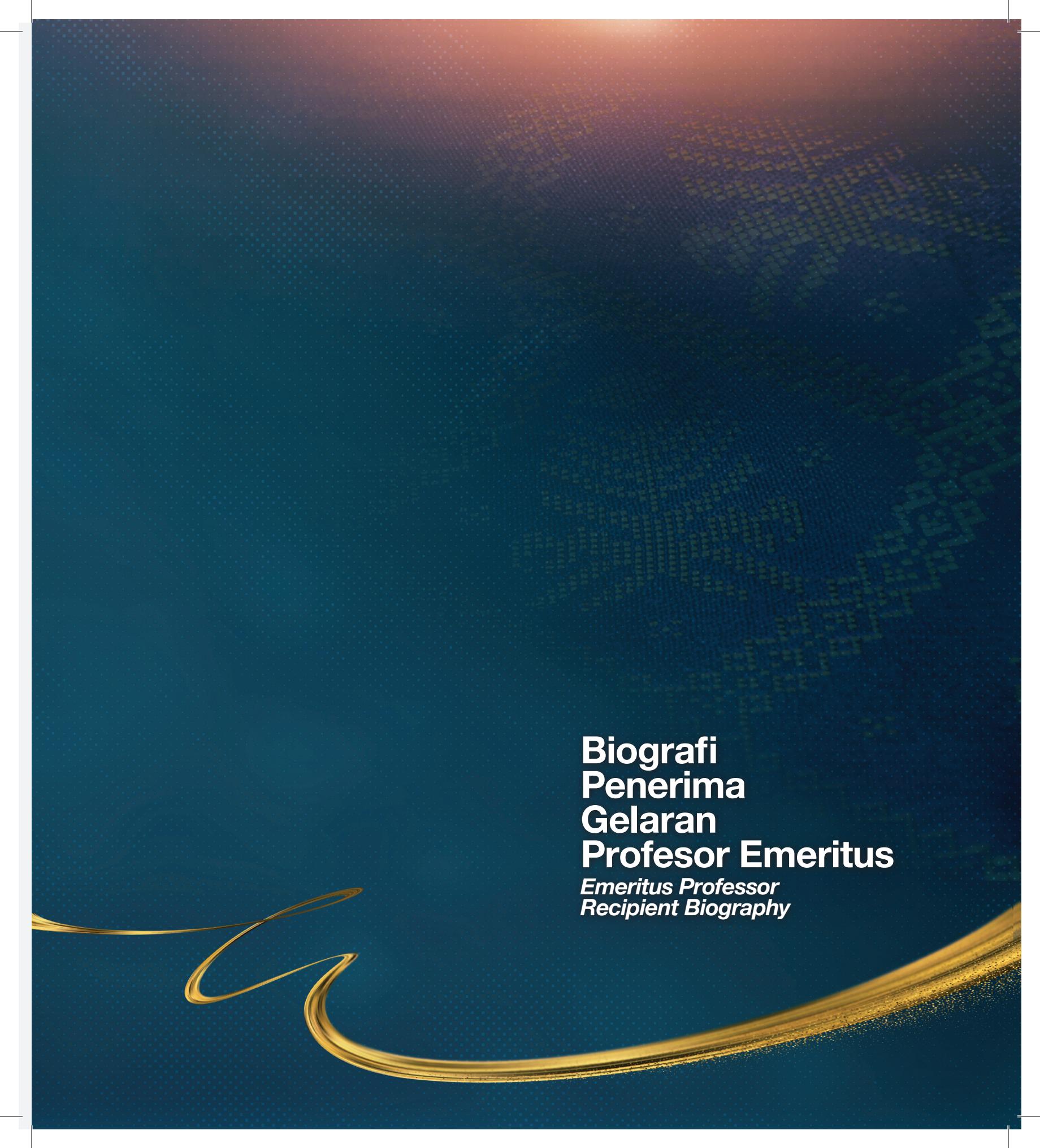


Istiadat
Konvokesyen
Universiti Teknologi MARA ke-**95**

◆◆◆ *UiTM 95th Convocation Ceremony* ◆◆◆



Biografi Penerima Gelaran Profesor Emeritus

*Emeritus Professor
Recipient Biography*



**Yang Berbahagia Profesor Emeritus Datuk Ir. Dr.
Ow Chee Sheng**

Pakar Bidang Kejuruteraan Mekanik Bendalir
Fluid Mechanical Engineering Expert

Datuk Ir. Dr. Ow Chee Sheng dilahirkan di Melaka pada 15 Januari 1949 dan menerima pendidikan awal di Sekolah Kebangsaan Bandar Hilir Melaka (BHES). Kepimpinannya telah mula terserlah ketika beliau di bangku sekolah lagi apabila dilantik sebagai Ketua Pelajar Sekolah Menengah Kebangsaan Tinggi Melaka (MHS) pada tahun 1968. Beliau seorang yang mudah disenangi bukan sahaja dalam kalangan rakan sekerja, malah dalam kalangan pelajar dan rakan kerjasama yang lain. Sifat kebapaan yang sangat menonjol dan sering memberikan nasihat menjadikan beliau mudah didekati. Beliau dikatakan sering memastikan “apa yang dimilikinya akan dimiliki juga oleh orang lain, apa yang diperolehnya akan diperolehi juga oleh orang lain”.

Kepakaran dalam bidang Kejuruteraan Mekanik Bendalir bermula apabila Datuk Ir. Dr. Ow Chee Sheng memperolehi Sarjana Muda Kejuruteraan Mekanikal (Kepujian) di Universiti Canterbury, New Zealand pada tahun 1972. Sebelum memulakan kerjayanya di Institut Teknologi MARA (ITM) pada Jun 1973, beliau merupakan Pembantu Penyelidik di Jabatan Kejuruteraan Mekanikal, Universiti Canterbury, New Zealand. Kemudiannya, beliau menyambung pengajian di Imperial College London dan berjaya memperoleh Doktor Falsafah (PhD) pada tahun 1980. Beliau juga mempunyai kelayakan profesional dalam *Computational Fluid Dynamics Software* seperti *Fluent*, *Phoenics*, *Fortran*, *Macro-Assembler* dan *QBasic*. Perkhidmatan cemerlang beliau di ITM dan kemudian menjadi Universiti Teknologi MARA (UiTM) menyebabkan beliau dilantik sebagai Profesor Kejuruteraan Mekanikal pada tahun 1999.

Bapa kepada tiga orang cahaya mata ini merupakan seorang yang sentiasa memberikan perhatian dan mengutamakan UiTM dalam tindakannya. Beliau telah memberikan sumbangan yang sangat bermakna kepada universiti dan negara sepanjang 42 tahun perkhidmatannya melalui pelbagai peranan dalam kepimpinan universiti, kesarjanaan akademik dan khidmat kepada masyarakat, bangsa dan negara. Beliau berpengalaman luas dalam hal kepimpinan universiti dan pernah berperanan sebagai Ahli Senat UiTM, Ahli Jawatankuasa Kenaikan Pangkat, Gugusan Kejuruteraan, Ahli Jawatankuasa Akademik, dan Ahli Jawatankuasa Kenaikan Pangkat, Fakulti Kejuruteraan Mekanikal (FKM). Oleh kerana sikap bertanggungjawab yang ditorjolkan serta keperluan kepada kapakaran dan sumbangan yang berkaitan, beliau dilantik sebagai Profesor kontrak sehingga awal tahun 2015 selepas bersara wajib/paksa pada Januari 2005.

Datuk Ir. Dr. Ow Chee Sheng telah menghasilkan lebih dari 60 penerbitan di pelbagai jurnal, artikel dan prosiding yang diterbitkan bukan sahaja di dalam negara malah di luar negara seperti London, China, Korea, Filipina, Thailand, Singapura dan banyak lagi. Beliau terlibat dalam pembentukan program baharu dan bertanggungjawab memastikan kurikulum yang dibentuk mendapat pengiktirafan pada peringkat nasional dan antarabangsa. Penglibatan aktif beliau

dalam *Board of Engineers Malaysia (BEM)* dan *Engineering Accreditation Council (EAC)* Malaysia, telah membangunkan subjek Pencegahan Kebakaran berteraskan keperluan industri berlandaskan acuan *Washington Accord*. Selain itu program-program baharu dibangunkan antaranya Program Diploma Kejuruteraan Mekanikal, Program Diploma Lanjutan Kejuruteraan Mekanikal, Program Sarjana Muda Kejuruteraan Mekanikal, dan Program Pascasiswazah. Sumbangan dan peranan ini telah membantu menempatkan UiTM sebagai sebuah universiti yang terulung dalam melahirkan jurutera yang holistik dan diterima pada peringkat antarabangsa.

Datuk Ir. Dr. Ow Chee Sheng telah memainkan peranan penting sebagai pemimpin yang menyumbang kepada pembangunan masyarakat khusus dalam bidang kejuruteraan mekanikal. Beliau merupakan ahli jawatankuasa Penulisan Piawai SIRIM bagi Perlindungan Kebakaran bersama Ketua Pengarah BOMBA, wakil dari *Malaysian Medical Association (MMA)*, *Association of Consulting Engineers Malaysia (ACEM)*, Institut Jurutera Malaysia (IEM), *Institution of Fire Engineers (IFE)* UK dan Pertubuhan Akitek Malaysia (PAM). Bersama *American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)* di Malaysia (MASHRAE), beliau menulis kertas cadangan kepada Program Alam sekitar Bangsa-bangsa bersatu (UNEP) bertajuk *Recycling and Recovery of R11 and R12 from Chillers for Malaysia*. Dengan kelulusan dana berjumlah RM800,000 kerja lapangan telah diusahakan bersama Jabatan Alam Sekitar, Malaysia. Ketika beliau berperanan sebagai Penasihat pertama FKM Shell ECO-Marathon and Solar Vehicle Challenge, Pasukan FKM telah menghantar *Hydrogen Fuel Cell Powered Vehicle* dan memenangi tempat pertama kategori *Urban Design* di Manila, Filipina (2014). Beliau juga merupakan Ketua Perunding kepada pihak YTL Sdn. Bhd. bagi Projek Jana Kuasa Pasir Bogak dan menjadi mentor kepada kakitangan akademik dan teknikal bagi Fakulti Kejuruteraan Mekanikal dan Fakulti Kejuruteraan Elektrik.

Sebagai seorang yang mempunyai semangat kerjasama yang tinggi, terbuka dan tidak jemu berkongsi ilmu telah membawa beliau untuk terus cemerlang. Penglibatan Datuk Ir. Dr. Ow Chee Sheng di pelbagai institusi dan pertubuhan sebagai pakar rujuk kejuruteraan dan pemimpin akademik yang dihormati telah menaikkan nama UiTM secara tidak langsung. Beliau sangat aktif dalam berkongsi idea, pandangan dan menyumbang tenaga kepada IEM. Beliau telah terlibat dengan kerja sukarela IEM sejak 1984 dengan memegang pelbagai jawatan. Jawatan-jawatan yang disandang beliau bermula dengan Ahli Majlis (1985-1988), Bendahari Kehormat (1988-1990), Naib Pengurus Jawatankuasa Kerja Penerbitan (1986-1988), Setiausaha Kehormat (1990-1992), Naib Yang DiPertua/Naib Presiden (1993-1996), Naib Pengurus Jawatankuasa Kerja Amalan Profesional (1988-1989), Penyunting Kehormat Terbitan IEM (1986-1987) dan Setiausaha Kehormat (1990-1992). Berdasarkan pengalaman dan kapakaran yang dimiliki, beliau diamanahkan memegang jawatan Timbalan Yang

DiPertua / Timbalan Presiden dalam membantu Presiden sebagai Ketua Ekskutif IEM dan Pengerusi Jawatankuasa Kerja Kewangan yang bertanggungjawab menjaga hal ehwal kewangan Institusi Jurutera Malaysia (2003-2005) seterusnya, dilantik sebagai Yang DiPertua / Presiden IEM selama dua tahun dan bertanggungjawab menerajui isu-isu berkepentingan kepada institusi dan negara. Atas sumbangan berimpak tinggi kepada IEM, beliau diiktiraf sebagai Felo Kehormat IEM.

Beliau pernah juga berperanan sebagai Pengerusi Komuniti *Smoke/Ventilation Standard*, SIRIM (2000-2005), Bahagian Teknikal Perkhidmatan Bangunan IEM (*Building Services Technical Division*), Komuniti Pusat Konvensyen, Bahagian Teknikal Kejuruteraan Mekanikal, Simulasi Kebakaran dan Asap, IJM Cooperation Berhad Putrajaya, Pengarah Penyelidikan dan Pembangunan (R&D), Pengarah Perunding IEV Group International (2005), Pengarah dan Pengerusi *Region XIII American Society of Heating, Refrigerating and Air-conditioning Engineers USA (ASHER)* (2004-2007), ahli bersama bagi Persatuan Jurutera Mekanikal Amerika (2000-2003), Ahli ASHRAE (USA) (2007-2009), Honors and Awards Committee ASHRAE (USA) (2008/2009), Penilai Panduan Reka Bentuk untuk Iklim Lembab ASHRAE, Ahli Jawatankuasa Teknikal Sistem dan Komponen Air Boleh Diminum SIRIM (2009), Penilai Luar bagi kursus *Heating, Ventilation and Air Conditioning (HVAC)* Universiti Kuala Lumpur (UniKL) (2009/2010), Felo ASHRAE, Ahli *Institution of Fire Engineers (UK)*, *American Society of Mechanical Engineers* dan *Society of Fire Protection Engineers USA* (2020).

Minat dan komitmen Datuk Ir. Dr. Ow Chee Sheng kepada perkembangan penyelidikan telah mendorong beliau bekerjasama dengan pihak luar demi mempertingkat kualiti akademik serta pengiktirafan dunia luar terhadap UiTM. Hasil dan pencapaiananya dalam penyelidikan menghasilkan Paten: *Marine Growth Preventer-WIPO Record for Inventors*. Penyelidikan ini adalah kerjasama dengan pihak Syarikat IEV Group untuk menghasilkan *Marine Growth Preventer*, inovasi alat yang mesra alam untuk membersihkan paip di bawah aras laut yang diguna pakai oleh syarikat-syarikat besar di seluruh dunia. Beliau juga terlibat dengan penulisan mengenai Perisian Bebas *Full Hydraulic Calculation of Sprinklers and Spray Systems for both Closed Loop and Open Loop System* yang digunakan untuk reka bentuk *Overhead AFFF Foam System* di Hangar 02 MAS, Lapangan Terbang Subang serta *Optimising Pipe Sizes for Gravity Feed From One Tank to Eight other Tanks Downstream at Various Platform Levels using a Relaxation Method*. Beliau juga merupakan pakar runding bagi syarikat Hashim & Neh Sdn. Bhd dalam reka bentuk, penyeliaan dan pembinaan struktur kawalan kebakaran *Aqueous Film Forming Foam (AFFF)* di Hangar 02 & 03 *Malaysia Airlines*. Kerjasama yang sama juga dilakukan bersama-sama Muhibbah Engineering Sdn. Bhd. di Pusat Penyelenggaraan Enjin *Malaysia Airlines*. Seterusnya beliau bersama Unit Perundingan UiTM menjalankan perundingan kejuruteraan Mekanikal dan Kejuruteraan (M&E) untuk Projek di Resort Pasir Bogak, Pulau

Pangkor bekerjasama dengan Syarikat IEV Group bagi tujuan *Development of Marine Growth Preventer* fasa 1 dan fasa 2.

Beliau telah terlibat secara aktif dengan organisasi ASHRAE sejak tahun 1990 lagi. Antara sumbangan lain beliau bersama ASHRAE ialah sebagai Jawatankuasa Kecil MBR / 2024 Sistem HVAC dan Peralatan serta Buku Panduan (2020-2024). Beliau merupakan Wakil Penyelidikan 3.0 (2020-2023) Jawatankuasa Pentadbiran Penyelidikan (2020-2023) dan pernah mempengaruhi Jawatankuasa Penerbitan (2019-2020) dan telah menjadi ahli Jawatankuasa Penerbitan sejak 2018. Beliau juga merupakan *Board Elected Alternate Nominating Committee* (2015), dan *Nominating Committee* (2012-2013), Jawatankuasa Anugerah dan Penghargaan (2008-2009), *Board Elected Alternate, Nominating Committee* (2007-2009), *Director and Regional Chair, Board of Directors* (2004-2007), *Non-Voting Member / Publications Chair of Publishing and Education Council* (2015-2020), Ahli Jawatankuasa Ad Hoc Pembangunan Ekonomi (2014-2015), *REGIONXIII / Director and Regional Chair, Members Council* (2004-2007), *Region Assistant Regional Chair, REGION XIII* (2002-2008), *Chapter President, Malaysia* (2001-2002, 1999-2000, 1991-1993), *Chapter Vice President* (1995-1999), *Chapter Delegate, Malaysia* (1999-2000, 1991-1992), *Assistant Regional Chair, ASHRAE Region XIII* (2001), *Regional Vice Chair for Research Promotion: Region XIII* (1999).

Kemerlangan beliau telah diperakui pada peringkat kebangsaan dan antarabangsa dengan pelbagai anugerah berprestij dan pengiktirafan di dalam dan luar negara berjaya diperoleh antaranya beliau diiktiraf kepadarannya apabila dilantik sebagai Felo *The Institution of Engineers, Malaysia (IEM)* pada tahun 1995, Felo ASHRAE pada 2002 dan Felo Akademi Sains Malaysia pada April 2006. Beliau juga dianugerahkan *Regional Award of Merit, ASHRAE* pada tahun 2002, dan dianugerahkan pingat Panglima Jasa Negara (PJN) yang membawa gelaran 'Datuk' pada tahun 2006 serta *Distinguished Service Award, ASHRAE* pada tahun 2013.

Setelah meninggalkan UiTM, beliau meneruskan minat dan usahanya bersama ASHRAE, USA. Antara penglibatannya adalah mempengaruhi Jawatankuasa Penerbitan dari Julai 2018 hingga Jun 2019. Kini berkhidmat sebagai ahli mengundi dalam Jawatankuasa Pentadbiran Penyelidikan yang mengagihkan sehingga 3 juta USD dana penyelidikan untuk cadangan penyelidikan HVAC baharu. Setiap cadangan Topik Penyelidikan untuk Penerimaan (RTAR) yang diterima dibiayai sehingga maksimum USD 250,000.

Dengan pencapaian yang cemerlang dan luar biasa, Universiti Teknologi MARA dengan penuh sukacita menganugerahkan gelaran Profesor Emeritus kepada Yang Berbahagia Datuk Ir. Dr. Ow Chee Sheng.

Datuk Ir. Dr. Ow Chee Sheng was born in Malacca on 15 January 1949 and received his early education at Sekolah Kebangsaan Bandar Hilir Melaka (BHES). His leadership quality stood out since he was in school when he was appointed as a student leader at Sekolah Menengah Kebangsaan Tinggi Melaka (MHS) in 1968. He was well-liked not only by his colleagues but also by students and others who worked with him. His apparent fatherly disposition and habit of frequently giving others his advice made him approachable. Datuk believes that what he owns will be owned by others and that what he receives, will also be received by others.

His expertise in Fluid Mechanical Engineering began when he received his bachelor's degree in Mechanical Engineering (Hons) from the University of Canterbury, New Zealand in 1972. Before his career at Institut Teknologi MARA (ITM), he was an assistant researcher at the Department of Mechanical Engineering, University of Canterbury. Datuk then furthered his studies at the Imperial College of London where he obtained his PhD in 1980. He also acquired professional certifications in Computational Fluid Dynamics Software such as Fluent, Phoenics, Fortran, Macro-Assembler, and QBasic. His excellent service to ITM and later UiTM led him to be conferred the title of Professor in Mechanical Engineering in 1999.

A father of three, Datuk is a caring individual who always puts UiTM first in his actions. Throughout his 42 years of service, he has given significant contributions to the university and the country through his roles in university leadership, academic scholarship, and social services to the public, nation, and country. With vast experience in university leadership, Datuk Ir. Dr. Ow Chee Sheng has held posts as a member of the UiTM Senate, a panelist for academic staff promotion at the faculty and S&T Collegiate level, and a member of the Academic Board of Mechanical Engineering Faculty. He retired in January 2005 yet his dedication to his job and the demand for experts in his field led Datuk to return as a contract Professor in 2015.

Datuk Ir. Dr. Ow Chee Sheng has produced over 60 publications for journals and conference proceedings locally and internationally such as in Australia, China, Korea, the Philippines, Thailand, and Singapore. Additionally, he has been involved in forming new programmes and was responsible for their national and international recognitions. His active involvement in the Board of Engineers (BEM) and Engineering Accreditation Council (EAC) Malaysia has enabled him to develop a new subject, Fire Precaution Engineering, under the Washington Accord template to meet the needs of the industry. Among the programmes that Datuk helped to develop the curriculum are the Diploma in Mechanical Engineering, the Advanced Diploma

in Mechanical Engineering, the Degree in Mechanical Engineering, and the Postgraduate programme. His invaluable contributions and roles helped to place UiTM at the forefront of producing engineers that are holistic and established globally.

Datuk Ir. Dr. Ow Chee Seng is a prominent leader who contributed to the development of society, particularly in the field of Mechanical Engineering. He was a member of the standing committee on Writing standards for SIRIM in Fire protection together with the General Director of BOMBA, representatives from the Malaysian Medical Association (MMA), the Association of Consulting Engineers Malaysia (ACEM), Institution of Engineers Malaysia (IEM), Institution of Fire Engineers (IFE) UK and Pertubuhan Akitek Malaysia (PAM). Together with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) in Malaysia, or MASHRAE, he wrote a working proposal to the United Nation Environment Programme (UNEP) for a Recycling and Recovery of R11 and R12 from Chillers for Malaysia. Funding of RM 800,000 was approved, and work was carried out with the Department of Environment Malaysia. When Datuk was the first Faculty of Mechanical Engineering's (FKM) Shell Eco-Marathon and Solar Vehicle Challenge team advisor, the FKM team submitted an entry for its Hydrogen Fuel Cell powered vehicle which won first place under the Urban Design category in Manila, Philippines in 2014. Datuk, moreover, was the Chief Negotiator for YTL Sdn Bhd for the Pasir Bogak Power Plant project and a mentor to the academic and technical staff of the Faculty of Mechanical Engineering and the Faculty of Electrical Engineering.

As an individual who is highly cooperative and open-minded and enjoys sharing knowledge with others, Datuk continues to achieve success. His involvement at various institutions and organisations as an Engineering expert and a well-respected academic leader helped to bring UiTM to prominence. He actively shares his views and ideas with IEM. In fact, Datuk has been involved in volunteering work under IEM since 1984 in which he held several posts. Among the many posts that he has held were as Council member (1985-1988), Honorary Treasurer (1988-1990), Vice Chairman of the Publication working Committee (1986-1988), Honorary Secretary (1990-1992), Vice President (1993-1996), Vice Chairman for Professional Practice Working Committee (1988-1989), Honorary Editor for IEM publication (1986-1987), and Honorary Secretary (1990-1992). With his experience and expertise, Datuk was entrusted with the post of Vice President, aiding the President as the Chief Executive of IEM and Chairman of the Financial Working Committee where he was responsible for all monetary matters at the Institution of Engineers (2003-

2005). He was then elected as the President of IEM for two years during which he oversaw important matters pertaining to the institution and the country. He was later made an IEM honorary fellow due to his impactful contributions.

Datuk Ir. Dr. Ow Chee Seng was also the Chairman of the Smoke/Ventilation Standard committee for SIRIM (2000-2005), chairman and committee member for IEM Building Services Technical Division, as well as a committee member of the Convention Centre, Mechanical Engineering Technical Division IEM Fire and Smoke Simulation for Putrajaya, IJM Cooperation Berhad. Datuk was also the R&D Consulting Director of the IEV Group International (2005), and Director and Regional Chair of Region XIII ASHRAE (2004-2007). He was also a Corresponding member of the American Society of Mechanical Engineers (2000-2003), a member of the nominating committee ASHRAE (USA) (2007-2009), a member of the Honors and Awards Committee ASHRAE (USA) (2008/2009), ASHRAE reviewer for Design Guide for Humid Climate, and member of SIRIM Technical Committee on Portable Water System and Components (2009). Moreover, Datuk was an external examiner for the Heating, Ventilation, and Air Conditioning (HVAC) course at Universiti Kuala Lumpur (UniKL) (2009/2010), a fellow at ASHRAE, a member of the Institution of Fire Engineers (UK) as well as the American Society of Mechanical Engineers (until 2005), and the Society of Fire Protection Engineers USA (2020).

Datuk Ir Dr Ow Chee Sheng's passion and commitment to research development have driven him to collaborate with outsiders to enhance UiTM's academic quality and global recognition. His achievement in research led to a patent for Marine Growth Preventer-WIPO Record for Inventors. This research work is a collaboration with the IEV Group of Companies to produce Marine Growth Preventer, an eco-friendly innovation instrument to clean pipes below sea level used by large companies around the world. Datuk was also involved in writing the independent software for Full Hydraulic Calculation of Sprinklers and Spray Systems for both Closed Loop and Open Loop Systems which was used in the design of the Overhead AFFF Foam System at Malaysia Airlines (MAS) Hangar 02 in Subang Airport. In addition, Datuk wrote software to optimise pipe sizes for gravity feed from one tank to eight other tanks downstream at various platform levels using a relaxation method. At Hashim & Neh Sdn Bhd, Datuk is a consultant in the design, supervision, and construction of the Aqueous Film Forming Foam (AFFF) at MAS Hangar 02 & 03. A similar collaboration was carried out with Muhibbah Engineering Sdn Bhd at the MAS Engineering Maintenance Centre. Consequently, together with UiTM's consultancy unit, Datuk carried out mechanical engineering consultancy for the Pasir Bogak Pulau Pangkor Resort, with a

partnership with IEV Group of companies, for the Phase 1 and Phase 2 development of the Marine Growth Preventer.

Datuk Ir. Dr. Ow Chee Sheng is an active member of ASHRAE since 1990. His other contributions to ASHRAE include his involvement in the MBR sub-committee / 2024 HVAC Systems and Equipment and Handbook committee (2020-2024). He was also the Research Liaison 3.0 for the Research Administration Committee (2020-2023) and chaired the Publication Committee (2019-2020), as well as a member of the Research Committee (2018-2019). Datuk was on the Board of Elected Alternate for the Nominating Committee in 2015 and from 2007 to 2009, the Director and Regional Chair of the Board of Directors (2004-2007), and non-voting member / Publications Chair of the Publishing and Education Council (2015-2020). His other achievements include his involvement as a member of Developing Economies Presidential Ad Hoc Committee (2014-2015), REGION XIII / Director and Regional Chair, Members' Council (2004-2007), Region Assistant Regional Chair, REGION XIII (2002-2008), Chapter President, Malaysia (2001-2002, 1999-2000, 1991-1993), Chapter Vice President (1995-1999), Chapter Delegate, Malaysia (1999-2000, 1991-1992), Assistant Regional Chair, ASHRAE Region XIII (2001), and Regional Vice Chairman for Research Promotion: Region XIII (1999).

Datuk Ir. Dr. Ow Chee Sheng's excellent work is certified locally and internationally through various prestigious accolades and recognitions. His expertise led to his appointment as a fellow at the Institution of Engineers, Malaysia in 1995, at ASHRAE in 2002, and at the Akademi Sains Malaysia in April 2006. Datuk was also awarded the Regional Award of Merit, ASHRAE in 2002, and the Panglima Jasa Negara (PJN) award that carries the title 'Datuk' in 2006. In fact, he also received the Distinguished Service Award, ASHRAE in 2013.

After retiring from UiTM, Datuk sustained his passion and endeavour with ASHRAE, USA whereby he chaired the Publication committee from July 2018 to June 2019. He currently serves as a voting member on the Research Administration committee which disburses up to 3 million USD in research funds for new HVAC research proposals. Each Research Topic for Acceptance (RTAR) proposal which is accepted is funded to a maximum of USD 250,000.

With outstanding and exceptional achievements, it is with great pleasure that Universiti Teknologi MARA confers the title Emeritus Professor to the Honourable Datuk Ir. Dr. Ow Chee Sheng.