

# ASM

2018 EDITION

# EXPERT

# NETWORK

Leaders | Advocators | Discoverers | Practitioners | Collaborators | Communicators |  
Innovators & Inventors of Science, Engineering & Technology

Think Science | Celebrate Technology | Inspire Innovation



# ASM 2018 EDITION EXPERT NETWORK

Leaders | Advocators | Discoverers | Practitioners | Collaborators | Communicators |  
Innovators & Inventors of Science, Engineering & Technology

## CONTENT

<i>page</i> <b>06</b> About ASM	<i>page</i> <b>08</b> Senior Fellow	<i>page</i> <b>12</b> Fellows	<i>page</i> <b>48</b> Associates	<i>page</i> <b>50</b> Top Research Scientists Malaysia	<i>page</i> <b>66</b> Young Scientists Network- ASM
--	--	-------------------------------------	--	---	--

Development of science should always be balanced. While there may be priorities, no one science can be developed at the expense of another. Science should be understood as a unity. This is particularly true today where different disciplines of science have come together for mutual support and some eventually will give birth to new fields and disciplines.

Excerpt from Tun Dr Mahathir Mohamad's speech at the Inauguration of ASM, September 1995



We must embrace change and use the advancement of science and technology to empower the people. When used in combination with the arts, we can now offer solutions that are not only high tech but also with high touch. After all, it's we Malaysians who are the drivers of a progressive Malaysia 2050 and custodians of our nation's harmony, prosperity and sustainability.

Professor Datuk Dr Asma Ismail FASc  
President, Academy of Sciences Malaysia



# ABOUT ASM

The Academy of Sciences Malaysia (ASM) is a learned organisation representing the scientific minds of Malaysia. The Academy is mandated by the Academy of Sciences Malaysia Act 1994 to advise the government and stakeholders on matters related to science, engineering and technology (SET). Among its 14 functions, ASM places high importance on pursuing excellence in science, engineering and technology for the benefit of all.

Thus, ASM carries out strategic studies and produces reports, position papers, blueprints, roadmaps and reviews which are independent, evidence-based, reliable and timely. The recommendations are designed to help policy makers and government officials comprehend the issues to enable them to design and develop practical and inclusive action plans. ASM studies are conducted by a team of analysts headed by Fellows who are subject matter experts in the relevant field. The knowledge, expertise and network of the Fellows are harnessed to enable ASM to effectively play its role as a thought leader in SET.

ASM's programmes are designed to develop and nurture talent in Science, Technology, Engineering and Mathematics (STEM) at various levels ranging from school to young scientists. ASM often collaborates and partners with corporations and ministries in reaching out to more young talents. Many of ASM's flagship programmes are carried out as a pilot projects and later taken up by relevant players.

Malaysia's participation in the global SET arena positions its scientists in various platforms and programmes abroad. Aside from increasing Malaysia's visibility in the eyes of the world, it also enhances the scientists' experience and expertise apart from widening their network. As such, ASM actively participates in international and regional programmes, committees and platform, be it bidding for funding, leading a committee or co-organising fora.

ASM's works are communicated to the stakeholders in a manner that is easily understood by public and presented in a simplistic manner. Emphasis is given in presenting scientific facts and findings so that it is not only conveyed in a way that is engaging but also faithful to the evidence, as these efforts are imperative to elevate the national agenda and increase the literacy in STEM among our community.

As a statutory body under the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC), ASM now consist of 353 Fellows across eight disciplines ranging from Medical Sciences to Social Sciences and Humanities. With the widespread of expertise, ASM's voice in addressing matters of national importance is now unified and more inclusive. ASM is further supported by 41 Associates, 168 members of Young Scientists Network (YSN-ASM) and 133 Top Research Scientists Malaysia recipients and 10 Mahathir Science Awards Laureates in carrying ASM's mandate effectively.

**AN EXEMPLARY**

**LEADER**

The  
Academy of Sciences Malaysia  
appoints  
**YM Academician Datuk Dr Tengku Mohd Azzman Shariffadeen FASc**

as a Senior Fellow  
in recognition  
of his vast contribution  
towards the development  
of ICT field nationally  
and internationally  
as well as his role  
as a strategist  
in the development  
of national policies.

He is a Foundation Fellow  
under the  
Information Technology  
and Computer Sciences  
discipline.



**SENIOR FELLOWS**



Datuk Dr Tengku Mohd Azzman Shariffadeen FASc was born in Kota Bahru, Kelantan in 1946. He earned his Bachelor in Science (Electrical Engineering) in 1970, Master in Science (Automatic Control) in 1971 and completed his PhD in Automatic Control in 1974 from University of Manchester Institute of Science and Technology.

His illustrious career began when he joined University of Malaya (UM) as a lecturer in 1974. A decade later, he became the Founding Director General of Malaysian Institute of Microelectronic Systems (MIMOS) and was entrusted to be the first President and Chief Executive Officer (CEO) upon corporatisation of MIMOS Berhad in 1996.

### **Contributions in areas of Science, Engineering and Technology**

Datuk Dr Tengku Mohd Azzman Shariffadeen has made vast contribution to the national development of science, engineering and technology, especially in the area of ICT. His relentless pursuit to develop IT industry in Malaysia has led to the establishment of MIMOS. In 21 years of leading MIMOS, he helped develop it into a well-recognised R&D institute with significant pioneering contributions to the country.

Among notable achievements were the first internet service–JARING and the first microchip design, testing and wafer fabrication facility in Malaysia. These advanced technologies were successfully transferred from Fraunhofer in Germany and NEC in Japan and became national platform to develop home grown innovations to commercialisation.

He was the first ex-officio Secretary to the National Information Technology Council (NITC). During this period, he played an instrumental role in the formulation, development and implementation of national policies and strategies of information and communication technology, in particular the Multimedia Super Corridor (MSC), National IT Agenda (NITA), the National Cybersecurity Agency (now called as CyberSecurity Malaysia).

### **Contributions at International Level**

Datuk Dr Tengku Mohd Azzman Shariffadeen's pioneering work in developing ICT field in Malaysia attracted many international organisations to seek his expertise as advisor and consultant. He was appointed as the Advisor on ICT for the UN Secretary General.

He then became a member of its Global Alliance for ICT and Development. The Islamic Development Bank based in Jeddah also sought his expertise in policy formulation, strategic planning, technology development and management.

In 2006, he served as advisor to the Al Aghar Group, a Saudi think tank, on the transformation of Saudi Arabia into a Knowledge Society. Besides, in 2008, he was involved as a consultant on innovation development at the King Abdul Aziz City for Science and Technology. He was engaged as Consultant for UNDP Bangladesh on a project to make digital information access. He was also appointed as the Vice-President of Orbicom, an NGO that focused on communication challenges in the knowledge era.

### **Contributions to ASM**

Datuk Dr Tengku Mohd Azzman Shariffadeen is a Founding Fellow of the Academy (1995). Since then, he has made significant contributions to ASM through his involvement in ASM working committees and programmes. He helms the Vice-president role (2016-2020) and was a Council Member in 2015-2016. He also has served as chairman for few working groups and committees.

He has also taken the lead in several recent projects under ASM that have significant national impact. Among his contributions were leading a working group to study broadband penetration in the country and produced a Position Paper in 2013. He co-chaired the Malaysia Foresight 2050 project with Academician Professor Emerita Datuk Dr Mazlan Othman FASc, producing a living narrative report entitled the

Envisioning Malaysia In 2050: A Foresight Narrative. He was also given the responsibility to lead the New Economic Opportunities (NEO) Working Group to study new economic opportunities in STI-Based Industries in Emerging Markets for Malaysia to pursue, together with Professor Dr Jamal Othman from the National Council of Professors as the Co-Chair. The report was successfully tabled to the National Science Council (NSC) in 2017. NSC approved the idea and he is now leading the process of identification and establishing neutral entities as recommended in the NEO study.

As the Chairman of ASM Membership Committee, he initiated many ways to further improve and strengthen the selection of ASM Fellows and members of Young Scientists Network (YSN). He has introduced an improved guideline and more structured selection procedures in selecting nominees with good attributes and willingness to contribute to ASM.

### **Awards and Recognitions**

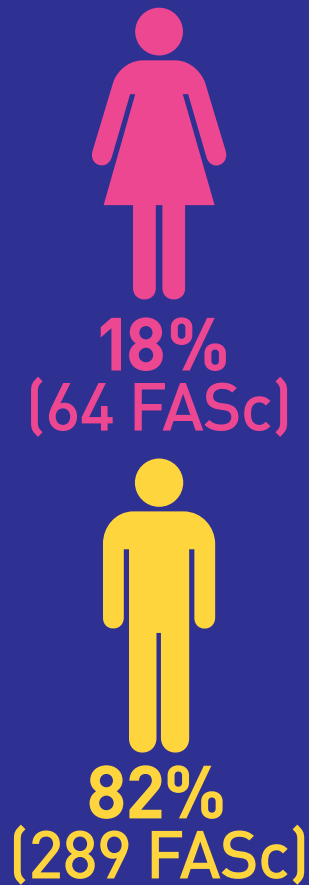
He has received numerous awards and honours for his contributions in the research and development. Among them were PIKOM IT Achievement Award 1992; 5th ASEAN Achievement Award 1997; IEM Award for Contribution to the Engineering Profession in Malaysia 2000; Cyber Security Lifetime Award, and Malaysia Cyber Security Awards 2016.

He was conferred Doctorate from various national and international universities in recognition of his exemplary accomplishments and achievements. Among them are Degree of Doctor of Engineering by University of Manchester Institute of Science and Technology (UMIST), 1998; Honorary Doctorate in Information Technology by University Tun Abdul Razak (UNITAR), 2003; Honorary Degree of Doctor of Science by Universiti Kebangsaan Malaysia (UKM), 2005; Honorary Degree of Doctor of Philosophy in Computer and Information Engineering, International Islamic University of Malaysia (IIUM), 2006.

ASM Fellowship consists of distinguished scientists, engineers, technologists and social scientists that have made exceptional contributions in their fields. Individuals with merit, possessing high integrity demonstrating utmost decorum at all times with essential characteristics of an ambassador of ASM at national and international level are nominated each year.

Fellowship is awarded based on a stringent selection process in eight disciplines.

Information Technology & Computer Sciences	<b>20</b>
Engineering Sciences	<b>64</b>
Medical & Health Sciences	<b>64</b>
Chemical Sciences	<b>40</b>
Biological, Agricultural & Environmental Sciences	<b>76</b>
Mathematics, Physics & Earth Sciences	<b>45</b>
Science & Technology Development and Industry	<b>37</b>
Social Sciences & Humanities	<b>07</b>



# FELLOWS

## Professor Dato' Dr Ismail Sahid FASc

*School of Environmental and Natural Resources Sciences,  
Faculty of Science and Technology, Universiti Kebangsaan Malaysia (UKM)*

Professor Dato' Dr Ismail Sahid was born on 5 October 1951 in Pulau Pinang. He received his early education at SK Sungai Acheh Nibong Tebal. Graduated from UKM in 1975 and hold a PhD from University of Sheffield, he is well-recognised for his work in weed biology and environmental toxicology. He has contributed new knowledge in managing weed problem in oil palm plantations and rice fields, the management of pesticide application, and discover natural compounds which have a potential to develop as bioherbicide.

As a prominent and widely experienced scientist, he has been frequently sought out by various national and international organisations. Among them are the International Rice Research Institute that required his expertise to investigate pesticide contamination in rice fields at the Muda Agricultural Development Authority in Kedah. He has been invited to speak as keynote speaker by the Asia Pacific Weed Science Society, Manila in 2003.

In recognitions for his scientific contributions, he was awarded several research awards. He has won grants from international organisations, specifically from MONSANTO (2000–2006) for studying the resistance problem of "goose-grass weed" (*Eleusine indica*) towards the herbicide, glyphosate (commercially known as Roundup®). He received a research grant from BASF to explore the potential of OnDuty® (a mixture of imazapic and imazapyr herbicides) to contaminate soil and water in irrigated rice fields.

In 2003, Professor Ismail became an award-winning writer for the best scientific articles at UKM. He was also awarded a certificate of appreciation as author of four best articles from the Malaysian Palm Oil Board for the years of 2003, 2012 and 2015. He presently serves as a reviewer for many international Journals under Elsevier and Springer-Verlag publication.



## Professor Dr Mazlan Abd Ghaffar FASc

*Deputy Vice-Chancellor (Research and Innovation),  
Universiti Malaysia Terengganu (UMT)*

Professor Dr Mazlan Abd Ghaffar was born on 19 April 1962 in Kuala Terengganu. He graduated in 1985 from University of Putra Malaysia and completed his Master study at University of Newcastle in 1988. In 2001, he earned his PhD from University of Wales while continued his services at Universiti Kebangsaan Malaysia. Since 2014, he was appointed as Deputy Vice-Chancellor (R&I), UMT.

Professor Mazlan is an expert in the field of ichthyology and applied fisheries sciences in Malaysia. In recent years, he has actively involved in the direct impact of climate changes on-to the selected marine organism with special preferences on the captive edible marine organism. He has set-up and developed a kind of validation laboratory to conduct experiments using climate change parameters variable such as Temperature, Salinity, pH, CO<sub>2</sub> of variable ranges in accordance to values in IPCC report. With his laboratory mates, he has successfully published several relevant manuscripts in short period of time.

Professor Dr Mazlan has contributed significantly at national and international level. His expertise is often sought by various ministries for his advices in policymaking, expert opinions and as assessor for funding NOD (Sea to Space). Presently, he was appointed as advisor to the ASEAN Fisheries Education Network (ASEAN-FEN). He was the Leader for a project on profiling and economic enhancement of Kuala Nerus Fishermen Community, 2015 – 2017. He was also a member of the Malaysia-Singapore Joint Committee on the Environment and contributes his expertise in bilateral issue specifically on marine ecology between Malaysia-Singapore. He serves as a reviewer to a number of Journals such as Journal of Environmental Fish Biology, Journal of Thermal Biology and Marine Ecology Progress Series.







## **Professor Dato' Dr Mohd Yazid Abd Manap FASc**

*Research Fellow,  
Halal Product  
Research Institute,  
Universiti Putra  
Malaysia (UPM)*

Originated from Negeri Sembilan, Professor Dato' Dr Mohd Yazid Abd Manap started his early education at Nyalas Primary School, Melaka before he continued his study at Jasin Secondary School (LCE), Jasin English Secondary School and Melaka High School. He obtained his diploma (1977) from UiTM, his BSc and MSc from University of Minnesota, US in 1982 and 1984, respectively. He then completed his doctoral degree from University of Glasgow, Scotland, UK in 1988.

Professor Yazid has been involved in academic work for more than 27 years. During his career, he holds various academic administration positions at UPM such as a Head of Department, Dean of Faculty and the Director of Halal Product Research Institute. He now continues to contribute to UPM as a Research Fellow at Halal Product Research Institute. Prior to his service at UPM, he had gained numerous experiences in the private sector and MNCs in overseas. He had served Glaxo Malaysia Sdn Bhd (1977-1979), Grand Metropolitan Foods (1984-1985), Minneapolis, Minnesota USA and Nestle (1988-1990) Vervey, Switzerland.

He is also a member of the Malaysian Halal Professional Council and Chairman of the ASEAN University Dean Council. Armed with his expertise and experience, he was appointed as committee members in various universities and ministries from national and international levels. Among them are SIRIM Development Standards committee, Ministry of Health CODEX committee, Chairman of Development Methods of analysis of Department of Chemistry Malaysia and various committees in Ministry of Higher Education (MOHE). He is a Registered Enforcement Personnel with the Malaysian Halal Council for the Executive Program and Halal Audit Officers who are certified by JAKIM.

Born on 19 June 1956, Professor Dr Paridah Md Tahir has had an illustrious educational background where she earned her Diploma in Forestry from UPM in 1980 and completed her Bachelor degree (1987) and Master (1987) in Wood Science and Technology at Mississippi State University, USA. Later in 1995, she received her PhD in Wood Chemistry from University of Aberdeen, Scotland.

Professor Paridah is an outstanding researcher in the field of wood-based, particularly in the area of Biocomposite. Her expertise is often sought by various organisations such as Construction Industry Development Board, SIRIM Berhad and the Malaysian Timber Industry Board (MTIB). She helped MTIB in developing and reviewing more than 50 standards for timber, wood-based panels, structural timbers and wood finishing.

Highlights of her involvement in standards development activities is when she was elected as a convenor for WG 4 -Test methods in ISO TC 218, an international secretariat for standards on Timber. She is also actively committed in other ISO standards such as Wood-based Panels (ISO TC 89) and Timber Structures (ISO TC 165). She was instrumental in bringing the Malaysian oil palm plywood to be accepted by the international member countries. Her study on oil palm plywood has been applied in several plywood mills in the country.

In recognition to her work, the Department of Standards Malaysia has awarded her with a STaR Award in 2015. She was the recipient of Excellence Service Awards, UPM for the year of 1999 until 2009, 2011, and 2014 until 2016. In 2014, she was recognised as one of the recipient of the Top Research Scientists Malaysia.



## **Professor Dr Paridah Md Tahir FASc**

*Department of  
Forest Production,  
Faculty of Forestry,  
Universiti Putra  
Malaysia (UPM)*



## Associate Professor Dr Siti Aisah Alias FASc

*Deputy Director, National Antarctic Research Centre (NARC), University of Malaya (UM)*

Associate Professor Dr Siti Aisah Alias was born in Negeri Sembilan on 25 March 1966. She obtained her degree in Ecology from University of Malaya in 1991. Later on in 1996, she completed her PhD in Marine Mycology from University of Portsmouth.

Dr Siti Aisah is an expert in the areas of marine and polar sciences. Her research fields include biodiversity and phylo biogeography, antimicrobial activity and cold-adapted enzymes and biochemistry of marine derived fungi and polar soil micro fungi. Her work is important to understand climate change and organisms in particular latitudinal studies in fungal response to temperature and UV stress. She leads various research projects as a Principal Investigator, and has formed many research linkages with many scientists and collaborative partners including from the British Antarctic Survey (BAS), Polish Polar Research (PPR), and Instituto Antartico Chileno (IAC).

She first started out as a marine mycologist, having discovered many novel marine fungal species early in her career before lending her hand to establish the Malaysian Antarctic Research Programme (MARP) in 2007. She is instrumental in assisting the development of the Antarctic Treaty under a grant from MOHE for the development of Science and Policy in Antarctic (2011 – 2016). This is to forge and strengthen Malaysia's presence in the politics and science of Antarctica. She has actively participated in MARP's outreach programme called 'Malaysia's Journey to the Ice: Women in Antarctica' to promote awareness of Antarctica to undergraduate students and secondary school pupils in Malaysia.

Her contributions to marine and polar science was recognised when she was awarded the National Young Scientist Award (2001), Science and Technology Research Grant from the Toray Science Foundation (2005), and a Fellowship from the United Nations University, Japan, UNESCO, Paris (2008).

## Professor Dr Chuah Cheng Hock FASc

*Department of Chemistry, Faculty of Science, University of Malaya (UM)*

Professor Dr Chuah Cheng Hock was born in An Xi, Hokkien, China. He received his tertiary education from UM in Bachelor of Science (Hons) in 1976 and earned his PhD in 1988.

His expertise is in extraction and characterisation of natural products from plants and insects. Among areas that he is interested in are insect chemistry, natural product chemistry and palm oil chemistry. His strength is in the applications of analytical techniques, such as GC-MC, LC-MS, and high field NMR in chemical structural elucidation.

He has served as editorial board member for scientific journals and has been invited to review research papers for well-regarded international journals (ISI-Cited), namely BioMed Research International, Journal of Chromatographic Science, Journal of Oleo Science, Journal of Supercritical Fluids, Journal of Food, Journal Polymer Testing, Phytotherapy Research and Soft Materials. He has served as Permanent Member of Technical

Committee on Oleochemicals (under Industrial Standards Committee ISC-B) of SIRIM, 2012 – 2016. Internationally, Prof Chuah has been involved as Editorial Board member at the Journal of Spectroscopy and Dynamics for the year of 2011 and represents Malaysia at the International Union of Pure and Applied Chemistry since 2011.

Apart from academic work, he is very active in professional bodies such as Malaysian Institute of Chemistry (IKM) and MOSTA. He is also the senior Fellow for IKM. He also often participates as an organising committee member for various workshops, seminars and conference organised by universities.

## Professor Dr Gan Seng Neon FASc

*Department of Chemistry, Faculty of Science, University of Malaya (UM)*

Professor Dr Gan Seng Neon was born in China in 1948 and came to Malaya in 1953. He did his Sixth Form at Cochrane Road School, and went on to study at UM in 1969. He completed his BSc in 1972, BSc (Hons) in 1973, and he continued with postgraduate study at the Chemistry Department to obtain his PhD in 1976.

Professor Gan is a renowned academic and polymer chemist. He contributed to the chemical industries by enhancing their products and providing critical solutions to increase their productivity. His research interests involve polymeric materials created from palm oil such as polyols for rigid and flexible foams, plasticizers for PVC, light curable urethane pre-polymers for dental composites, hybrid resins for toners, microcapsules for self-healing materials, electro-spun nanofibers for stem-cells, nano-emulsion as drug carrier, conducting polymers for sensors applications, and anti-corrosion coatings for metal surfaces.

Professor Gan's knowledge in polymer chemistry is recognised nationally and internationally. He had served as a consultant to industries dealing with materials and polymers such as Summitomo Rubber R&D (Japan), Toyochem Specialty Chemical Sdn Bhd, Top Glove Sdn Bhd and many more. For seven years since 1999 until 2006, he represented UM at the International Standard working committee ISO/TC45 for Natural Rubber Product-Testing and Specifications. He was a Guest Professor at Zhejiang University of Technology, China for three years since 2014 until 2017.



## Professor Dr Khalijah Awang FASc

*Department of Chemistry, Faculty of Science, University of Malaya (UM)*

Professor Dr Khalijah Awang was born on 22 September 1964 in Kuala Lumpur. She completed her secondary school at Sekolah Menengah (P) Sri Aman, Petaling Jaya.

She received her Bachelor of Science in Chemistry (Hons) from University Waterloo, Canada in 1987, followed by Master of Science from UM in 1990. Then, she pursued his doctoral study in the field of natural product chemistry at the University René Descartes, Paris, and obtained her PhD degree in 1993.

Professor Khalijah is a prolific researcher in the area of natural products with a strong focus on pharmacognosy. Her work covers the study of novel and bioactive compounds from rare and endemic Malaysian plants that could be potential leads for the development of therapeutic drugs. In addition, she also endeavours in the studies of medicinal plants used in the Malay traditional medicine: *Alpinia conchigera*, *Brucea javanica*, *Curcuma zedoaria*, *Piper sarmentosum* and *Kaempheria galanga*. She has studied more than 70 rare and medicinal plants.

She has built a strong network and had numerous collaborative projects with national research institutes and universities, nationally and internationally. Currently, she is the coordinator for the French Malaysian Scientific Collaboration-Phytochemical Survey of Malaysian Flora from 2005-2020. She is involved as coordinator for the International French Malaysian Natural Products Laboratory by IFM NatProLab from 2015 until 2019.

In recognition of her contributions in research field, she was awarded a Senior Fellowship by the Japanese Society for Promotion of Science in 2005 and recognised as one of the Top Research Scientists Malaysia (TRSM) in 2014.





## Professor Dr Mansor Ahmad @ Ayob FASc

*Department of Chemistry, Faculty of Science, Universiti Putra Malaysia (UPM)*

Originated from Gurun, Kedah, Professor Dr Mansor was born on 9 July 1956. He graduated from Indiana University, Bloomington in 1979 with a Bachelor of Sciences in Chemistry. Later, he earned his Master in Analytical Chemistry from University of Kentucky, USA, and PhD in polymer chemistry from University of Salford, UK in 1994.

Professor Mansor is an expert in the area of polymer chemistry with his contribution being in the fundamental area of polymer, nanomaterials and composites. His research interest mainly focuses in the preparation, modification and evaluation of polymers, co-polymeric hydrogels and modified natural polymer systems as controlled release matrices in agriculture and medicine.

He is a well-rounded academic, playing the role as a teacher, researcher, scholar, mentor, administrator, and a leader. He contributes his expertise through his involvement in various committees, organisations and professional fraternity. He has been appointed as member of the Technical Committee on Safe System of Work and Practices in Occupational Setting for preparing Malaysian Standard, MOHR and

Department of Standard Malaysia since 2003. He has been selected as Malaysian National Expert of ASEAN Sub-Committee on Infrastructure in Research and Development (SCIRD) project on Public-private Collaboration in Science & Technology: Policy Development, Training and Awareness. Besides, he was an Executive Committee member for OIC Inter-Islamic Nanotechnology Network (Iran), 2013 – 2015.

At community level, Professor Dr Mansor is actively involved in organising various activities to promote S&T in Selangor. He is also a member of Steering and Think Tank Committee for the Direction and Development S&T for the State of Selangor.

Professor Ir Dr Abdul Aziz Abdul Raman was born in Tampin, Negeri Sembilan in 1964. He completed his STPM in Sekolah Menengah King George V, Seremban and emerged as one of the best performers in the country. He was enrolled in UM as an undergraduate student in Chemical Engineering program and graduated in 1989.

His ambition to engage in an adventurous career led him to oil and gas industry when he joined Dowel Schlumberger as an international field engineer. Subsequently he joined Golden Hope Fruit Industries and later Nestle Malaysia until mid of 1993. The exposure to these industries has made him realise that career in research and development is probably his main forte. This led him to join UM in September 1993 as a tutor and completing his Master of Engineering in 1996 and PhD in 2007 from the same university.

Professor Aziz is passionate in teaching, research, consultancy, academic administration and academic activities. He is a practicing chemical engineer where he is involved in many engineering consultancy projects, especially in the field of environmental sustainability. His

research interest in mixing technology, cleaner production and advanced wastewater technology is from his conviction that advancements in these fields could led to significant cost saving, increase in productivity and provide environmental friendly solutions to the industries. His research work in mixing and biodiesel production using membrane reactors is commendable as energy intensification efforts.

His contributions to the engineering profession are well-recognised nationally and internationally. He is frequently invited for keynote lectures on engineering education and industry-academia collaborations. He has contributed to nation building through his industry-greening initiatives with the Department of Environment Malaysia. He has co-authored seven books and guideline related to greening industries, as well as conducts training on cleaner production audits and greening the industries. For his achievement, he received 2014 Top Research Scientist Malaysia Award.



## Professor Ir Dr Abdul Aziz Abdul Raman FASc

*Dean, Faculty of Engineering, University of Malaya (UM)*



## Datuk Ir Abdul Kadir Mohd Din FASc

*Board of Director, SAJ Ranhill Sdn Bhd*

Born in 1958, Datuk Ir Abdul Kadir Mohd Din holds a Diploma in Civil Engineering from MARA Institute of Technology, Shah Alam and graduated with a Bachelor of Science (Hons) in Civil Engineering from the University of Strathclyde, Scotland in 1984.

Datuk Abdul Kadir has vast experience in managing Malaysia's wastewater. He was instrumental in helping the development of the wastewater management under his capacity as the first Chief Executive Officer of Indah Water Konsortium Sdn Bhd (IWK). Under his leadership, he pushed forward the concept of sustainability, through zero waste management. Thus, he managed to improve the efficiency of sewerage services to the public hence preventing the occurrence of epidemic water-borne disease.

He holds a few positions such as the Chairman of Malaysian Civil Engineering Standard Method of Measurement (MyCESMM2) under Construction Industry Development Board (CIDB), which is aimed at standardising

and improves all tender Bill of Quantities for used in the construction industry nationwide. He also contributed to share his vast knowledge to University Technology Petronas and Universiti Teknologi MARA (UiTM) as an Adjunct Lecturer.

In recognition of his leadership qualities, he was appointed as the President of the Malaysian Water Association (MWA) in 2017. Prior to this, he served as the COO at the Pengurusan Aset Air Berhad (2007 – 2009) and worked towards restructuring of water industry to be aligned with Water Industry Act and migrating water operators into licensing regime. Due to his vast experience, he has been listed as one of the top 50 Most Impact Leaders in Water & Water Management (Global Listing) in 2018. His other achievements include organising the Continuity Improvement Project (CIP) to create innovations on sewerage products and inviting the technology providers for the sewage treatment based on success basis.



## Professor Sr Dr Mazlan Hashim FASc

*Senior Director, Research Institute for Sustainable Environment (RISE), Universiti Teknologi Malaysia (UTM)*

Professor Sr Dr Mazlan Hashim was born on 14 April 1961 in Batu Pahat, Johor. During his early childhood, he was a keen nature observer and enjoyed very much outdoor activities. He loves making his own toys, spin his own made tops, flew his own-made kites, rode his own-made go-cart, sail his own-made raft and turn to be a DIY-enthusiast.

He received his early education at the Larkin (1) English School, Johor Bahru and continued his secondary school education at Dato Jaafar Secondary School in Johor Bahru. In September 1985, he continued his graduate studies at University of New Brunswick, Canada and graduated with merit in the Mechanical Engineering degree in 1987. Then, he pursued his doctoral study in the field of environmental remote sensing at the Department of Environmental Science, University of Stirling, UK and obtained his PhD degree in 1995.

He is an expert in remote sensing technology applications within the natural resources management, environmental management, and conservation and in mapping various national strategic applications. His expertise is sought by various government agencies and industries as a consultant and expert review panel. His research interest in remote sensing of the environment have taken him far to numerous global collaborations covering most of the Asian, American, European, and African continents, either to conduct in-situ studies or sharing his research outputs in conferences. In 2015, he led a scientific expedition of six UTM-scientists to the Antarctic, completing his long-grown passion in satellite-based study for the Antarctic-Tropic interactions.

Professor Mazlan is continuously inspiring young researchers to impactful research, putting scientific findings to actions, humanising it to benefit related industry and society, apart, from contributions to new knowledge.

## Professor Dr Mohd Adzir Mahdi FASc

*Faculty of Engineering,  
Universiti Putra Malaysia (UPM)*

Professor Dr Mohd Adzir Mahdi was born on 4 June 1972 in Kuala Lumpur. He received his Bachelor in Engineering from UKM in 1996, and obtained Master Degree from UM in 1999. In 2002, he earned his PhD with Distinction from UM.

Professor Mohd Adzir is one of the pioneers of the photonics research initiatives in Malaysia. He started his career by joining Telekom Malaysia Photonics Research Centre in 1995 and pursued research on optical fibre amplifiers, which was a new area in Malaysia during that time. Through his research, he has developed a number of products starting with amplifier gain block and narrowband amplifier. To date, he has successfully produced five commercial products with the latest one is pulse fibre laser for marking/engraving applications. He is also one of co-founders of start-up Company, inLAZER Dynamics Sdn Bhd, specialising on pulse laser solutions.

Apart from research, he is also actively involved in various national and international committees as well as services to the community. His leadership skills are shown through his numbers of administrative positions. He served as senate member for UPM (2014 – 2016), Deputy Dean (Research and Innovation) (2011 – 2014) and Deputy Director, Knowledge Management Unit, Research Management Centre, UPM (2006 -2010). He is widely credited for the development of the KM portal, which is now the default system to manage and assess performance of academicians in UPM. In addition, he was also directly involved in the development of ASM's Top Research Scientists Malaysia database.

He has received numerous awards for his contribution, including IEEE LEOS Graduate-student Fellowship, the Australia-Malaysia Institute Research Fellowship, COMSTECH Young Scientist, World Academy of Sciences (TWAS) Young Affiliate Fellow and Anugerah Akademik Negara under the category of Ahli Akademik Harapan by MOE.



## Professor Ir Dr Goi Bok Min FASc

*Dean of Lee Kong Chain Faculty of Engineering and Science,  
Universiti Tunku Abdul Rahman (UTAR)*

Professor Ir Dr Goi Bok Min was born on 26 December 1973 and received his early education at Sekolah Jenis Kebangsaan (C) Sin Min in Kedah. After earning his Bachelor in Engineering from University of Malaya in 1998, he further his education and obtained Master Degree from Multimedia University in 2002. In 2006, he obtained his PhD from the same institution.

Professor Goi is an expert in the area of cryptology, which is the underpinning technique to provide the digital security services. He has designed and implemented secure efficient cryptographic algorithms and cryptanalysed several published cryptographic schemes. He managed to merge and integrate various techniques to propose new variant of security techniques, for example, bio-encryption and key binding (biometrics and cryptography), and video and image crypto watermarking, multi-modal authentication schemes. He collaborates with local institutes for his research work namely MIMOS, MMU and international research institutes from Korea, China, Japan, USA, Singapore and New Zealand.

As an expert, he contributes his expertise through engagement as a consultant and panel of expert with various organisations such as the Panel Expert for the Development of a National Cryptology Policy, Cyber Security Malaysia and Malaysian Society for Cryptology Research MSCR (2010) and Technical Committee member on Information Security and Smartcard in SIRIM (TC5) (2004-2009). He is an Editorial Board member for various international journals and often invited as a reviewer for Journal of Information Processing and Systems (JIPS), Journal of Systems and Software, Elsevier, International Journal of Information Security, Springer and many more.





## Professor Dr Mohamed Ridza Wahiddin FASc

*Department of  
Computer Science,  
Kulliyah of  
Information and  
Communication  
Technology,  
International Islamic  
University Malaysia  
(IIUM)*

Born in Selangor, Professor Dr Mohamed Ridza Wahiddin earned his tertiary education from University of Manchester Institute of Science and Technology (UMIST), UK. Upon completion of his PhD in Theoretical Physics, he returned to Malaysia and took up a lecturer position at Universiti Malaya.

Professor Ridza is a cybersecurity expert and his field of research is in the area of quantum optics and its applications. He was instrumental to position MIMOS as the first and active Asian member of the World's first Quantum Cryptography Standards initiated by the European Telecommunications Standards Institute (ETSI). He led the National Cyber Security Policy Thrust Five and managed to produce the National R&D Cyber Security Roadmap as the outputs. He also managed to get A PCMM Level 3 certificate from National Security Laboratory for MIMOS.

Professor Ridza has also demonstrated leadership quality and had introduced many innovations when he was entrusted to establish the Kulliyah of Science, IIUM which is now in the Kuantan campus. He was responsible for the development of the Bachelor of Science (Hons) in Mathematical Sciences

which has now successfully produced several cohorts of mathematical sciences graduates. He has served as the Dean of the Office of Corporate Strategy and Quality Assurance, 2012 – 2013 and later was appointed as the Deputy Rector (Research & Innovation), IIUM, 2013 – 2017. Under his leadership, the university's main strategic plan (2013-2020) and the university's ICT strategic plan (2013-2015) were approved for implementation.

During his secondment from IIUM at MIMOS Berhad, he and his multi-disciplinary team engineered the first realisation of Quantum Cryptography Network in ASEAN, and this project was funded by the Ninth Malaysia Plan. For his outstanding contributions to Quantum Optics, he is awarded the higher doctoral degree, Doctor of Science (DSc) by UMIST, UK in 2004.

Professor Datuk Ts Dr Shahrin Sahib was born on 23 July 1968 at Kampung Sepinang, Segamat, Johor. His illustrious journey in the academic arena started with a Bachelor's Degree and a Master's Degree from Purdue University, US in the area of Computer Systems Engineering, followed by a PhD in the area of Parallel Processing from the University of Sheffield, UK in 1995.

His contribution in academia began in 1997 when he served Multimedia University after which he joined Kolej Yayasan Melaka as the Founding Director of Academic Affairs. In 2002, he joined UTeM where he held several prominent administrative posts including as the Deputy Dean, Dean and the Deputy Vice-Chancellor (Academic & International) (2013) and eventually as the Vice-Chancellor in 2014 till present. Prior to his appointment as the Vice-Chancellor of UTeM, he served for a short stint as the Director of Academic Development Management at the Department of Higher Education, MOE in 2012.

Professor Shahrin is an expert in the area of Information and Communication Technology, especially in the field of networking, security and parallel processing. He is actively involved in many committee and subcommittee as the chairman, co-chairman, panel, and advisory council at the state, national and international levels. He sits in the Accreditation Committee and Chair the Computing Standard Committee, Malaysian Qualification Agency (MQA). Besides contributing to the development of Malaysian Critical National Information Infrastructure (CNII) Policy and the National Cyber-Security Policy (NSCP), he also contributes to Cybersecurity Malaysia as a Member of Malaysia Common Criteria (MyCC) Scheme Management Board.

For his outstanding achievement, he has received the Award for Excellence from UTeM in 2003, 2005 and 2009. He has also been awarded by the title of Darjah Mulia Seri Melaka (DMSM) by Melaka State Government in 2014.



## Professor Datuk Ts Dr Shahrin Sahib FASc

*Vice-Chancellor,  
Universiti Teknikal  
Malaysia Melaka  
(UTeM)*



## Professor Dr Tharek Abd Rahman FASc

*Director, Wireless  
Communication  
Centre, Universiti  
Teknologi Malaysia  
(UTM)*

Professor Dr Tharek Abd Rahman was born in Arau, Perlis. He received his early childhood education at Kangar English School and continued his study at Derma English School, Kangar. He obtained his BSc in Electrical and Electronic Engineering from University of Strathclyde, UK in 1979, MSc in Communication Engineering from UMIST, UK and PhD in Mobile Radio Communication Engineering from University of Bristol, UK in 1988.

Professor Tharek's expertise is in the field of telecommunication engineering and wireless technology. His involvement in the field of wireless communication has been inspired by his curiosity towards how signal is received via radio, TV and mobile phones. His passion has led him to winning numerous awards in national and international levels.

In term of his research work, he managed to secure funding from agencies like Nippon Telephony Telegraphy Japan, Ericsson, Alcatel/ Maxis, and Celcom. In

2011, Malaysian Communication and Multimedia Commission (MCMC) collaborated with his team to establish research and training facilities that includes theory and hands-on training of (LTE-Long Term Evolution) technology. Under his leadership, the Wireless Communication Centre, UTM had been awarded the Higher Institutional Centre of Excellence (HICoE) status to focus on 5G wireless communication research. He succeeded to attract two international telecommunication giants, Ericsson and Huawei, to collaborate in 5G research.

For his illustrious long serving record of accomplishment as an academic and researcher in the field of telecommunications, he has been conferred with Excellence Award, UTM 1992 and 2003. His GPS and GSM tracking systems received special and gold medal awards at British Invention Show in 2005. He is also a recipient of the 2016 Top Research Scientists Malaysia Award.



## Professor Dato' Dr Abd Aziz Tajuddin FASc

*School of Physics,  
Universiti Sains Malaysia  
(USM)*

Professor Dato' Dr Abd Aziz was born in Sungei Kechil, Nibong Tebal on 20 January 1956. He did his 'A' Level study at Aston College, UK. Later, he pursued his studies at the University of Salford, UK and obtained a BSc (Hons) in 1980 in the field of Health and Environmental Physics. Following his excellent academic results, he was offered to do a doctoral degree at the University of Surrey, UK. He was awarded the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom Overseas Research Students - Fees Support Scheme Award (1980 - 1983) and eventually he managed to get his PhD in 1986.

In July 1986, he joined USM School of Physics as a lecturer. He was instrumental in introducing the Medical Physics course in USM, making it the first university in Malaysia to produce medical physics graduates. As an expert in the area of radiation physics and medical physics, he was actively

involved in the development of rules and regulations to make use of ionising radiation in medicine more professional and safer.

He was also actively involved with Malaysia Atomic Energy Licensing Board and also SIRIM or Department of Standard Malaysia to draft regulations and standards. Even though he is not a medical doctor by training, he was appointed as the Director of the Advanced Medical and Dental Institute of USM (2012 – 2015). This speaks volume of his knowledge in the medical field as well as leadership in areas related to medical research.

In view of his contributions in research, he was bestowed with various awards and recognitions including the Toray Science Foundation Grant Award (1990 – 1991) and USM Excellence Service Award (1994, 1996, 1998, 2002, 2009 and 2013). He was also appointed as a Visiting Scientist at King's College London (1999).



## Professor Dr Maslina Darus FASc

*Deputy Dean of Undergraduate, Faculty of Science and Technology,  
Universiti Kebangsaan Malaysia (UKM)*

Professor Dr Maslina Darus was born on 1968 at Pulau Pinang. Her early education was at Convent Pulau Tikus Primary School, Pulau Pinang from 1975-1980. Then, she continued her secondary school at SMK Convent Pulau Tikus, Pulau Pinang from 1981-1983. In 1988, she left for Canada and obtained her first degree in 1992 from Acadia University, Nova Scotia. In 1996, she obtained her PhD from University of Wales, UK in Univalent function theory. Her initial interests was in computer science but end up to be a mathematician instead.

Professor Maslina's interests in geometric function theory is mainly focus on the univalence properties of certain subclasses of analytic functions. She has collaborated with many mathematicians throughout the globe such as Romania, USA, Canada, Australia, Middle East, China, India, Japan and many others. She is often invited by researchers from the computer sciences field to collaborate especially on the Pattern Recognition. She has also been invited as Planery and Keynote speakers in many different international conferences, specifically in the Geometric Function Theory symposium.

She is one of the co-founder for the International Centre for Scientific Research and Studies based in Saudi Arabia. In view of her contributions in research, she was bestowed with the National Young Scientist Award 2002, Nishiwaki Prize 2009, and UKM Excellence Staff Award (2013). She is also the recipient of the Distinguished Women Scientists Award in Mathematics, from Venus International Foundation, India in 2017.



## Professor Dr Sahrim Ahmad FASc

*School of Applied Physics, Faculty of Science and Technology,  
Universiti Kebangsaan Malaysia (UKM)*

Professor Dr Sahrim Ahmad was born on 15 February 1960 in Kedah. He received his BSc (Hons) in Physics from University of Malaya in 1983. He then earned his PhD in Materials Physics from Loughborough University, UK in 1988. After completed his PhD, he was then appointed as a lecturer at the Department of Physics, UKM.

Professor Sahrim is an expert in the field of magnetic and advanced materials. He has completed more than 42 research projects and consultancy work as a leader and co-researcher. His work on novel radar absorbing materials (RAM) subjected to transverse electromagnetic (TEM) has been successfully developed. His team managed to produce products that offered proper characteristics for handling, flexibility and lightweight, meeting requirement for various applications.

His expertise is sought by various government agencies and industries as a consultant and expert review panel.

He serves as a consultant to various projects such as Environmental Impact Assessment (EIA) Consultant to PROLINTAS Sdn Bhd for AKLEH and LKSA project. He also provided consultancy services to MIGHT to prepare Guideline for Aerospace Industry in Malaysia as well as to establish National Composite Centre.

He has been actively involved in the administration and management of UKM and other committees. Since 1998, he has been appointed to several administrative posts at the Faculty of Science and Technology namely as Industrial Training Coordinator in 1996-1999, Head of Materials Science Program (2002-2009), Deputy Dean (2009-2010) and Dean (2010-2017). He is current Editor in Chief of Sains Malaysian (USM). He is actively involved in various activities organised by Institute of Physics, Malaysia and Malaysia Solid State Society. He is also a Fellow of Malaysia Solid State Science and Technology Society.





## Professor Dr Ngeow Yun Fong FASc

---

*Department of Preclinical Sciences, Faculty of Medicine and Health Sciences, University Tunku Abdul Rahman (UTAR)*

Professor Dr Ngeow Yun Fong was born on 7 September 1946. Originated from Kuala Lumpur, she graduated from University of Singapore in 1972 and received her Master in Medical Microbiology from University of London in 1976.

Professor Ngeow is a medical microbiologist and has over 40 years' experience of service as an educator and researcher. Her strength lies in both fundamental research as well as applied research, particularly in sexually transmitted infectious and tuberculosis. She pioneered the Penicillinase-producing *Neisseria gonorrhoeae* (PPNG) and chlamydial (*C. trachomatis* and *C. pneumoniae*) research in Malaysia. She has also established genotyping for *Mycobacterium tuberculosis*, *Mycobacterium abscessus*, *Neisseria meningitidis*, and *Candida albicans*. These researches have provided further insight in the medical microbiology profession.

Her professional expertise has led to her appointment as resource person and expert panel, as well as invited to be a speaker, examiner locally and abroad. She has been appointed as a microbiology consultant for WHO research projects and actively participated in research activities for local and international agencies, such as the IMR, MOH and the industry (notably the Pharma). She was also involved in formulating the curriculum for the UTAR medical programme.

For her outstanding achievement, she has received several awards such as the John Hopkins University School of Medicine Visiting Scientists Award (1992), Senior Fellowship of the International Union against Sexually Transmitted Infectious (IUAST), Asia Pacific Branch (2004) as well as Excellent Service Awards from UM, 1993 – 1995; 2003 – 2004.

Professor Dr Onn was born on 15 March 1959 in Muar. He received his BSc (Hons) from UM in 1984, and PhD from University of Glasgow, Scotland in 1987. He then joined the academic staff of UM in 1988, and is currently a Professor grade VK5 at the Department of Molecular Medicine.

Professor Onn specialises in lectinology, proteomics and glycoproteins. He has been involved in research on plant lectins for more than 30 years. He has purified and characterised two different lectins from the seeds of cempedak and applied them in different areas of biomedical research such as the development of IgA nephropathy and cancer biomarker discovery. His research using lectins within the last 15 years has led to identification of aberrant serum and urinary glycoproteins in cancer patients. Among

the most promising biomarkers that were identified are serum glycoproteins that can be used to screen for early breast cancer and urinary peptide fragments that can effectively distinguish patients with benign prostatic hyperplasia from those with prostate cancer.

His research is mainly on lectins and cancer biomarker, with findings presented in more than 60 invited lectures locally and internationally. Prof Onn had sat on numerous expert advisory and evaluation committees at national and international levels. He was appointed as external examiner of medical and dental biochemistry programmes at 11 different universities and appointed as Visiting Professor at Prince of Songkla University in 2016 and 2017.



## Professor Dr Onn Hashim FASc

---

*Department of Molecular Medicine, Faculty of Medicine, University of Malaya (UM)*



## Professor Dato' Dr Ravindran Jegasothy FASc

*Dean, Faculty of Medicine, MAHSA University*

Professor Dato' Dr Ravindran Jegasothy was born on 17 July 1954 in Kedah. He graduated with the MBBS from the University of Malaya in 1979 and obtained his Masters from the National University of Singapore in 1985.

He has contributed immensely to the development of Obstetrics and Gynaecology (O&G) services in Malaysia during 35 years that he has spent in public services in Malaysia. He contributed in the reduction of maternal mortality and systematic changes in the practice of O&G such as the colour coding system in obstetrics, the red alert system and integrated obstetric wards.

Professor Ravindran has worked extensively in studying the causes of mothers dying in childbirth and in the prevention of such needless deaths. He used the platform of the Confidential Enquiries into Maternal Deaths in Malaysia to introduce educational efforts for all caregivers in maternity care and introduce system changes to ensure timely

and effective care in obstetric emergencies. He has served as a consultant to neighbouring Asian countries to pass the lessons learnt in reducing maternal mortality.

He is recognised for his expertise and sits in many national and international committees, as well as a reviewer to a number of professional journals. He is well regarded in the Patient Safety movement and presently, he is on the International Accreditation Panel with the International Society of Quality in Healthcare (ISQua). He also serves as the Secretary of Asian Society of Quality in Health (ASQua). He is a Fellow of the Royal College of O&G (London), Fellow of the Academy of Medicine of Malaysia and the Indian Academy of Medical Sciences. He was awarded the Distinguished Community Service Award by the International Federation of Gynaecology and Obstetrics (FIGO) in 2003.

## Professor Dato' Dr Syed Mohamed Aljunid Syed Junid FASc

*International Centre for Casemix and Clinical Coding, Faculty of Medicine, Universiti Kebangsaan Malaysia (UKM)*

Professor Dato' Dr Syed Mohamed was born on 20 August 1959 in Kuala Lumpur. He obtained his PhD in Health Economics and Financing from London School of Hygiene and Tropical Medicine, in 1995. He became the first Malaysian to obtain PhD in Health Economics in Malaysia and introduce Health Economics as an academic discipline in Malaysia.

He established the International Centre for Casemix and Clinical Coding (ITCC) UKM, a first global centre supporting 25 developing countries in implementation of casemix system, which is a tool to support the implementation of national health financing system. With his expertise, he was sourced as a Consultant to the United Nations Agencies such as WHO, UNICEF, International Atomic Energy Agency (IAEA) and other national and international agencies and organisations namely Asian Development Bank, MOH Malaysia and Indonesia.

Among his major contributions are to influence the decision to introduce HPV Vaccination against Cervical Cancer in the national immunisation of Malaysia in 2013 and the change of oral polio vaccine to the safer Inactivated polio vaccine (IPV) in the national immunisation programme of Malaysia in 2005.

As an accomplished health economist, Prof Syed Mohamed has received numerous prestigious awards, including Frost and Sullivan Best IT Company Award: Casemix Solutions Sdn Bhd (2017), Anugerah Khas Inovasi Naib Canselor UKM 2014 and MSC Malaysia Asia Pacific IT Alliance (APICTA) Award 2013 Best e-Health Solutions (2013). Currently, he was seconded from UKM to Kuwait University to help establish the first Faculty of Public Health in the Middle East Region.

## Tan Sri Dato' (Dr) Ir Gan Thian Leong FASc

*Executive Chairman & Managing Director, Brunfield International Group*

Tan Sri Dato' (Dr) Ir Gan Thian Leong is recognised as a progressive and entrepreneurial leader involved in an integrated technology enterprise focused on property development, engineering and construction, real estate investment and management. He has steered Brunfield to a brand that is well respected and valued as an entrepreneurial, technology-enterprise that delivers quality lifestyles and sustainable solutions. To-date, Brunfield has evolved to become a DBM (Design, Build and Manage) service provider.

As a Professional Engineer, Tan Sri Gan's passion and commitment to nurture education and R&D in the field of engineering and entrepreneurship is highly respected. As the Founder of Brunfield Foundation, he has established the "Brunfield Oxford ASEAN Human Rights Scholarships" in collaboration with the University of Oxford, UK. He then pursued his vision to establish Brunfield-Tsinghua Construction Management Lab at Tsinghua University, China and the Harvard Graduate School of Design-Malaysia Vision Valley (MVV) sustainability study. As an alma mater of University of Ottawa, Canada, he is the main contributor to the establishment of "Brunfield Engineering Student Projects & Entrepreneurship Centre" and "Brunfield International Group Graduate Scholarships". Tan Sri Gan also established the Brunfield Professor of Civil Engineering Chair at Universiti Tunku Abdul Rahman. He also serves as a Board of Trustee in Cancer Research Malaysia.

He has received numerous awards for his contributions and achievements. This includes achievements recognised in the Malaysia Book of Records namely the FIRST smart homes system for residences in Putrajaya, the FASTEST hypermarket project and the FIRST lightweight oil palm fibre reinforced cement composite panel, which has also won the Gold Medal Innovation and Invention award in Geneva, Switzerland. Apart from being a successful entrepreneur, he is also a technopreneur and socialpreneur.



## Professor Ir Dr Lee Sze Wei FASc

*President, Tunku Abdul Rahman University College (TARUC)*

Professor Ir Dr Lee Sze Wei was born on 1970 in Negeri Sembilan. He obtained his Bachelor of Engineering (Hons) in Electronic and Optoelectronic Engineering with First-Class Honours at the University of Manchester Institute of Science and Technology, UK in 1994. He subsequently pursued both Masters of Philosophy and PhD in Digital Communications at University of Manchester Institute of Science and Technology (UMIST) in 1995 and 1998, respectively. He also received his Master of Business Administration from the University of Salford, UK in 1999.

He is an expert in the field of telecommunication engineering and has made significant contribution in enhancing university-industry linkage and collaboration (R&D) in the area of technology transfer. He also leads an initiative exploring on the socio-economic impact of the Malaysian electronic industry with Malaysian Productivity Centre (MPC) in particular the multiplying effect of R&D activities in the industry.

Professor Lee has led several research projects and system design work in wireless communications since year 1999. He was one of the pioneers in Malaysia to work on W-CDMA wireless transceiver design in the year 2000. He and his team also worked on WLAN and other wireless systems. He has also been active in providing technical training for the industry and has trained close to 2,000 working engineers in digital communications, 3G & 4G mobile communications, digital signal processing for communications, WLAN and WPAN technologies.

Apart from this, he is also active in his other academic pursuits serving as the Fellow of the ASEAN Academy of Engineering and Technology, Fellow of the Institution of Engineering and Technology, Professional Technologist of Malaysia Board of Technologists, as well as Professional Engineer registered with the Board of Engineers Malaysia.





## Dr Raslan Ahmad FASc

---

*Senior Vice-President, Malaysian Industry-Government Group for High Technology (MIGHT)*

Dr Raslan Ahmad was born in Bota Kiri, Perak on 13 October 1964. He went to Sekolah Menengah Seri Perak in Teluk Intan to undertake his Sijil Tinggi Pelajaran Malaysia (STPM) and gained a ticket to pursue a Degree in Southeast Asian Studies from University of Malaya. He graduated with a sense of pride of coming from a humble background in 1987 and opted to further his studies in Master of Philosophy at the same university before embarking onto a journey of a professional working life. Then, he earned his Doctorate in Philosophy in Science Policy and Technology Management at Policy Research in Science, Engineering and Technology (PREST) at the University of Manchester, UK in 1999.

Dr Raslan started his career 30 years ago as Coordinator for Corporate Planning Division of Malaysian Institute of Microelectronic Systems (MIMOS) and grew with the government R&D powered house through its corporatisation process along the years. With over 27 years of experience in various government agencies, Dr Raslan brings with him a wealth of experience in corporate planning, R&D management, government, and universities alliances and has extensive experience in science governance at the national and international levels.

Not just that, he has vast experience in managing international affairs related to ICT such as Free trade Agreement (FTA), International Telecommunication Union (ITU), eASEAN and Global Alliance ICT or Development (GAID). He has always worked very hard in whatever he chooses to do and that is his one true strength.

Professor Dr Mahendhiran Sanggaran Nair was born in 19 January 1964 in Klang, Selangor. He received his BSc Hons in Mathematics from Brock University, Canada in 1989, and earned his Master in Statistics (1990) and Master in Economics (1991) from the York University, Canada. He received his PhD in Economics (Econometrics) from the same university in 1996.

He is an expert in data science majoring in statistical and econometric methods. He uses his expertise to study the impact of science, technology and innovation on sustainable economic development and wealth creation. As an expert in econometric modelling and statistical forecasting for Malaysia, he has led Science, Technology, Innovation and Economic (STIE) strategic policy analysis and was the Principal Investigator for Malaysia's Knowledge Content (MyKE-III study) for the Malaysian government. He has also developed econometric, forecasting and fore-sighting models for key government agencies. His team has completed the Selangor Industrial Master Plan, which was launched by the Selangor Government with an investment of RM6 billion.

Professor Mahendhiran is often sought for his expertise by international consulting companies and agencies to undertake national and industrial studies. He was the subject matter expert for the Strategic Plan to develop Kingdom of Saudi Arabia's Innovation and Knowledge Economy Plan. He has also contributed to the development of Malaysia's ICT Strategic Roadmap, New Economic Model, Malaysian Indian Blueprint and Malaysia's Knowledge Economy Study.

He is currently a Fellow of Chartered Professional Accountants (Australia). He has published his research work extensively in leading international journals in applied econometrics, economics, information and communication technology, finance and management.



## Professor Dr Mahendhiran Sanggaran Nair FASc

---

*Vice-President (Research & Development), Monash University Malaysia & Chief Executive Officer, Monash Malaysia R&D Sdn Bhd*



## Distinguished Professor Datuk Dr Shamsul Amri Baharuddin FASc

*Founding Director, Institute of Ethnic Studies (KITA), Universiti Kebangsaan Malaysia (UKM)*

Distinguished Professor Datuk Dr Shamsul Amri Baharudin was born on 11 January 1951 in Negeri Sembilan. He is a well-known anthropologist and social activist. Since 1973, he has accumulated over forty years of teaching and research experience within University of Malaya and UKM. The focus of his research, writing and lectures are on the themes of politics, culture and economic development within Southeast Asia.

In 1999, he was appointed as the Director of Institute of the Malay World and Civilization, UKM and introduced the social science content to the humanities-based institute. Later, he was appointed as the Founding Director of the Institute of Ethnic Studies (KITA), UKM, in 2007; prior to his appointment as the Founding Director, Institute of Occidental Studies. He managed to elevate KITA as an active national player that participated in various national-level activities.

Professor Shamsul also contributed his expertise by sitting in various national and international committees such as the Board of Director, Dewan Bahasa dan Pustaka (2011 – 2014) and Member of the International Advisory Panel, Institute of Southeast Asian Studies, Singapore. He directly involved in the making of the Malaysia Education Blueprint 2013-2025 under MOE, Malaysia Education Blueprint 2015-2025 under MOHE, and Malaysia Human Development Report 2013 under United Nations Development Programs.

He is currently an active analyst and commentator on Malaysia Current Affairs in local and international mass media such as CNBC Asia, BBC London, Radio Australia, Netherlands and Singapore. He was awarded title of Distinguished Professor by MOHE in 2010, the Academic Prize by Fukuoka Asian Cultural Award 2008 and the Golden Globe Tiger Award for Outstanding Contribution to Education 2017.

## ASM Fellows

### BIOLOGICAL, AGRICULTURAL AND ENVIRONMENTAL SCIENCES

**Academician Emeritus Professor**

**Dr Yong Hoi Sen FASc**

**Academician Tan Sri Dr Salleh Mohd Nor FASc**

**Academician Tan Sri Dato'**

**Dr Ahmad Mustaffa Babjee FASc**

**Academician Emeritus Professor Tan Sri Dato'**

**Dr Syed Jalaluddin Syed Salim FASc**

**Academician Emeritus Professor Tan Sri Dato' Sri**

**Dr Zakri Abdul Hamid FASc**

**Emeritus Professor Datuk Dr Abdul Latif Ibrahim FASc**

Dr Francis S.P. Ng FASc

Professor Dr Mak Chai @ Mak Lian Fong FASc

Professor Dr Ho Yin Wan FASc

Professor Dr Koh Chong Lek FASc

Emeritus Professor Dr Mohd Nordin Hasan FASc

Dr Rajanaidu Nookiah FASc

Emeritus Professor Dato'

Dr Sheikh Omar Abdul Rahman FASc

Emeritus Professor Dr Muhamad Awang FASc

Emeritus Professor Dato' Dr Mohamed Mahyuddin

Mohd Dahan FASc

Dato' Dr Yeang Hoong Yeet FASc

Emeritus Professor Dato'

Dr Abdul Latiff Mohamad FASc

Datuk Dr Ghazally Ismail FASc

Emeritus Professor Dato'

Dr Mohamed Abdul Majid FASc

Dr Helen Nair FASc

Professor Dr Soh Aik Chin FASc

Academician Dr C. Devendra FASc

Professor Datin Paduka Dr Khatijah Mohd Yusoff FASc

Dr Lim Boo Liat FASc

Dr Tan Swee Lian FASc

Professor Dr Yap Thoo Chai FASc

Professor Datin Paduka Dr Aini Ideris FASc

Dr Heong Kong Luen FASc

Professor Dr Phang Siew Moi FASc

Dr Ravigadevi Sambanthamurthi FASc

Dato' Dr Sim Soon Liang FASc

Professor Dato' Dr Azizan Abu Samah FASc

Dato' Dr Hashim Abd Wahab FASc

Professor Dr Mohd Sanusi Jangi FASc

Professor Dr Low Pak Sum FASc

Dr Chan Ying Kwok FASc

Professor Dato' Dr Mohamed Shariff

Mohamed Din FASc

Professor Datin Dr Faridah Hanum Ibrahim FASc

Dato' Dr Makhdzir Mardan FASc

Dr Harikrishna Kulaveerasingam FASc

Professor Dr Wickneswari Ratnam FASc

Dr Tan Keng Hong FASc

Professor Dr Normah Mohd Noor FASc

Datuk Seri Lim Chong Keat FASc

Professor Dato' Dr Ibrahim Che Omar FASc

Professor Dato' Dr Mohd Tajuddin Abdullah FASc

Professor Dr Fatimah Md Yusoff FASc

Dr Saw Leng Guan FASc

Professor Dr Ng Wing Keong FASc

Professor Dr Jinap Selamat FASc

Professor Dr Shamsuddin Jusop FASc

Professor Dr Tan Soon Guan FASc

Dato' Dr Abd Latif Mohmod FASc

Professor Dr Agamutu Pariatamby FASc

Professor Dr Abdul Manaf Ali FASc

Datuk Dr Abdul Rahim Nik FASc

Professor Dato' Dr Mazlin Mokhtar FASc

Professor Dato' Dr Mohd Azmi Mohd Lila FASc

Dr Rahimatsah Amat FASc

Professor Dato' Dr Rahmah Mohamed FASc

Professor Dr S.Vikineswary Sabaratnam FASc

Professor Dr Ahmad Ismail FASc

Dr Ahmad Parveez Ghulam Kadir FASc

Dr Chow Keng See FASc

Professor Dr Mohd Ali Hassan FASc

Dr Rajinder Singh Harminder Singh FASc

Associate Professor Dr Chan Kok Gan FASc

Professor Dr Mohd Hair Bejo FASc

Emeritus Professor Dr Nor Muhammad Mahadi FASc

Professor Dr Rofina Yasmin Othman FASc

Professor Dr Sheila Nathan FASc

Professor Dato' Dr Ismail Sahid FASc

Professor Dr Mazlan Abd Ghaffar FASc

Professor Dato' Dr Mohd Yazid Abd Manap FASc

Professor Dr Paridah Bt Md Tahir FASc

Associate Professor Dr Siti Aisah Alias FASc

**\*\*Names in BOLD are Foundation Fellows**

## CHEMICAL SCIENCES

**Academician Emeritus Professor Tan Sri Datuk**

**Dr Augustine Ong Soon Hock FASc**

**Academician Emeritus Professor Dato’**

**Dr V.G. Kumar Das FASc**

Emeritus Professor Dr Ng Soon FASc

Academician Professor Dr Ho Chee Cheong FASc

Datuk Dr Mohinder Singh S Sucha Singh FASc

Dr Goh Swee Hock FASc

Professor Datuk Dr Halimaton Hamdan FASc

Emeritus Professor Dato’ Dr Md Ikram Mohd Said FASc

Dr Lee Chnoong Kheng FASc

Datuk Dr Sukiman Sarmani FASc

Dato’ Dr Choo Yuen May FASc

Professor Dr Ibrahim Abdullah FASc

Professor Dato’ Dr Muhammad Idiris Saleh FASc

Dr Lai Yoong Wong FASc

Professor Dr Lee Soo Ying FASc

Professor Datin Dr Zuriati Zakaria FASc

Professor Dr Loh Teck Peng FASc

Professor Dr Rauzah Hashim FASc

Professor Dato’ Dr Mohd Jamil Maah FASc

Professor Dr Ng Seik Weng FASc

Emeritus Professor Dato’ Dr Laily Din FASc

Professor Dr Bohari Mohd Yamin FASc

Professor Dr Lee Hian Kee FASc

Professor Dr Yang Farina Abdul Aziz FASc

Professor Dato’ Dr Musa Ahmad FASc

Professor Dr Noorsaadah Abd Rahman FASc

Professor Dr Lim Yau Yan FASc

Professor Dr Mohd Basyaruddin Abdul Rahman FASc

Professor Dr Taufiq Yap Yun Hin FASc

Professor Dato’ Dr Wan Md Zin Wan Yunus FASc

Professor Dr Md Pauzi Abdullah FASc

Professor Dr Mohamad Kamal Harun FASc

Professor Dr Wan Ahmad Kamil Che Mahmood FASc

Professor Dr Zanariah Abdullah FASc

Brigadier General Emeritus Professor Datuk

Dr Kamarudin Husin FASc

Datin Dr Sri Nurestri Abd Malek FASc

Professor Dr Chuah Cheng Hock FASc

Professor Dr Gan Seng Neon FASc

Professor Dr Khalijah Awang FASc

Professor Dr Mansor Ahmad @ Ayob FASc

**\*\*Names in BOLD are**

**Foundation Fellows**

## ENGINEERING SCIENCES

**Academician Dato’ Ir Lee Yee Cheong FASc**

**Academician Tan Sri**

**Dato’ Ir Shahrizaila Abdullah FASc**

**Dato’ Dr Muhammad Ridzuan Salleh FASc**

Academician Datuk Ir Hong Lee Pee FASc

Ar Hijjas Kasturi FASc

Academician Tan Sri Dato’ Ir Ts Ahmad Zaidee Laidin FASc

Dato’ Dr Mohd Ariffin. Aton FASc

Ir Dr Ting Wen Hui FASc

Professor Dato’ Ir Dr A. Bakar Jaafar FASc

Emeritus Professor Dato’ Wira Ir

Dr Mohammad Noor Salleh FASc

Emeritus Professor Dato’ Ir Abang Abdullah

Abang Ali FASc

Tan Sri Dato’ Sri Professor Ir Dr Sahol Hamid

Abu Bakar FASc

Professor Dr Mohd Ali Hashim FASc

Professor Dato’ Dr Goh Sing Yau FASc

Tan Sri Datuk Professor Ir Dr Mohd Zulkifli

Mohd Ghazali FASc

Professor Dr Tan Hong Siang FASc

Datuk Ir Dr Ow Chee Sheng FASc

Dato’ Ir Dr Gue See Sew FASc

Dr Ir Salmah Zakaria FASc

Professor Dr Zahari Taha FASc

Professor Datuk A Rahman Abdullah FASc

Tan Sri Dato’ Sri Ar Esa Mohamed FASc

Professor Dato’ Seri Ir Dr Zaini Ujang FASc

Professor Ir Dr Shah Nor Basri FASc

Professor Dr Nasrudin Abd Rahim FASc

Tan Sri Ir Syed Muhammad Shahabudin FASc

Tan Sri Dato’ Ir Omar Ibrahim FASc

Professor Ir Dr Ahmad Faizal Mohd Zain FASc

Professor Datuk Dr Ahmad Fauzi Ismail FASc

Dato’ Sri Professor Ir Dr Judin Abdul Karim FASc

Professor Ir Dr Wan Abu Bakar Wan Abas FASc

Dato’ Ir Mohd Yusof Ibrahim FASc

Ir Dr Ruslan Hassan FASc

Professor Dr Zulkifli Yusop FASc

Professor Dato’ Ir Dr Wan Ramli Wan Daud FASc

Professor Datuk Ir Dr Mohd Jailani Mohd Nor FASc

Professor Dr Hanafi Ismail FASc

Professor Dr Abd Halim Shamsuddin FASc

Professor Dr Abdul Latif Ahmad FASc

Professor Dr Hamdani Saidi FASc

Professor Dato’ Dr Kamaruzzaman Sopian FASc

Datuk Ir Mohd Adnan Mohd Noor FASc

Datuk Ir Abdul Rahim Hashim FASc

Professor Dato’ Ir Dr Badrulhisham Abdul Aziz FASc

Professor Dato’ Dr Burhanuddin Yeop Majlis FASc

Ir Lalchand Gulabrai FASc

Professor Dr Abdul Rahman Mohamed FASc

Professor Dato’ Ir Dr Abdul Wahab Mohammad FASc

Professor Dr Ewe Hong Tat FASc

Datuk Professor Dr Mohd Ruddin Ab Ghani FASc

Professor Ir Dr Noor Azuan Abu Osman FASc

Dato’ Ir Lim Chow Hock FASc

Professor Dato’ Ir Dr Mahyuddin Ramli FASc

Professor Dr Mohamed Ibrahim Abdul Mutalib FASc

Professor Dr –Ing Ir Renuganth Varatharajoo FASc

Professor Dr Azmi Mohd Shariff FASc

Dr Leong Kok Hoong FASc

Professor Dato’ Ir Dr Mohd Saleh Jaafar FASc

Professor Ir Dr Ramesh Singh FASc

Ir Dr Zuhairi Abd Hamid FASc

Professor Ir Dr Abdul Aziz Abdul Raman FASc

Datuk Ir Abdul Kadir Mohd Din FASc

Professor Sr Dr Mazlan Hashim FASc

Professor Dr Mohd Adzir Mahdi FASc

## INFORMATION TECHNOLOGY AND COMPUTER SCIENCES

**Academician Tan Sri Dato’ Seri Ir Shamsuddin**

**Abdul Kadir FASc**

**YM Academician Datuk Dr Tengku Mohd Azzman**

**Shariffadeen FASc**

**Emeritus Professor Dato’ Ir Dr Mohd Zawawi**

**Ismail FASc**

Emeritus Professor Dato’ Dr Tan Wang Seng FASc

Datuk Dr Mohamed Arif Nun FASc

Dr Mohamed Awang Lah FASc

Dr Mohamad Zahran Dato’ Sheikh Abdul Halim FASc

Professor Dr Zaharin Yusoff FASc

Emeritus Professor Dato’ Dr Ir Zainul Abidin

Md Shariff FASc

Emeritus Professor Dato’ Seri Mashkuri Yaacob FASc

Emeritus Professor Dato’ Dr Tengku Mohd

Tengku Sembok FASc

Professor Dato’ Dr Halimah Badioze Zaman FASc

Professor Ir Dr Ahmad Fadzil Mohamad Hani FASc

Professor Dr Abdullah Gani FASc

Professor Dr Borhanuddin Mohd Ali FASc

Professor Dr Zainab Abu Bakar FASc

Ir Professor Dr Goi Bok Min FASc

Professor Dr Mohamed Ridza Wahiddin FASc

Professor Datuk Ts Dr Shahrin Sahib FASc

Professor Dr Tharek Abd Rahman FASc

## MATHEMATICS, PHYSICS AND EARTH SCIENCES

**Academician Datuk Fateh Chand FASc**

**Academician Tan Sri Datuk Ir Dr Ahmad Tajuddin**

**Ali FASc**

**Dato’ Dr Chatar Singh FASc**

**Emeritus Professor Dato’ Dr Mohd Sham**

**Mohd Sani FASc**

**Dato’ Dr R. Ratnalingam FASc**

Dr Shaharir Mohamad Zain FASc

Emeritus Professor Dato’ Dr Hassan Said FASc

Academician Professor Dato’ Ir

Dr Chuah Hean Teik FASc

Emeritus Professor Dato’ Dr Ibrahim Komoo FASc

Dr Bahrom Sanugi FASc

Distinguished Professor Datuk Dr Harith Ahmad FASc

Professor Dr Kurunathan Ratnavelu FASc

Professor Dr Tou Teck Yong FASc

Emeritus Professor Dato’ Dr Muhammad Yahaya FASc

Professor Dr Lim Ming Huat FASc

Emeritus Professor Dr Wong Chiow San FASc

Professor Dato’ Dr Roslan Abd Shukor FASc

Professor Dato’ Indera Dr Rosihan Mohamed Ali FASc

Emeritus Professor Dato’ Dr Lim Koon Ong FASc

Emeritus Professor Dr Fun Hoong Kun FASc

Professor Dr Ong Seng Huat FASc

Professor Dr Abdul Halim Shaari FASc

Professor Dr Felix Tongkul FASc

Professor Dr Fredolin Tangang FASc

Professor Dr Mohd Shafee’a Leman FASc

Professor Dr Joy Jacqueline Pereira FASc

Professor Dr Wan Ahmad Tajuddin Wan Abdullah FASc

Emeritus Professor Dato’ Dr Kamel Ariffin

Mohd Atan FASc

Dr Mazlan Madon FASc

Dr Low Kwai Sim FASc

Professor Dr Norani Muti Mohamed FASc

Professor Dr Ng Kwan Hoong FASc

Dato’ Dr Yap Kok Seng FASc

Professor Dato’ Dr Mohd Yusof Othman FASc

Professor Dr Ishak Hashim FASc

Professor Dr Raymond Ooi Chong Heng FASc

Dr Selliah Paramanathan FASc

Professor Dr Ramesh T Subramaniam FASc

Professor Dr Zainuriah Hassan FASc

Professor Dr Faidz Abd Rahman FASc

Professor Dr Md Rahim Sahar FASc

Professor Dr Mohd Salmi Md Noorani FASc

Professor Dato’ Dr Abd Aziz Tajuddin FASc

Professor Dr Maslina Darus FASc

Professor Dr Sahrim Ahmad FASc

Dr Low Kwai Sim FASc  
Professor Dr Norani Muti Mohamed FASc  
Professor Dr Ng Kwan Hoong FASc  
Dato' Dr Yap Kok Seng FASc  
Professor Dato' Dr Mohd Yusof Othman FASc  
Professor Dr Ishak Hashim FASc  
Professor Dr Raymond Ooi Chong Heng FASc  
Dr Selliah Paramanathan FASc  
Professor Dr Ramesh T Subramaniam FASc  
Professor Dr Zainuriah Hassan FASc  
Professor Dr Faidz Abd Rahman FASc  
Professor Dr Md Rahim Sahar FASc  
Professor Dr Mohd Salmi Md Noorani FASc  
Professor Dato' Dr Abd Aziz Tajuddin FASc  
Professor Dr Maslina Darus FASc  
Professor Dr Sahrim Ahmad FASc

#### **MEDICAL AND HEALTH SCIENCES**

**Academician Distinguished Professor Datuk Dr. Looi Lai Meng FASc**

**Academician Tan Sri Dato' Dr M. Jegathesan FASc**

**Professor Dr Mak Joon Wah FASc**

**Datuk Dr Hussein Awang FASc**

**Emeritus Professor Dato' Dr Khalid Abdul Kadir FASc**

**Tan Sri Dato' Dr Yahya Awang FASc**

Tan Sri Dato' Dr Abu Bakar Dato' Suleiman FASc

Academician Emeritus Professor Dato'

Dr Lam Sai Kit FASc

Tan Sri Dato' Seri Musa Mohamad FASc

Emeritus Professor Dato' Paduka

Dr Mustaffa Embong FASc

Emeritus Professor Puan Sri Datin Dr Wan Nafisah

Nik Mohd Adeeb FASc

Emeritus Professor Dato' Dr Hashim Yaacob FASc

Professor Dr Yap Sook Fan FASc

Emeritus Professor Dr Cheong Soon-Keng FASc

Academician Professor Dato'

Dr Khairul Anuar Abdullah FASc

Academician Emeritus Professor Dato'

Dr C.P. Ramachandran FASc

Professor Datuk Dr Asma Ismail FASc

Professor Dato' Dr Anuar Zaini Md Zain FASc

Professor Dr Victor Lim Kok Eow @ Azman Lim FASc

Professor Emeritus Dato' Dr Khalid Yusoff FASc

Tan Sri Dato' Wira Dr Sharifah Hapsah

Syed Hasan Shahabudin FASc

Emeritus Professor Dr Mohd Ismail Noor FASc

Tan Sri Datuk Dr Mohd Ismail Merican FASc

Professor Dr Cheah Phaik Leng FASc  
Dr Mary Jane Cardosa FASc  
Emeritus Professor Dr Boo Nem Yun FASc  
Professor Dr Subramaniam Krishnan FASc  
Professor Dato' Dr Jafri Malin Abdullah FASc  
Professor Dato' Dr Goh Khean Lee FASc  
Professor Dr Adeeba Kamarulzaman FASc  
Professor Dr Rosnah Mohd Zain FASc  
Professor Dr Rahmah Noordin FASc  
Professor Dato' Dr Ikram Shah Ismail FASc  
Emeritus Professor Dato' Dr Lian Chin Boon FASc  
Tan Sri Professor Dr Mohd Amin Jalaludin FASc  
Professor Dato' Dr Tan Chong Tin FASc  
Professor Dr Norazmi Mohd Nor FASc  
Dr Salmaan Hussain Inayat Hussain FASc  
Professor Datuk Dr Awg Bulgiba Awg Mahmud FASc  
Professor Dr Khor Geok Lin FASc  
Professor Dr Mustafa Ali Mohd FASc  
Professor Datuk Dr Rohana Yusof FASc  
Professor Datuk Paduka Dr Wan Azman  
Wan Ahmad FASc  
Professor Dr Jamunarani S Vadivelu FASc  
Dr Teo Soo Hwang FASc  
Professor Dr Balbir Singh Mohan Singh FASc  
Datuk Dr Lokman Hakim Sulaiman FASc  
Professor Dr Sazaly Abu Bakar FASc  
Professor Dr Suresh Kumar P.Govind FASc  
Professor Dr Zhari Ismail FASc  
Professor Dato' Dr Balwant Singh Gendeh FASc  
Professor Dr Lee Way Seah FASc  
Professor Dr Mary Anne Tan Jin Ai FASc  
Professor Dr Wan Ariffin Abdullah FASc  
Professor Datuk Dr A Rahman A Jamal FASc  
Professor Dr Lim Shen-Yang FASc  
Professor Dr Shamala Devi K.C. Sekaran FASc  
Professor Dr Thong Meow Keong FASc  
Professor Dr Tunku Kamarul Zaman  
Tunku Zainol Abidin FASc  
Professor Dr Yvonne Lim Ai Lian FASc  
Professor Dr Ngeow Yun Fong FASc  
Professor Dr Onn Hashim FASc  
Professor Dato' Dr Ravindran Jegasothy FASc  
Professor Dato' Dr Syed Mohamed Aljunid FASc

#### **SCIENCE & TECHNOLOGY DEVELOPMENT AND INDUSTRY**

**Academician Emeritus Professor Tan Sri Datuk Dr Omar Abdul Rahman FASc**

**Academician Emeritus Professor Tan Sri Dato' Dr Mohd Rashdan Baba FASc**

**Academician Datuk Dr Abdul Aziz S.A. Kadir FASc**  
**Tan Sri Dato' Ir Wan Abdul Rahman Wan Yaacob FASc**

Tan Sri Datuk Yong Poh Kon FASc

Tan Sri T. Ananda Krishnan FASc

Academician Tan Sri Datuk Dr Yusof Basiron FASc

Datuk Alladin Hashim FASc

Academician Emeritus Professor Datuk

Dr Mazlan Othman FASc

Tuan Ir Mohamed Zohari Mohamed Shaharun FASc

Datuk Dr Saharan Anang FASc

Dato' Dr Ong Eng Long FASc

Emeritus Professor Dr Jalani Sukaimi FASc

Dato' Dr Abdul Razak Mohd Ali FASc

Dato' Ir Lai Pin Yong FASc

Datuk Dr Soon Ting Kueh FASc

Datuk Dr Mohd Basri Wahid FASc

Professor Dato' Dr Ahmad Ibrahim FASc

Datuk Dr Ahmad Tasir Lope Pihie FASc

Tan Sri Professor Dato'

(Dr) Dzulkifli Abdul Razak FASc

Dato' Dr Samsudin Tugiman FASc

Dr Wan Abdul Rahaman Wan Yaacob FASc

Datuk Dr Kalyana Sundram P Manickam FASc

Dato' Dr Kamarudin Ab Malek FASc

Datuk Dr Salmiah Ahmad FASc

Dato' (Dr) Ir Andy Seo Kian Haw FASc

Datuk Fadilah Baharin FASc

Dr Amir Hashim Md Yatim FASc

Ir Choo Kok Beng FASc

Datuk Dr Mohd Yusoff Sulaiman FASc

Mr Goh Peng Ooi FASc

Dr Ahmad Hezri Adnan aFASc

Datuk Dr Ahmad Kushairi Din FASc

Tan Sri Dato' (Dr) Ir Gan Thian Leong FASc

Dato' Dr Jalaluddin Harun FASc

Professor Ir Dr Lee Sze Wei FASc

Dr Raslan Ahmad FASc

#### **SOCIAL SCIENCES AND HUMANITIES**

Professor Dato' Dr Aishah Bidin FASc

Dato' Dr Sharifah Maimunah Syed Zin FASc

Emeritus Professor Datuk Dr Shad Salem Faruqi FASc

Emerita Professor Dato' Dr Siti Zuraina

Abdul Majid FASc

Dr Zainal Ariffin Ahmad FASc

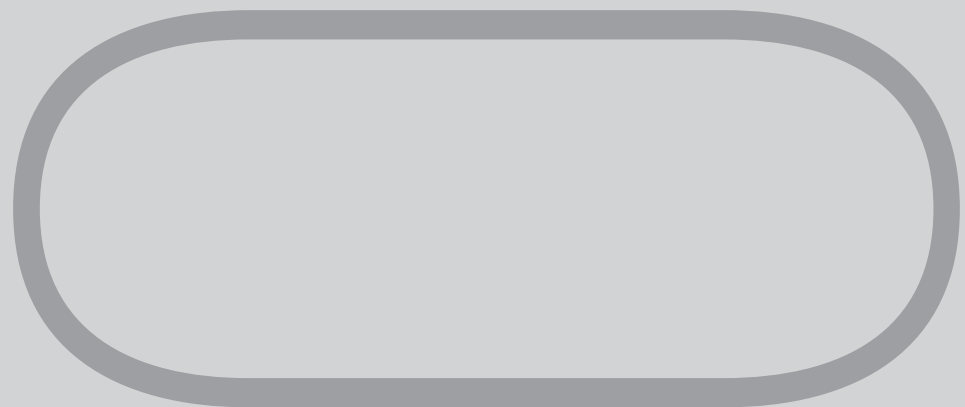
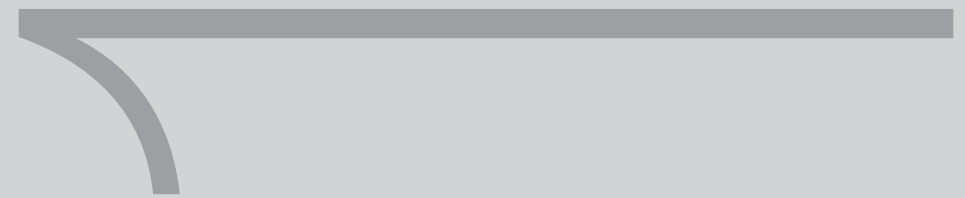
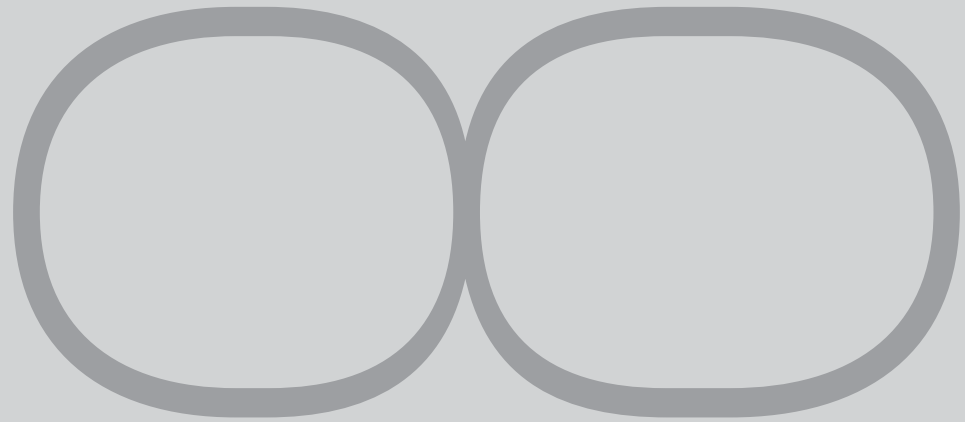
Professor Dr Mahendhiran Sanggaran Nair FASc

Distinguished Professor Datuk

Dr Shamsul Amri Baharuddin FASc

**\*\*Names in BOLD are Foundation Fellows**





# ASSOCIATES

A pool of diverse expertise appointed on a two-year terms to fullfil the increasing interdisciplinary demand of knowledge.

## Associates

Associate Professor Ir Ts Dr Asan Gani Abdul Muthalif  
Professor Ir Dr Suzana Yusup  
Associate Professor Dr Yazrina Yahya  
Ir Dr Tan Chee Fai  
Professor Dr Khor Cheng Seong  
Senior Professor Dr Manickam Ravichandran  
Professor Ir Mohamed Haniffa Abdul Hamid  
Associate Professor Dr Muzaimi Mustapha  
Ir C. Kamalesen Chandrasekaran  
Dato' Ir Hanapi Mohamad Noor  
Mr Rushdi Abdul Rahim  
Dr Zati Sharip  
Dr Anida Yusoff  
Associate Professor Dr Berhaman Ahmad  
Dr Chong Ju Lian  
Dr Elia Godoong  
Associate Professor Dr Fatin Aliah Phang Abdullah  
Dr Goh Pei Sean  
Dr Hamzah Tangki  
Associate Professor Ir Dr Haslenda Hashim  
Dr Hasrinah Hasbullah  
Associate Professor Dr Homathevi Rahman  
Associate Professor Dr Jamilah Mohd Salim@Halim  
Associate Professor Dr Juhana Jaafar  
Professor Dr Khairiyah Mohd Yusoff  
Professor Dr Madzlan Aziz  
Associate Professor Dr Ir Marlinda Abdul Malek  
Associate Professor Ir Dr Mimi Haryani Hashim  
Associate Professor Dr Mohd Azlan Jayasilan Abdul  
Gulam Azad  
Associate Professor Ir Dr Mohd Fadhil Md Din  
Dr Mohd Firdaus Abdul Wahab  
Associate Professor Dr Mohd Hafiz Dzarfan Othman  
Ir Mohmad Asari Daud  
Dr Umi Marshida Abd Hamid  
Associate Professor Dr Shahrina Md Nordin  
Dr Wan Amir Nizam Wan Ahmad  
Dr Yap Sau Wai  
Associate Professor Dr Zaiton Abdul Majid  
Associate Professor Dr Zainura Zainon Noor  
Professor Dr Nor Ashikin Mohamed Noor Khan  
Dr Jayaraj Vijaya Kumaran

Malaysia's transformational agenda rightly emphasises knowledge-based economy, which has human capital as one of its critical pillars. To drive competitiveness in a knowledge-intensive economy that is fuelled by innovation, the country needs to identify, recognise and harness its top scientific minds, as well as sustain a pool of talented people. Insufficient skilled labour is one of the challenges that have been identified through the 11<sup>th</sup> Malaysia Plan. This challenge needs to be overcome in order for Malaysia to achieve the status of a developed country by 2020.

ASM's initiative of Top Research Scientists Malaysia (TRSM) aims to address this challenge. The TRSM initiated in 2010 identifies and recognises leading Malaysian research scientists who are actively pushing the boundaries of research and development to generate new knowledge, make discoveries, create value-added opportunities as well as meaningful and impactful outcomes from their research that significantly contributes to the nation's socio-economic transformation. The TRSM recognition is valid for a five-year period. Active research scientists can be recognised for the following term upon re-evaluation.

In addition to giving the country's illustrious researchers a nationwide recognition, TRSM also features an online database that serves as a centralised point of reference for researchers who are still active in R&D. It is hoped that the convention of the best brains in the country would create a hub for knowledge generation and dissemination that can spur STI growth in Malaysia. TRSM recipients could serve as role models of excellence, mentors to the next generation and leaders to forge the nation's STI agenda. The TRSM database could also be a repository of potential research scientists for international recognition.

The TRSM initiative has two major phases:

- 1) Identify a pool of leading Malaysian researchers across all areas such as fundamental research, applied research, social science research and industry research experts based on an objective and standardised selection criteria.
- 2) Disseminate the profile of the TRSM through its database, which serves as a centralised point of reference for stakeholders to identify national R&D priority areas as well as human capital that can lead the priority areas. The database serves as a resource for the international scientific community such as academia, industries and international STI organisations that wish to seek top-notch STI expertise in Malaysia for knowledge exchange, networking and build-up linkages.

**157**  
TRSM RECIPIENTS  
SINCE 2012

**24**  
RECIPIENTS FOR THE  
7TH CYCLE (2018)



# TOP RESEARCH SCIENTISTS MALAYSIA



## **Professor Dr Abdul Rashid Mohamed Shariff**

*Faculty of Engineering, Universiti Putra Malaysia*

**Area of Expertise:**

*Agricultural Information System and Technology*

Professor Dr Abdul Rashid's love for nature and outdoor activities inspired his choice of career. He started first as a land surveyor. His passion in teaching has led him to become a great lecturer in agriculture engineering specialising in Precision Agriculture. He has published and co-authored about 200 articles in various national and international peer-reviewed journals and presented scientific papers across the world.



## **Professor Dr Ahmad Zaharin Aris**

*Dean, Faculty of Environmental Studies, Universiti Putra Malaysia*

**Area of Expertise:**

*Environmental Chemistry and Analysis*

Some of Professor Dr Ahmad Zaharin's research findings have been used to set up national guidelines and policies on environmental issues. He was appointed as government advisor for the Ministry of Environment and Water Resources, Republic of Trinidad and Tobago for its environmental forensics institute establishment. He has instituted many impressive and successful programmes including establishing comprehensive chemical databases for fingerprinting and hub for training and technology transfer in environmental forensics.



## **Associate Professor Ir Dr Aduwati Sali**

*Deputy Director, Research Management Center, Faculty of Engineering, Universiti Putra Malaysia*

**Area of Expertise:**

*Mobile and Satellite Communications*

An expert in mobile and satellite communications, Associate Professor Ir Dr Aduwati has led 12 research projects funded locally and internationally, including EU Horizon2020, NICT Japan, TWAS-Comstech, and various Ministries and Agencies in Malaysia. She also provides consultations to National Space Agency, STRIDE, ATSB Bhd, Petronas Bhd, and others on projects related to mobile and satellite communications. Since 2014, the fateful event of missing MH370 requested her to be in printed and broadcasting media regarding analysis on satellite communication in tracking the aircraft.



## **Professor Dr Chai Siang Piao**

*Deputy Head, School of Engineering, Monash University*

**Area of Expertise:**

*Catalyst and Reaction Engineering*

Professor Dr Chai Siang Piao's research focuses on reaction engineering and advanced photocatalysis for environmental and sustainable energy applications. He aspires to contribute towards the accentuation of innovations in Chemical Engineering. Having devoted more than 10 years to academic, he is enthusiastic and committed to contributing his research and knowledge to the nation, community and society.



## Associate Professor Dr Chan Yoke Fun

*Faculty of Medicine, Universiti Malaya*

**Area of Expertise:**  
*Medical Virology*

A rising star in her field, Associate Professor Dr Chan Yoke Fun's passion in biomedical science blooms when she began to develop a diagnostic test for a blood disorder termed thalassemia. Her group focuses on studying the molecular basis of enterovirus pathogenesis, immunology of chikungunya virus, and epidemiology of respiratory viruses. Her team was strong backed by government funding and is currently supported by international funding from both USA and UK, apart from industrial funding.



## Dr Hafizal Mohamad

*Senior Staff Researcher, MIMOS*

**Area of Expertise:**  
*Wireless Communication and Technologies*

Love for mathematics and obsession to solve technical problems have motivated Dr Hafizal to become a scientist. Passionate about creating a hyper-connected world, he now leads a team of committed researchers working on numerous R&D projects in Internet of Things and mesh networks.



## Professor Dr Chong Kok Keong

*Universiti Tunku Abdul Rahman*

**Area of Expertise:**  
*Solar Energy Technology*

Professor Dr Chong Kok Keong childhood's dream was to explore the field of Astrophysics. However, upon receiving his BSc, he developed an interest in 100-metre delay-line laser interferometer project in Universiti Teknologi Malaysia (UTM) for gravitational wave detection. Inspired by his PhD supervisor (Prof Dr Chen Ying Tian), he decided to devote his time into solar system, specifically to harness energy from the Sun, which is more critical issue for the mankind.



## Professor Dr Ida Idayu Muhamad

*Head of the Department of Bioprocess and Polymer Engineering,  
Faculty of Chemical and Energy Engineering, Universiti Teknologi  
Malaysia*

**Area of Expertise:**  
*Food and Biomaterial Process Engineering*

Professor Dr Ida Idayu works in the areas of food, biopolymer, biomaterial and bio-nanotechnology as a tool in converting numerous natural materials to valuable food sources, and non-food products such as chemicals and fuels. To date, her research has included applications and productions of food, feed and health-care industries and in producing sustainable materials and processes. Her particular emphasis has been in developing new products and processes based on biopolymers and biomaterials, with optimisation for commercialisation leading to economic and social benefits.



## Professor Dr Lean Hooi Hooi

*School of Social Sciences (Economics Program), Universiti Sains Malaysia*

**Area of Expertise:**  
*Time Series Econometrics*

From a very young age, Professor Dr Lean Hooi Hooi has trained herself to be self-disciplined and hardworking. Her research activities have largely focused on empirical studies in financial & energy economics for the Asia-Pacific region. Besides her strong foundation in quantitative methods, she had broadened her horizons and practical scope of expertise beyond pure financial economics issues and includes some work on its impact and connection to energy usage and environmental impact considerations.



## Professor Dr Leong Chee Onn

*Head, Center for Cancer and Stem Cell Research, International Medical University Malaysia*

**Area of Expertise:**  
*Molecular Pathogenesis of Cancer and Drug Target Discovery*

Professor Dr Leong Chee Onn has conducted multi-year research focused on understanding of the molecular pathogenesis of cancer and drug target discovery. His studies have provided new insights into the diverse functions of this gene family in the development and spread of cancer. His discovery has contributed to the development of novel diagnostics and therapeutics in targeting the refractory triple-negative breast cancers which led to the significant improvement of the outcome of the disease.



## Professor Dr Lee Yeong Yeh

*Department of Medicine, Universiti Sains Malaysia*

**Area of Expertise:**  
*Neurogastroenterology and Motility*

Professor Dr Lee Yeong Yeh's choice of doing medicine and research in gastroenterology was inspired by a few brilliant clinicians and researchers, including his two most important mentors, Kenneth McColl and Satish Rao. His major research interests lie in gastroesophageal reflux disease, neurogastroenterology, functional gastrointestinal disorders, Helicobacter pylori and gastrointestinal cancers.



## Professor Ir Dr Lim Yun Seng

*Faculty of Electrical and Electronic Engineering, Universiti Tunku Abdul Rahman*

**Area of Expertise:**  
*Smart Grid and Renewable Energy*

Professor Ir Dr Lim Yun Seng's main research focus is on the smart grid solutions for promoting the penetration of renewable energy sources while reducing the cost of electricity to developing countries. He has successfully built a grid-integrated energy storage system in Malaysia to deliver essential services to the power grids with the financial support from AAIBE. He has also collaborated with Newcastle University to build up a smart grid solution under the Newtonship scheme.



## Professor Dr Mohamad Kamal A Rahim

*Faculty of Electrical Engineering, Universiti Teknologi Malaysia*

**Area of Expertise:**  
*Antenna Technology*

Professor Dr Mohamad Kamal's research interest includes the areas of radio frequency, microwave and antennas. He has published over 400 articles in reputable journals and conferences. Throughout his career, he has been invited to deliver expert talk in antenna and microwave related conferences such as International Symposium on Antenna and propagation (ISAP), European conference on Antenna and propagation (EUCAP), and Asia Pacific Microwave conference (APMC).



## Professor Dr Mohd Talib Latif

*Deputy Dean, Faculty of Science and Technology, Universiti Kebangsaan Malaysia*

**Area of Expertise:**  
*Environmental Issues and Assessment*

Professor Dr Mohd Talib Latif's main research work includes the identifying the composition of gases and atmospheric aerosols particularly surfactants in the atmosphere. He has expanded his research on aerosols from sea surface microlayer (SML) and the composition of volatile organic compounds (VOCs) from urban and natural sources. His research group has contributed significantly to the formation of Malaysian New Air Quality Standard and Malaysian Air Pollutants Index.



## Professor Dr Mohd Razman Salim

*Faculty of Civil Engineering, Universiti Teknologi Malaysia*

**Area of Expertise:**  
*Waste Management and Wastewater Treatment Technologies*

For more than 35 years, Professor Dr Mohd Razman has devoted his works in teaching and research in the field of waste management and wastewater treatment technologies. As a researcher under CICHE, SIDA and DUCED programmes, he carried out study on capacity building in wastewater treatment technologies and solid waste management. He was appointed as a member for a task force by the ASM, involving in a study on water and wastewater management in Malaysia.



## Professor Ir Dr Ng Kok Sum

*Head of Business Engagement and Innovation Services, University of Nottingham, Malaysia*

**Area of Expertise:**  
*Chemical Engineering Design and Process Simulation*

Professor Ir Dr Ng Kok Sum's areas of specialisation include optimisation of sustainable value chain of palm oil industry, resource conservation via process integration techniques, synthesis and analysis of biomass processing and integrated bio refineries. He has initiated a cross-disciplinary research centre which focuses on research on the entire value chain of the palm oil industry covering from plantations to consumers called Centre of Sustainable Palm Oil Research (CESPOR).



## Professor Dr Noordin Mohd Yusof

*Faculty of Mechanical Engineering, Universiti Teknologi Malaysia*

**Area of Expertise:**  
*Machining and Production Engineering*

Professor Noordin's interest in Mechanical Engineering has been spurred by his own father who was the Parts and Service Manager prior to his retirement from Ford Motor Company in Singapore. A major focus of his research is on materials and processes where they are improved through various methods to attain desirable process performance as well to make them more sustainable. Through these research projects, he has contributed in terms of manpower development and knowledge dissemination.



## Dr Nordin Ramli

*Senior Staff Researcher, MIMOS*

**Area of Expertise:**  
*Wireless Communication and Technologies*

Dr Nordin is very passionate in conducting R&D in the area of cognitive radio, TV white space, space-time processing, equalisation, adaptive array system and wireless mesh networking, internet of things (IoTs) and big data analytic. Based on his work, he has published over 40 journals and conference papers, and filed more than 30 patents related to wireless communications.



## Professor Dr Rozita Rosli

*Head of Laboratory, UPM-MAKNA Cancer Research Laboratory, Institute of Bioscience, Universiti Putra Malaysia*

**Area of Expertise:**  
*Medical Genetics*

Professor Dr Rozita's current research mainly lies in the application of genomics and proteomics as tools in understanding and combating genetic diseases such as cancer and also infectious diseases. Her recent interest in breast cancer-related lymphedema has generated international links and collaborations. Together with her graduate students, her work has led to the development of DNA vaccines, molecular diagnostic tools, the production of therapeutics from natural products as well as a number of related patents.



## Professor Datin Dr Rubiyah Yusof

*Dean, Malaysia-Japan International Institute of Technology (MJIT), University Teknologi Malaysia*

**Area of Expertise:**  
*Artificial Intelligence, Control Systems and Machine Vision*

Inspired by the philosophy of R&D of the Japanese, Professor Datin Dr Rubiyah focused her research in the area of artificial intelligence, control systems, and machine vision. Most of the research projects which she has been involved in for the last 25 years are towards novel knowledge and impactful to the industries in Malaysia. More importantly, these areas of R&D can give outputs which benefit mankind through automation, which reduces the pain points of human, as well as improving the competitiveness of the industries.



## **Professor Ir Dr Sharifah Rafidah Wan Alwi**

*Director, Process Systems Engineering Centre, Faculty of Chemical and Energy Engineering, Universiti Teknologi Malaysia*

**Area of Expertise:**  
*Chemical and Process Design Engineering*

Professor Ir Dr Sharifah Rafidah loves challenges, enjoys trying new things and looking at ideas and solutions from different angles. Not only is she very active in research, she is also an active consultant and professional trainer. Believing that research should directly benefit the community, Professor Sharifah worked with her research team in Process Systems Engineering Centre (PROSPECT) to develop various software tools for resource management and design in industrial and commercial sectors.



## **Professor Ir Dr Siti Kartom Kamarudin**

*Director, Fuel Cell Institute, Universiti Kebangsaan Malaysia*

**Area of Expertise:**  
*Fuel Cell*

Professor Ir Dr Siti Kartom is a world expert on zero emission energy conversion technologies called fuel cells using hydrogen, alcohols and wastewater as fuel. Her research in Direct Methanol Fuel Cell for Portable Application successfully generates portable electricity from a micro fuel cell. She was honoured with The World Most Influential Minds - listed as top 100 world scientist in engineering.



## **Professor Dr Sharul Kamal Abdul Rahim**

*Faculty of Electrical Engineering, Universiti Teknologi Malaysia*

**Area of Expertise:**  
*Antenna Technology*

Since 2001, Professor Dr Sharul Kamal has been with the Wireless Communication Centre (WCC) UTM. His research interests include Antenna Design, Smart Antenna System and Beamforming Network for 5th Generation (5G) mobile communication. He has secured more than RM2.4 million of research grant internationally and nationally as a head of projects. He has a patent granted and more than 30 patent filling and copyright.



## **Professor Dr Suraini Abd Aziz**

*Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia*

**Area of Expertise:**  
*Industrial and Environmental Biotechnology*

Deep interest in teaching and research has led Professor Dr Suraini to join Department of Biotechnology, Faculty of Food Science and Biotechnology, Universiti Putra Malaysia as a lecturer. Apart from teaching, she had developed research interest in the field of Industrial and Environmental Biotechnology specialised in Bioenergy and Biobased Chemical.



# TRSM 2012-2018

---

Professor Datuk Dr Asma Ismail FASc  
Professor Dr Balbir Singh Mohan Singh FASc  
Professor Dr Mustafa Ali Mohd FASc  
Professor Dr Rahmah Noordin FASc  
Professor Dr Abdul Latif Ahmad FASc  
Professor Dr Abdul Rahman Mohamed FASc  
Professor Datuk Dr Ahmad Fauzi Ismail FASc  
Professor Dr Hamidi Abdul Aziz @ Abdul Rahman  
Professor Dr Hanafi Ismail FASc  
Professor Dr Lee Keat Teong  
Professor Dr Mohd Adzir Mahdi FASc  
Professor Dr Rahinah Ibrahim  
Professor Ir Dr Ramesh Singh Kuldip Singh FASc  
Professor Dr Zainal Arifin Mohd Ishak  
Professor Dr Lai Oi Ming  
Professor Dr Lee Chow Yang  
Professor Dato' Dr Mohamed Shariff Mohamed Din FASc  
Prof Dr Mohd Hair Bejo FASc  
Professor Dato' Dr Nik Muhamad Nik Ab Majid  
Professor Dr Phang Siew Moi FASc  
Professor Dr Tan Soon Guan FASc  
Professor Dr Tan Wen Siang  
Professor Dr Zulkifli Idrus  
Associate Professor Dr Badlishah Sham Baharin  
Dr Kamariah Long  
Professor Dr Mohd Basyaruddin Abdul Rahman FASc  
Professor Dr Mohd Zobir Hussein  
Professor Dato' Dr Jafri Malin Abdullah FASc  
Professor Dato' Ir Dr Abdul Wahab Mohammad FASc  
Professor Ir Dr Cheong Kuan Yew  
Professor Dr Hamdani Saidi FASc  
Professor Dato' Dr Kamaruzzaman Sopian FASc  
Professor Dr Luqman Chuah Abdullah @ Chuah Teong Guan  
Professor Dr M Iqbal Saripan  
Associate Professor Dr Mohd Mustafa Al Bakri Abdullah  
Professor Dato' Dr Mohd Yusof Othman FASc  
Professor Dr NorAishah Saidina Amin  
Professor Ts Dr Ruzairi Abdul Rahim  
Professor Ir Dr Sheikh Hussain Shaikh Salleh  
Professor Dr Zainuddin Abd Manan  
Dato' Dr Abd Latif Mohmod FASc

Professor Datin Paduka Dato' Dr Aini Ideris FASc  
Professor Dr Chong Shu Chien @Alexander  
Professor Dr Darah Ibrahim  
Professor Dr Fatimah Md Yusoff FASc  
Professor Dr Ibrahim Che Omar FASc  
Professor Dr Mohd Ali Hassan FASc  
Professor Dr Ng Wing Keong FASc  
Professor Dr Paridah Md Tahir FASc  
Professor Dr Raja Noor Zaliha Raja Abd Rahman  
Professor Dr Shamshuddin Jusop FASc  
Professor Dr Tan Chin Ping  
Dr Chantara They Ratnam  
Professor Datuk Dr Halimaton Hamdan FASc  
Professor Dr K Sudesh Kumar C Kanapathi Pillai  
Dr Meor Yusoff Meor Sulaiman  
Professor Dr Nor Azah Yusof  
Professor Dr Taufiq Yap Yun Hin FASc  
Professor Emeritus Dr Fun Hoong Kun FASc  
Professor Dr Hairul Azhar Abdul Rashid  
Professor Dr Zainuriah Hassan FASc  
Professor Dr Adeeba Kamarulzaman FASc  
Professor Dr Ishwar Singh Parhar  
Professor Dr Jamunarani S. Vadivelu FASc  
Professor Dr Rosnah Mohd Zain FASc  
Professor Dr Shamala Devi Sekaran FASc  
Dr Teo Soo Hwang FASc  
Professor Ir Dr Abdul Aziz Abdul Raman FASc  
Professor Ir Dr Abdul Halim Mohamed Yatim  
Associate Professor Dr Ir Abdul Manaf Hashim  
Professor Dr Ahmad Zuhairi Abdullah  
Associate Professor Dr Che Mohd Ruzaidi Ghazali  
Professor Ir Dr Goi Bok Min FASc  
Professor Dr Hazizan Md Akil  
Brigadier General Datuk Prof Emeritus  
Dr Kamarudin Hussin FASc  
Professor Ir Dr Mariatti Jaafar @ Mustapha  
Professor Ir Dr Masjuki Hassan  
Professor Dr Mohammad Nazri Mohd Ja'afar  
Professor Ir Dr Mohd Zainal Abidin Ab Kadir  
Professor Dr Nasrudin Abd Rahim FASc  
Professor Ir Dr Sim Kok Swee  
Professor Dr Syed Alwee Aljunid Syed Junid  
Professor Dr Uda Hashim  
Professor Dr Abdul Rahman Omar

Professor Dr Jinap Selamat FASc  
Professor Dr Thong Kwai Lin  
Professor Dr S Vikineswary Sabaratnam FASc  
Professor Datuk Dr Abdul Khalil Shawkataly  
Professor Dr Khalijah Awang FASc  
Professor Dr Noorsaadah A Rahman FASc  
Professor Dr Ramesh T Subramaniam FASc  
Professor Dr Rauzah Hashim FASc  
Professor Dr Abdul Kariem Mohd Arof  
Professor Dr Wan Ahmad Tajuddin Wan Abdullah FASc  
Professor Dr Mohamed Azmi Ahmad Hassali  
Professor Dr Wong Kum Thong  
Professor Dr Ani Idris  
Professor Dr Azmi Mohd Shariff FASc  
Professor Dr Farid Nasir Ali  
Professor Ir Dr Mohd Omar Ab Kadir  
Professor Ir Dr Mohd Sobri Takriff  
Professor Dr Nik Meriam Nik Sulaiman  
Professor Dr Robiah Yunus  
Professor Ir Dr Srimala Sreekantan  
Professor Dr Othman Sulaiman  
Professor Dr Rofina Yasmin Othman FASc  
Professor Dr Rokiah Hashim  
Dr Nor Azah Mohamad Ali  
Professor Dr Azman Hassan  
Professor Ir Dr Dominic Foo Chwan Yee  
Professor Dr Latiffah Abdul Latiff  
Professor Dr Liong Min Tze  
Dr Loh Soh Kheang  
Professor Sr Dr Mazlan Hashim FASc  
Professor Dr Noor Hayaty Abu Kasim  
Professor Ir Dr Suzana Yusup  
Professor Dr Tharek Abdul Rahman FASc  
Professor Dr Yvonne Lim Ai Lian FASc  
Associate Professor Dr Cheah Yoke Kqueen  
Professor Dr Cheong Sok Ching  
Professor Dr Chua Kek Heng  
Ir Dr Leong Wai Yie  
Professor Dr Mohamed Ridza Wahiddin FASc  
Professor Ir Dr Mohd Azlan Hussain  
Professor Dr Mohd Nordin Adlan  
Professor Dr Mohd Rafii Yusop  
Associate Pofessor Dr Mohd Yunus Abd Shukor  
Professor Dr Nor Hadiani Ismail  
Professor Dr Shaliza Ibrahim

Professor Dr Yeap Guan Yeow  
Professor Dr Zainal Arifin Ahmad  
Professor Dr Abdul Rashid Mohamed Shariff  
Associate Professor Ir Dr Aduwati Sali  
Professor Dr Ahmad Zaharin Aris  
Professor Dr Chai Siang Piao  
Associate Professor Dr Chan Yoke Fun  
Professor Dr Chong Kok Keong  
Dr Hafizal Mohamad  
Professor Dr Ida Idayu Muhamad  
Professor Dr Lean Hooi Hooi  
Professor Dr Lee Yeong Yeh  
Professor Dr Leong Chee Onn  
Professor Dr Lim Yun Seng  
Professor Dr Mohamad Kamal A Rahim  
Professor Dr Mohd Razman Salim  
Professor Dr Mohd Talib Latif  
Professor Dr Ng Kok Sum  
Professor Dr Noordin Mohd Yusof  
Dr Nordin Ramli  
Professor Dr Rozita Rosli  
Professor Dr Rubiyah Yusof  
Professor Ir Dr Sharifah Rafidah Wan Alwi  
Professor Dr Sharul Kamal Abdul Rahim  
Professor Dr Siti Kartom Kamarudin  
Professor Dr Suraini Abd Aziz

Contemporary scientific challenges often benefit from investigators with diverse backgrounds and expertise. Thus, bringing together of talented young scientists creates new opportunities for better solutions to both national and international challenges. Furthermore, the exchange of best practices amongst young scientists across disciplines could further expand the opportunities for career development of young scientists in any country. To achieve this, there is a need for a strong platform where top young scientists can interact, coordinate, and organise to meet these challenges.

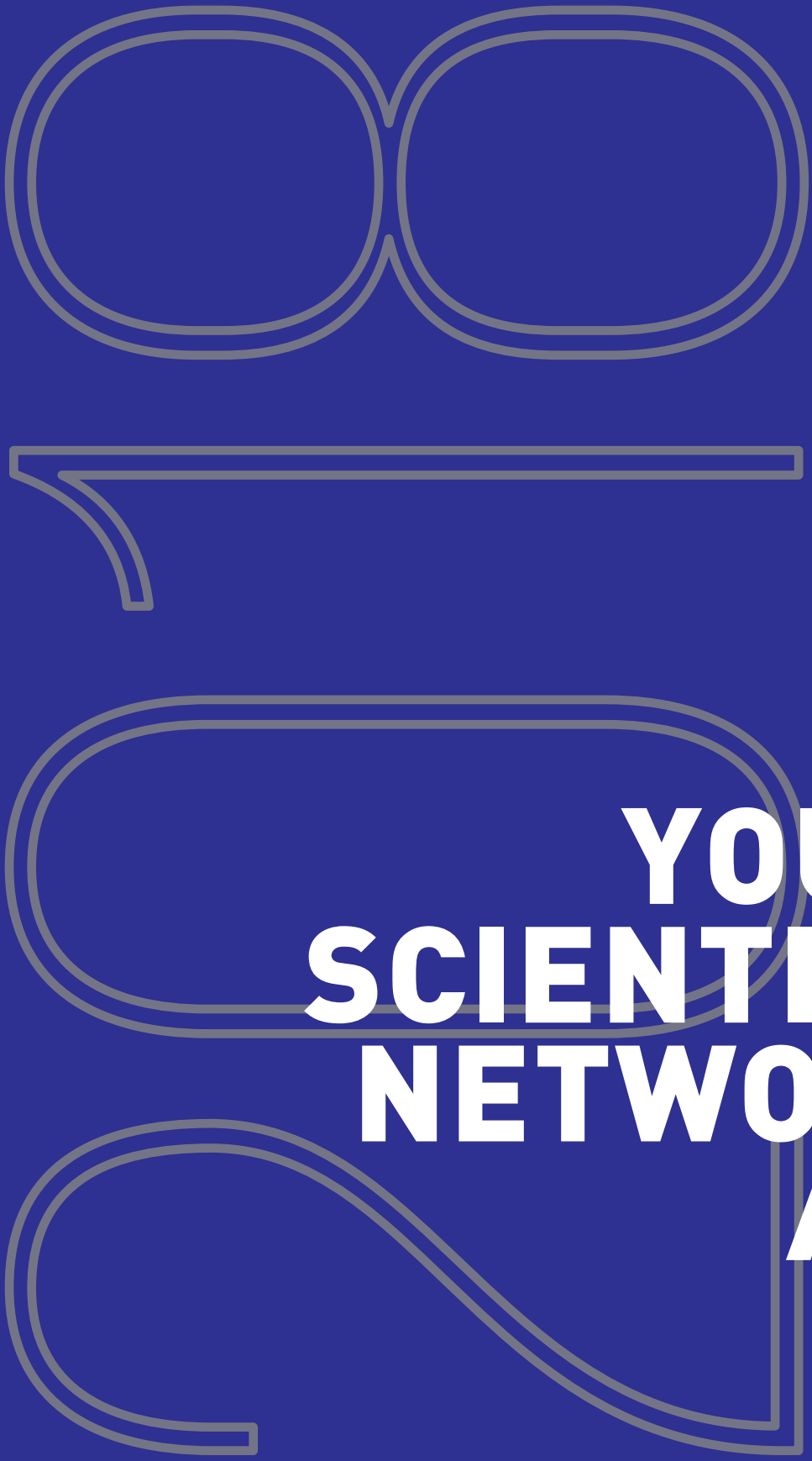
The Young Scientists Network-Academy of Sciences Malaysia (YSN-ASM) was officiated at the YSN-ASM Inaugural Colloquium in December 2012 with the following objectives:

- represent the voice of young Malaysian scientists on national and international issues and give them a platform to influence policy decisions
- facilitate networking opportunities among young and senior scientists to exchange knowledge and experiences
- engage young scientists to be involved in addressing national issues using scientific knowledge and technology through interdisciplinary approaches and contribute towards the development of scientific capacity and awareness in Malaysia
- promote career in science as the choice for young people to ensure scientific progress and sustainability in the country

YSN-ASM intends to function as a National Young Academy (NYA) that will link with the Global Young Academy (GYA). To date, YSN-ASM has linked up with the Global Young Academy of Sciences as well as other young academies to provide opportunities for Malaysian young scientists to interact internationally with other young scientists.

The Network consists of 86 members and 101 affiliates from various disciplines and institutions. It aims to create a network of young Malaysian scientists who are not only excellent in their field of study but also demonstrate a passion to contribute to society and collaborate with colleagues from diverse fields and background.

Apart from that, the Network also aims to inspire the future generation of scientists as well as early career scientists to work together as affiliate members towards ensuring the success of YSN-ASM programmes.



# YOUNG SCIENTISTS NETWORK- ASM

Professor Dr Abhimanyu Veerakumarasivam  
Professor Dr Liong Min Tze  
Professor Dr Lee Keat Teong  
Associate Professor Dr Mimi Haryani Hassim  
Associate Professor Dr Chan Kok Meng  
Dr Normi Mohd Yahaya  
Associate Professor Dr Tan Kar Ban  
Professor Dr Ahmad Zaharin Aris  
Associate Professor Dr Leong Chee Onn  
Dr Michael Ling King Hwa  
Associate Professor Dr Chen Soo Kien  
Professor Ir Dr Mohd Zainal Abidin Ab Kadir  
Professor Ir Dr Sharifah Rafidah Wan Alwi  
Associate Professor Dr Zainovia Lockman  
Dr Cheah Pike See  
Professor Dr Lee Yeong Yeh  
Associate Professor Dr Ahmad Taufek Abdul Rahman  
Professor Ir Dr Chin Nyuk Ling  
Professor Ir Dr Leong Wai Yie  
Professor Dr M. Iqbal Saripan  
Associate Professor Dr Rajesh Ramasamy  
Professor Dr Denny Ng Kok Sum  
Associate Professor Dr Lim Jit Kang  
Associate Professor Dr Sreeramanan Subramaniam  
Professor Dr Chow Wen Shyang  
Associate Professor Dr Chan Yoke Fun  
Associate Professor Dr Chai Siang Piao  
Dr Foo Keng Yuen  
Associate Professor Dr Zulfadzli Yusoff  
Associate Professor Dr Mohd Faizul Mohd Sabri  
Dr Yong Kok Chong  
Professor Dr Christopher Ho Chee Kong  
Associate Professor Dr Mohd Hafiz Dzarfan Othman  
Associate Professor Dr Nirmala Bhoo Pathy  
Dr Chan Chee Seng  
Dr Lai Chin Wei  
Associate Professor Dr Ooi Boon Seng  
Associate Professor Ir Dr Aduwati Sali  
Associate Professor Dr Asrul Akmal Shafie  
Associate Professor Dr Wan Azlina Wan Ab Karim Ghani  
Associate Professor Dr Rosdiadee Nordin  
Associate Professor Dr Ng Sing Muk  
Associate Professor Dr Asrulnizam Abd Manaf  
Dr Mohd Sukor Su'ait  
Associate Professor Dr Yumi Zuhani Has-yun Hashim

Dr Lim Jeng Shiun  
Dr Oon Chern Ein  
Associate Professor Dr Abdul Rahim Othman  
Associate Professor Dr Teh Su Yean  
Ir Dr Ng Poh Kiat  
Dr Chia Yoke Yin  
Associate Professor Dr Ong Boon Hoong  
Dr Faisal Ali Anwarali Khan  
Dr Ho Wai Shin  
Associate Professor Dr Fatin Aliah Phang  
Dr Chai Lay Ching  
Dr Chau De Ming  
Dr Mohd Ghows Mohd Azzam  
Dr Yap Wing Fen  
Dr Lee Khai Ern  
Dr Afnizanfaizal Abdullah  
Associate Professor Dr Ang Bee Chin  
Dr Baharudin Ibrahim  
Dr Juan Joon Ching  
Dr Kenny GL Woon  
Associate Professor Dr Lim Hong Ngee  
Associate Professor Dr Lionel In Lian Aun  
Associate Professor Dr Nik Fadzly Nik Rosely  
Dr Oh Pei Ching  
Dr Puan Chong Leong  
Dr Shahiron Shahidan  
Associate Professor Dr Siti Fauziah Toha @ Tohara  
Dr Tee Kok Keng  
Dr Wahizatul Afzan Azmi  
Associate Professor Dr Ahmad Atif  
Associate Professor Dr Nafarizal Nayan  
Associate Professor Dr Low Siew Chun  
Dr Cindy Teh Shuan Ju  
Dr Lee Hooi Ling  
Dr Khalisanni Khalid  
Dr Tan Yee Shin  
Dr Razinah Sharif @ Mohd Sharif  
Dr Paul Cliff Simon Divis  
Dr Phan Chia Wei



**The Academy of Sciences Malaysia (ASM)** came into force on February 1995 and was established under the Academy of Sciences Malaysia Act 1994. ASM performs an unparalleled service by bringing together experts in all areas of scientific and technological endeavor to address critical national issues relating to Science, Engineering, Technology and Innovation as well as to provide strategic STI Input to the government.

---

Level 20, West Wing, MATRADE Tower, Jalan Sultan Haji Ahmad Shah, off Jalan Tuanku Abdul Halim, 50480 Kuala Lumpur

T: +6 (03) 6203 0633 / F: +6 (03) 6203 0634

[www.akademisains.gov.my](http://www.akademisains.gov.my)