

# Professor Ts Dr Muhammad Hisyam Lee FASc FAPM

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## Profile

Dr Hisyam is an academic and consultant with extensive expertise in statistical quality control, forecasting models, environmental statistics, and applying statistical methods in engineering and technology. With a PhD in Mathematics from Universiti Teknologi Malaysia, he has made significant contributions to academia and industry over the past three decades.

His leadership roles include serving as Director of Data Management and Analytics and Deputy Director of Analytics and Institutional Research at UTM, where he led the development of data-driven strategies and enhanced university-wide research management processes. He also played a pivotal role in IT management, overseeing critical projects such as developing RADIS and a Power BI data visualisation platform.

Dr Hisyam is a recognised figure in academic governance. He has contributed to strategic decision-making as a long-standing member of the UTM University Senate and its Standing Committees. His educational leadership extends to his roles as an adjunct and visiting professor at prestigious institutions, his involvement in external examinations, and his board memberships.

He has been a key player in Malaysia's academic quality assurance. He serves as Chair and Panel Assessor for numerous MQA accreditation audits and MyRA research assessments across leading Malaysian universities. Various national organisations have sought his consulting expertise, including Tenaga Nasional Berhad, the Economic Planning Unit, and the Ministry of Science, Technology, and Innovation.

Beyond his academic and professional achievements, Dr Hisyam is deeply committed to community engagement. He has served in various leadership roles within Parent-Teacher Associations at primary and secondary schools in Johor. His education and community service contributions further highlight his dedication to nurturing future generations.

He has been honoured as a Fellow of the Academy of Sciences Malaysia (FASc) and the Academy of Professors Malaysia (FAPM), among other awards. His research profiles are well-documented on Scopus and Web of Science, where his work continues to influence the field of statistics and beyond.

## Education

- **PhD in Mathematics**, Universiti Teknologi Malaysia, 2003
- **Master of Science in Statistics**, Universiti Kebangsaan Malaysia, 1994
- **Bachelor of Science (Honours) in Statistics**, Universiti Kebangsaan Malaysia, 1991

## Professional Honours

- **Fellow (FASc title)**, Academy of Sciences Malaysia (ASM), 2024
- **Fellow (FAPM title)**, Academy of Professors Malaysia (APM), 2021

## Professional Recognition

- **Professional Technologist (Ts. title)**, Malaysia Board of Technologists (MBOT), 2020

## Academic Leadership and Governance

- **University Senate**, Universiti Teknologi Malaysia, since 2014
  - Contributed to strategic decision-making, policy development, and overall governance.
- **Standing Committees of University Senate (JKTS)**, Universiti Teknologi Malaysia, since 2014
  - Academic Policy and Entity, Academic Curriculum and Quality Assurance, Library and Educational Resources, Examination and Graduation, Research and Innovation, and Industry and Community Linkages.

## Administrative and Leadership Roles

- **Director**, Data Management and Analytics, UTM (2021-2023)
  - Led the development of data-driven strategies for academic and institutional research.
  - Managed university-wide data analytics for strategic decision-making.
- **Deputy Director**, Analytics and Institutional Research, UTM (2018-2021)
  - Oversaw institutional research initiatives, contributing to policy development.
- **Manager (IT)**, Deputy Vice-Chancellor (Academic & International) Office, UTM (2014-2018)
  - Led a team to develop and implement a Power BI data visualisation platform, enabling comprehensive analysis and reporting of academic-related data for enhanced decision-making.
  - Developed and managed the implementation of a meeting management system for the JKTNCA to streamline and optimise meeting coordination and documentation processes.
- **Manager (IT)**, Research Management Centre, UTM (2008-2012)
  - Oversaw the implementation of IT solutions that enhanced research management processes, contributing to the overall efficiency of the Research Management Centre.
  - Led IT teams and spearheaded projects such as developing the RADIS system, which streamlined online research project management.

## Academic Appointments

- **Adjunct Professor**, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, since 2021
- **Board of Studies (BoS)**, Centre for Mathematical Sciences, Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) (2022-2024)
- **External Examiner of Academic Programme**
  - School of Quantitative Sciences, Universiti Utara Malaysia (UUM) (2023-2025)
  - Faculty of Science and Technology, Universiti Kebangsaan Malaysia (UKM) (2021-2023)
  - Faculty of Applied and Human Sciences, Universiti Malaysia Perlis (UniMAP) (2021-2023)
  - Faculty of Applied Sciences and Technology, Universiti Tun Hussein Onn Malaysia (UTHM) (2024-2026)
  - College of Computing, Informatics, and Mathematics, Campus Kuala Terengganu, Universiti Teknologi MARA (UiTM) (2024-2025)
- **Visiting Professor**
  - Faculty of Engineering, Universitas Diponegoro (UNDIP) (2024)
  - Faculty of Applied Sciences and Technology, Universiti Tun Hussein Onn Malaysia (UTHM) (2021-2023)

## Awards and Recognitions

- **Lecturer Excellence Award**, SAS Malaysia (2008)
- **World Class Professor Award**, Institut Teknologi Nopember, Indonesia (2018, 2020)
- **Mitra International Partner Award**, Institut Teknologi Nopember, Indonesia (2023)

## Teaching Experience

- **Courses Taught:** Undergraduate and postgraduate courses in statistics, including Experimental Design, Statistical Process Control, Multivariate Statistical Analysis, and Research Methodology.

## Supervision

- **PhD Students Supervised:** Over 20 PhD candidates, including research on control charts, statistical learning, and environmental statistics.

## Research Interests

Statistical quality control, forecasting models, environmental statistics, and statistical applications in engineering and technology.

## Research Profiles

- **Research Grant:** UTM Scholars
- **Scopus Author ID:** 56943557500
- **Web of Science ResearcherID:** C-9063-2011

## Editorial Roles

- **Al-Radidain Journal of Computer Sciences and Mathematics**, University of Mosul, since 2024
- **Inferensi**, Insitut Teknologi Sepuluh Nopember (ITS Surabaya), since 2021
- **Teknika: Jurnal Sains dan Teknologi**, Universitas Sultan Ageng Tirtayasa, since 2021
- **Data Analytics and Applied Mathematics (DAAM)**, Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), since 2020
- **Transaction in Mathematical and Computational Sciences**, University of Sargodha, since 2020
- **Jurnal Teknologi**, Universiti Teknologi Malaysia, since 2018
- **MATEMATIKA**, Universiti Teknologi Malaysia, since 2007
- **Journal of Statistical Modeling & Analytics (JOSMA)**, Institut Statistik Malaysia (2020-2022)
- **Communication in Science & Technology** (2016-2020)

## Professional Affiliations

- **Life Member**, Institute of Mathematical Statistics (ISM), since 2016
- **Life Member**, Institute of Statistics Malaysia (ISM<sub>Y</sub>), since 2010.
  - Vice President (2012-2014) and Council Member (2008-2012)
- **Life Member**, Islamic Countries Society of Statistical Sciences (ISOSS), since 2010
- **Life Member**, Malaysian Mathematical Sciences Society (PERSAMA), since 1999.

## Contributions to MQA (Malaysian Qualifications Agency)

### Institutional Academic Quality Assurance and Accreditation Audits

- **2024:** Status Certificate Audit for Self-Accreditation at UCSI University
- **2023:** Compliance Audit for Self-Accreditation at Universiti Teknologi Petronas
- **2022:** Compliance Audit for Self-Accreditation at the University of Nottingham Malaysia

## Academic Programme Accreditation Audits

- **2020:** Chair for the Audit of the Doctor of Philosophy Programme (MQA/FA 14324), Universiti Malaysia Pahang (UMP); Chair for the Final Accreditation Audit of B.Sc. (Industrial Mathematics) (MQA/FA 9029), Universiti Malaysia Pahang (UMP), Jan.
- **2019:** Chair for the New Fast-Track Postgraduate Programme Audit (MQA/FA 10910), Universiti Sultan Zainal Abidin (UniSZA), Sept.; Assessment Panel for Compliance Audit of Full Accreditation Requirements for Postgraduate Programmes, Universiti Malaysia Perlis (UniMAP), Oct.; MQA-appointed Panel Assessor for Final Accreditation of Bachelor of Science (Mathematics with Computer Graphics) and Bachelor of Science (Mathematics with Economics), Nov.
- **2018:** Chair of Compliance Audit for 'Deemed Accredited' B.Sc. with Honours (Industrial Statistics), Universiti Utara Malaysia (UUM), Nov.; MQA-appointed Panel Assessor for Compliance Audit of 'Deemed Accredited' Bachelor of Science with Honours (Decision Science), Nov.; Panel Assessor for Final Accreditation of Bachelor of Science (Actuarial Science), Universiti Sains Islam Malaysia (USIM), Nov.; Panel Assessor for Final Accreditation of Bachelor of Science (Mathematics) with Education, Universiti Pendidikan Sultan Idris (UPSI), Oct.
- **2017:** Chair of Provisional Accreditation Audit of Master in Marine Statistics (MQA/PA 9120), Universiti Malaysia Terengganu (UMT), April; Chair of Provisional Accreditation Audit of B.Sc. (Statistics with Education) (MQA/PA 938), Universiti Pendidikan Sultan Idris (UPSI), June; Chair of Provisional Accreditation Audit of M.Ed. Mathematics with IT (MQA/PA 9122), Universiti Malaysia Terengganu (UMT), July; Chair of Final Accreditation Audit of B.Sc. (Industrial Statistics) (MQA/FA 0728), Universiti Tun Hussein Onn (UTHM), March; MQA-appointed Chairperson for Provisional Accreditation Audit of Master in Mathematics (MQA/PA 9121), Universiti Malaysia Terengganu (UMT), Jan.; Panel Assessor for Provisional Accreditation of Master of Science (Industrial Computing), Universiti Malaysia Pahang (UMP), March; Panel Assessor for Re-accreditation of Bachelor of Science in Statistics, Universiti Malaya (UM), March.
- **2016:** Chair of Final Accreditation Audit of Diploma in Quantitative Science (MQA/FA 1119), Universiti Selangor (UniSel), March; Chair of Final Accreditation Audit of M.Sc. (Applied Mathematics) (MQA/FA 1349), Universiti Tun Hussein Onn (UTHM), Jan.; MQA-appointed Panel Assessor for Final Accreditation of PhD in Science, Universiti Teknologi Petronas (UTP); Panel Assessor for Final Accreditation of Bachelor of Science (Technology Mathematics), Universiti Tun Hussein Onn (UTHM), Feb.; Panel Assessor for Final Accreditation of Master of Science (Industrial Statistics), Universiti Tun Hussein Onn Malaysia, Jan.
- **2015:** Chair of Final Accreditation Audit of B.Sc. (Hons) Mathematics and Economics (MQA/FA2395), College of Arts and Technology HELP, Kuala Lumpur; Chair of Final Accreditation Audit of M.Sc. (Engineering Mathematics) (MQA/FA0510), Universiti Malaysia Perlis (UniMAP), Aug.
- **2014:** Appointed by MQA as Panel Assessor for Audit and Accreditation of Postgraduate Programmes at the Faculty of Science and Technology, UKM.
- **2011:** Chair of Provisional Accreditation Audit of Diploma in Quantitative Science (MQA/PA 1119), Universiti Selangor (UNISEL), Kampus Berjuntai Bestari.

## Contributions to MyRA (Malaysia Research Assessment)

### Institutional Research Assessment Roles

- **2024:** Site Assessment for MyRA Year 2022 at UKM.
- **2023:** Site Assessment for MyRA Year 2022 at UM.
- **2019:** Achievement Assessment for MyRA Year 2018 at UTP, USM, UM, UKM; Assessment for MyRA 2018 IPTS (Private Institutions).
- **2018:** Site Assessment for MyRA Year 2017 at UPM, UKM, UM, and USM.

- **2017:** Assessor Panel for Triennial Site Assessment for MyRA achievements (Years 2013 & 2015) at Universiti Kebangsaan Malaysia (UKM), Universiti Sains Malaysia (USM), and Universiti Malaya (UM); Site Assessment for MyRA Year 2016 at UKM, Universiti Putra Malaysia (UPM), UM, and USM; Document Assessment for MyRA Year 2016 for all public universities, including Universiti Teknologi Petronas (UTP), Universiti Tenaga Nasional (UNITEN), and Multimedia University (MMU).
- **2016:** Assessor Panel for Centralised MyRA Year 2015 achievements.
- **2015:** Assessor Panel for Star Rating Assessment of MyRA at Universiti Sains Malaysia (USM), Universiti Tun Hussein Onn Malaysia (UTHM), Universiti Sains Islam Malaysia (USIM), Universiti Teknikal Malaysia Melaka (UTeM), and Universiti Malaysia Pahang (UMP).

## Consulting Expertise

- **Institute for Youth Research Malaysia, Ministry of Youth and Sports (2023):** Contributed to the development of the Malaysia Youth Index (MYI) 2023 and the Malaysian Youth Mental Health Index; facilitated the Technical Working Group (TWG) Workshop for #MYIndexBelia 7.0; involved in the development of the Malaysian Youth Indeks (IBM) Analytical Model for the Year 2024.
- **Universiti Putra Malaysia (UPM) (2020):** Participated in the reassessment session of the Institute for Mathematical Research (INSPEM), providing expert evaluation and strategic recommendations.
- **Ministry of Natural Resources and Environment (2014):** Enhanced the Environmental Performance Index (EPI) for Malaysia, aiding in the assessment and improvement of environmental sustainability practices.
- **Ministry of Science, Technology and Innovation (MOSTI) (2012):** Conducted the isotopes mapping for ionising radiation across Peninsular Malaysia, contributing to national safety and environmental monitoring.
- **Economic Planning Unit (EPU) (1996):** Led the study on the demand and supply of labour and training needs in the construction industry in Peninsular Malaysia until 2005.
- **Tenaga Nasional Berhad (1992 - 1994):** Conducted a study on public preferences for energy conservation technology, providing insights into customer behaviour and preferences.

## Institutional Development Activities

### Leadership and Committee Roles

- **Led the Graduate Employability Analysis Task Force, Ministry of Higher Education (2020)**
  - Directed a task force to analyse graduate employability trends, influencing policy development and strategic planning at the national level.
- **Impact Study Contributor, Graduate Tracer Study System and MyMoheS, MoHE (2017)**
  - Conducted impact assessments for the Graduate Tracer Study System and MyMoheS, providing actionable insights for improving graduate employability tracking.
- **Led the Pre-Audit Evaluation Panel, Maintenance of Self-Accreditation Status, UTM (2023)**
  - Spearheaded the pre-audit evaluation process, ensuring that UTM met the criteria to maintain its self-accreditation status.
- **Led the Monitoring Performance Assessment and Career Advancement of Academic Staff Committee, UTM (2020-2022)**
  - Led efforts to monitor and assess academic staff's performance and career advancement, ensuring alignment with UTM's strategic goals.

- **Led the Development of the Differentiated Career Pathways (DCP) System**, Universiti Teknologi Malaysia (2017-2019)
  - Guided the creation of a digital platform for the DCP system, enabling tailored career progression for UTM academic staff.
- **Institutional Audit Committee Member**, Self-Accreditation Status, UTM (2017-2018)
  - Played a key role in maintaining UTM’s self-accreditation status through rigorous institutional audits and evaluations.
- **Led the Committee for the Development of the University Academic Administration System**, Universiti Teknologi Malaysia (2016-2018)
  - Oversaw the design and implementation of a comprehensive academic administration system, streamlining administrative processes within the university.
- **Committee Member**, Academic Administrator Replacement Plan, UTM (2016-2018)
  - Contributed to the development and execution of a succession plan for academic administrators, ensuring leadership continuity within UTM.
- **Implementation Committee Member**, Integrated-CGPA (iCGPA), UTM (2016-2017)
  - Assisted in implementing the Integrated-CGPA system, aligning it with UTM’s educational objectives and enhancing student evaluation methods.
- **Working Committee Member**, UTM Research Computing (2016)
  - Supported enhancing research computing capabilities at UTM, facilitating advanced computational research activities.
- **Working Committee Member**, Differentiated Career Pathways (DCP), UTM (2015)
  - Contributed to developing differentiated career pathways, offering tailored career progression opportunities for academic staff.
- **Working Committee Member**, Calculation Method of Academic Staff Workload, UTM (2014-2016)
  - Played a crucial role in developing a comprehensive workload calculation method for academic staff, ensuring fair and transparent workload distribution.
- **Led the Quotation Evaluation Technical Committee**, RMC, UTM (2011-2013)
  - Guided the assessment of quotations and bids for research projects, optimising resource allocation and procurement processes.
- **Led the Technical Evaluation Committee**, Research Management Centre, UTM (2010-2011)
  - Spearheaded the evaluation of technical bids and proposals, ensuring adherence to UTM’s research objectives and standards.
- **Led the Judges Committee**, 13th Industrial Art and Technology Exhibition, UTM (2011)
  - Directed the evaluation process for innovative projects and exhibits, contributing to promoting technological advancements within UTM.

## Community and Educational Engagement

### Parent-Teacher Association (PIBG) Roles

- **2002/2003:** Vice Chairman of Parent-Teacher Association (PIBG), Primary School of Senai (SKPU), Johor.
- **2003/2004, 2005/2006:** Vice Chairman of Parent-Teacher Association (PIBG), Primary School of Senai (SK Senai), Johor.
- **2006/2007, 2007/2008:** Chairman of Parent-Teacher Association (PIBG), Primary School of Senai (SK Senai), Johor.
- **2011/2012:** Committee Member of Parent-Teacher Association (PIBG) at Primary School of Putra Utama (SKPU) and Secondary School of Bandar Putra (SKMBP), Kulai, Johor.
- **2012/2013:** Vice Chairman of Parent-Teacher Association (PIBG) at Primary School of Putra Utama (SKPU); Committee Member of Parent-Teacher Association at Secondary School of Bandar Putra (SKMBP), Kulai, Johor.
- **2014/2015:** Chairman of Parent-Teacher Association (PIBG) at Primary School of Putra Utama (SKPU); Committee Member of Parent-Teacher Association (PIBG) at Secondary School of Bandar Putra (SKMBP), Kulai, Johor.
- **2015/2016:** Committee Member of Parent-Teacher Association (PIBG) at Secondary School of Bandar Putra (SKMBP), Kulai, Johor.