

## Personal Particulars

PROF EMERITUS DATO' DR TORLA BIN HASSAN  
DSAP, PSK



## Professional Career Summary

Prof Emeritus Dato' Dr Torla Hassan, was vice Chancellor of MUM, Tanzania 2019 – 2021, and Deputy Rector (Academic and Planning) of IIUM, 2015 - 2017, received his PhD (Physics) from the University of Stirling, Scotland, in 1988, becoming the first Malaysian to have studied quantum mechanics versus Einstein's theory of Local Realism. Before that, he was an Academic Assistant at the University of Kuwait, where he obtained his MSc and BSc (*Nuclear and Molecular Physics*).

He was also a student at the Religious Institute of the State of Kuwait, *Al-Ma'had AlDini*, which is widely recognized in the Islamic world as one of the best institutions of its kind.

He joined IIUM in 1984, a few months after the university was established. Those who know of his contribution to IIUM have described it as unique, pointing to the fact that he has been the only academic who has the required qualification to serve as Dean of various and diverse faculties from 1997 to 2015. He was the first IIUM staff sent to Kuantan in 1995 to establish the pre-Medical programme. He was the founding Dean of Science and also of the two Faculties of Laws and Islamic Revealed Knowledge at the Terengganu branch campus. He served twice as the Dean of the International Institute of Islamic Thought and Civilization (ISTAC). He was also the Dean of the Centre for Foundation Studies.

He has been able to carry out these responsibilities because fate has favoured him with a combination of attributes: his education and upbringing have enabled him to master both scientific and Islamic religious knowledge and to converse fluently in 4 different languages.

With regard to his credibility as a scholar of the physical sciences, he has published articles in some of the most prestigious international journals. He is perhaps the first and among very few Malaysians who has managed to get work published in *Physical Review Letters*, which scholars consider to be the world's top academic journal for physics.

He has also published works on issues of Islamic interest in the form of text books in Arabic used by thousands of IIUM students.

He has represented Malaysia in various international conferences, such as the USIslamic World Forum in Doha. He has also obtained many awards in international competitions for innovators and inventors, including gold medals in Geneva and Seoul.

Although his basic training was in physics, his main interest and passion cuts across the traditional Islamic disciplines, such as ethics, *usul al din*, *shariah*, and civilization. He has taught many different courses at both undergraduate and postgraduate levels, ranging from mathematics and advanced quantum mechanics to ethics, *usul al din* and *usul al fiqh*.

During his tenure as the Dean of Science, members of the kulliyah's academic staff were able to prove that they were the most productive among IIUM kulliyahs in research and scientific publication.

He put to good use his passion for Islamic religious studies and his understanding of the various conflicting thoughts and ideas within the Islamic cultural heritage. He guided academics towards consolidating and expanding the curricular. One of his biggest concerns was to ensure that IIUM programmes would reflect, as much as possible, the ethical values, the richness and the diversity of the Islamic intellectual heritage. He managed to break some ground. The professors could appreciate the need to go into areas that IIUM had hitherto ignored.

Thus he proposed an overhaul so that the narrow outlook of the programme structure would become more balanced and holistic, which was a big departure from the old paradigm. Since this exercise of introducing new compulsory courses based on the newly developed structure was so important, most professors agreed that ample time had to be given. It is hoped that IIUM will truly become a garden of knowledge and virtue where the component of virtue is equally emphasized.

He served as Dean of the Centre for Foundation Studies (CFS) of IIUM from 2012 until 2015. During this period he restructured the study programme from two years to one year only. He managed to save RM 500 million of the university development budget. He was also able to reduce operational expenditure from RM 50 million annually to RM 25 million. The number of teaching and administrative staff was also reduced by 40%.

Among his leadership qualities is that he was successful in pooling academic strength and motivating people to accomplish common goals. His world class quality is proven when he scored the highest (99th percentile in 4 items) from the assessment made by the American Management Association (AMA). The results mean that out of 100 world leaders assessed there are 99 of them who are below him. The full result of the assessment and the detail description are attached.

### **Summary: Strength, Uniqueness and Special Qualities**

1. Staff of IIUM since its inception.
2. Professor since 2001.
3. Proficiency in 4 languages.
4. Strong international network.
5. Strong background in science, physics and mathematics.
6. Strong background in Islamic religious studies: Ethics, *fiqh*, *usul fiqh*, Islamic Economics, and Islamic thought and civilization.
7. Over 50 international publications.
8. The first Malaysian who has published an article in *Physical Review Letters* (*PRL* is one of the world's most prestigious journals).
9. A member of ***Shariah Index*** research group.
10. Gold medals from Geneva and Seoul.
11. Dean of 5 different faculties (Science, Laws and IRK, Centre for Foundation Studies and ISTAC).
12. Founding dean of Faculty of Science.
13. Overseer of the establishment of 2 branch campuses – Kuantan (Pre-Medical) and Terengganu (for Laws and IRK).
14. Malaysian representative at international forums (Doha and Tashkent).
15. Visiting scholar to more than 40 countries as a researcher and as an officer to promote the university.
16. A member of the Editorial Boards of 9 international refereed academic journals.
17. Appointed by the Senate to revise *Tilawah al-Quran* (Tajwid) curriculum.
18. Appointed by the Senate to develop Arabic text books used in IIUM (as well as in Thailand and Singapore).

## Curriculum Vitae

## **PERSONAL PARTICULARS**

PROF EMERITUS DATO' DR TORLA BIN HASSAN DSAP, PSK  
Tel no : +6019 384 8620 (Mobile)

## **ACADEMIC QUALIFICATIONS**

- PhD, University of Stirling, Scotland, UK, March 1988.  
PhD Thesis: Tests of Quantum Mechanics versus Local Realism Using an Atomic Deuterium Source.
- MSc (*Nuclear and Molecular Physics*), University of Kuwait, State of Kuwait, June 1984. MSc Thesis: Photoassociation of 9, 10-dicyanoanthracene with Naphthalene, Phenanthrene and Pyrene.
- BSc (*Major in Physics, and minor in Computer Science and Mathematical Statistics*), University of Kuwait, State of Kuwait, June 1981.
- Religious Institute, *Al-Ma'had Al-Dini*, State of Kuwait, 1977.

## **POSTS HELD**

Deputy Rector (Academic and Planning), May 2015 – 2017.

The only Dean who was chosen to serve various faculties (kulliyahs) of IIUM from 1997 to 2015.

Deputy dean for 3 years - one year at Universiti Brunei Darussalam (UBD), 1991 and 2 years at IIUM, 1995-1997.

### ***i) Academic posts***

- Professor, Faculty of Engineering, 2011 - 2017
- Deputy Rector (VU6) 2015 - 2017.
- Professor (VK 6), 2006 – 2015.
- Professor (VK 7), 2001 – 2006.
- Professor, Faculty of Science, 2000 – 2011.
- Associate Professor, 1996 - 2001.
- Assistant Professor (Faculty of Economics and Management Sciences), 1989 - 1996.
- Assistant Professor (Centre for Fundamental Knowledge), 1988 - 1989.
- Assistant Lecturer (Centre for Fundamental Knowledge), 1984 - 1988.

### ***ii) Administrative posts***

- Vice Chancellor of MUM, Tanzania 2019 – 2021
- Deputy Rector (Academic and Planning), 2015 – 2017.

- Dean, International Institute of Islamic Thought and Civilization (**ISTAC**), 2006 – 2007 and 2015.
- Dean, Centre for Foundation Studies, **IIUM**, 2012-2015.
- Founding Dean, Kulliyah of Science, **IIUM**, 1999 - 2006.
- Founding Dean of Laws and Islamic Revealed Knowledge (**IIUM-KUSZA Programme, a branch campus of IIUM in Terengganu**), offering LLB and B.IRK degree programmes as well as matriculation programmes in Laws and Islamic Revealed Knowledge, 1997 – 1999.
- The first IIUM staff to be sent to Kuantan in 1995, to establish IIUM academic programme in Kuantan.
- Founding Deputy Dean, Pre-Medical Programme (**IIUM-IKIP Pre-Medical Programme**), Kuantan, 1995 - 1997.
- Deputy Dean, Student Affairs Division, the Universiti Brunei Darussalam (**UBD**), 1 January - 31 December 1991.
- Acting Head, Physics Department, **UBD**, 1990.
- Seconded to **UBD** for 5 years, 1990 – 1995.

### **SERVICE TO COMMUNITY**

- A member of Jawatankuasa Induk, Majlis Dakwah Negara, MDN-YADIM, 2018-present.
- Chairman of Human Right Panel, Majlis Dakwah Negara – YADIM, 2018-present.
- Chairman of Jawatankuasa Pembangunan Hartanah , Pondok Perdana, MDN, 2018present.
- Chairman of Jawatankuasa Pembangunan Projek Kompleks Dar Assalam, MDN, 2018-present.
- Senior Academic Fellow, International Institute of Islamic Thought (IIIT), USA, 1 September 2017 – present.

**PUBLICATIONS:** The list below is meant to highlight his activities from 2003 onwards, although selected publications prior to 2003 are also included.

### **GENERAL PUBLICATIONS**

Although his basic training was in physics, his main interest and passion cuts across sciences and the traditional Islamic disciplines (e.g. *Usuluddin*, *Shariah*, ethics, civilization, etc). His exposure to formal and informal religious education has been continuous. He has published works on issues of Islamic interest in the form of books, multi-author books and articles in reputable journals.

#### ***i) Books***

1. Partial Differential Equations, a Textbook for Engineering Students of IIUM, submitted for publication, 2015.
2. Introduction to Lattice Statistical Mechanics, a Textbook for Mathematics Students of the Kulliyah of Science, 2016.
3. *Min Dhiya' al Lughah al Arabiyyah, Maktabah al Shurouk al Dawliyyah*, Egypt (2005). [Arabic Textbook for students of IIUM (2005 – 2008),

Vol. I 209 pages

Vol. II 203 pages

## ii) *General Articles*

- A Rapid and Efficient Novel Molecular Based Method for Detection of Haram Food Ingredients in the Malaysian Market. *First International Halal Science Symposium 2006. Chulalongkorn University, Thailand*, 1-2 Sept 2006.
- *Al-Ilm wa al-Iman fi Sunan al Lah al Kawniyyah*, **At-Tajdid**, **17**, 11 – 38, 2005, [IIUM]. (*At-Tajdid is the flagship journal of IIUM, in ARABIC*).
- Akidah Kepercayaan Orang Melayu dari Perspektif Saintifik (Beliefs of the Malays from a Scientific Perspective), *Ancangan Pembungkus Berdaya Cipta dalam Pengajian Melayu/Indonesia*, pp 192 - 217, Prince of Songkla University, **Thailand** and Kesatuan Guru-Guru Melayu, **Singapore**, 1999.
- Modern Physics versus Islam, **Jurnal Kesturi**, Jurnal Akademi Sains Islam, **Malaysia** (ASASI), *7(1) 54 (1997)*.
- Kepimpinan Intelek Kebendaan dan Islam (Islamic Intellectual Leadership vs Materialistic Intellectual Leadership), **Jurnal Beriga**, Dewan Bahasa dan Pustaka **Brunei**, pp73-77, *Okt-Dis 1995*.
- Alam, Sains dan Al-Quran (Nature, Science and the Qur'an), **Jurnal Beriga**, Dewan Bahasa dan Pustaka **Brunei**, pp3-14, *April-Jun 1995*.

## iii) *Conferences*

- NANO-SciTech 2011: *Super Continuum Generation in Nonlinear Optical Fibers with Higher Order Nonlinearity*, Shah alam, Malaysia, March 2011.
  - International Conference on Islamization in Modern Science and Scientification of Islamic Studies: Prospect and Bridges (ICIMSIS): *Integration of Science and Islamic Studies*, (as a panellist of a forum and as a moderator), Faculty of Science, **Malaysia**, 7- 8 Dec 2011.
  - Islam in Malaysia, Institute for Studies of the Civil Society (ISCS) Uzbekistan, *International Conference on "Role and Significance of Islamic Factor, Traditions and Customs in the Formation of the Principles of Civil Society in the Countries of Central Asia"*, Bukhara, **Uzbekistan**, 20 - 24 Sep 2007.
  - Management from Islamic Perspectives, 15 - 16 May 2007, Kuala Lumpur, **Malaysia**.
  - Represented Malaysia in the *US-Islamic World Forum*, Doha, **Qatar**, 17 - 19 Feb 2007. [www.us-islamicworldforum.org/pdf/Brookings\\_Doha%20bios.pdf](http://www.us-islamicworldforum.org/pdf/Brookings_Doha%20bios.pdf)
  - Konvensyen Islam Hadhari Peringkat Kebangsaan (National Convention on Islam Hadhari), **Malaysia**, 2006.
- The International Conference on Ibn Khaldun's Legacy and Its Contemporary Significance, 20 - 22 Nov 2006, Kuala Lumpur, Malaysia.
- Islam in Malaysia, Institute for Studies of the Civil Society (ISCS) Uzbekistan, *International Conference on "Role and Significance of Islamic Factor, Traditions and Customs in the Formation of the Principles of Civil Society in the Countries of Central Asia"*, Tashkent, **Uzbekistan**, 26 - 27 Oct 2006.

- International Conference on Maqasid al-Shari'ah and its Realization in Contemporary Societies, 8 - 10 Aug 2006, IIUM. Kuala Lumpur, **Malaysia**.

*iv) Editor/Expert appointments*

- Associate Editor of International Journal of Muslim Sciences, Al Jamiah Cordova, 2018-present.
- A member of Editorial Advisory Board of Journal of Independent Studies and Research-Management, Social Sciences and Economics (JISR), 2018-present.
- A member of Scientific Board of the International Multidisciplinary Congress of Eurasia, Barcelona and Spain, 2018.
- A member of Scientific Board of the International Congress on New Trends in Science Engineering and Technology, Antalya, 2019.
- A member of the Editorial Board of Journal of Nano Science and Quantum Physics (JNSQP), August 2017 – present.
- A member of the Editorial Board of Journal of Science, Princess of Narathiwat University (PNU), January 2018 – present.
- A member of the Editorial Board of an Arabic journal, *At-Tajdid*, 2005 – 2007.
- A member of the Editorial Board of *International Journal of Muslim Unity (IJMU)*, 2003 - 2007.
- A member of the Editorial Board of *Australian Journal of Islamic Law, Management and Finance (AJILMF)*, 2010 – present.
- A member of the Editorial Board of Nano Science and Quantum Physics, 2017 – present.
- Executive Editor of *Revelation and Science*, 2010 – present.

**SCIENTIFIC PUBLICATIONS** (author or co-author)

*i) Selected Articles (from 2003 to 2016)*

- Transient Radiative Heat Transfer through Thin Films Using Laguerre-Galerkin Method, *Journal of Physics D: Applied Physics*, **36** 3014 - 3026 (2003). [Institute of Physics and IOP Publishing Limited, UK].
- Determination of Lard in a Mixture of Body Fats of Mutton and Cow by Fourier Transform Infrared Spectroscopy, *Journal of Ole Science*, **52** 633 – 638 (2003), [Japan].
- Quantum-Trajectory Simulations of a Two-Level Atom Cascaded to a Cavity QED Laser, *Physical Review A*, **68** 063804 (2003), [American Physical Society, USA].
- Expedient Implementation of Two New Methods for Analyzing the Pigment Composition of Photosynthetic Specimens, *Spectrochimica Acta Part A*, **60** 2783 - 2791 (2004), [Elsevier Science Publisher, the Netherlands].

- Efficacy of Malaysian Plant Extracts in Preventing Peroxidation Reactions in Model and Food Oil Systems, *Journal of Ole Science*, **53** No. 11, 525 - 529 (2004), [Japan].
- Antioxidative Behaviour of Malaysian Plant Extracts in Model and Food Oil Systems, *Asia Pacific Journal of Clinical Nutrition*, **Vol 13** Supplement (2004), [Japan].
- Synergistic Effect of Rosemary, Sage and Citric Acid on Fatty Acid Retention of Heated Flaxseed Oil, *Journal of Ole Science*, **53** No 12, 581 – 591 (2004), [Japan].
- Physico-Chemical Stability of Flaxseed Oil with Natural Antioxidant Mixtures during Heating, *Journal of Ole Science*, **54** No 2, 71 – 79 (2005), [Japan].
- Performance of Phytochemical Antioxidant Systems in Refined-BleachedDeodorized Palm Olein during Frying, *Asia Pacific Journal of Clinical Nutrition*, **14**, No 4, December 2005, [Australia].
- Effect of Feed Additive on the Development of Proteolytic Enzymes of the Tropical Sport Fish Malaysian Mahseer (*Tor tambroides* – Bleeker) Fry, *American Journal of Biochemistry and Biotechnology*, **1**, No 3, 133 – 135, 2005.
- Time-dependent Radiative Transfer through Thin Films: Chapman-EnskogMaximum Entropy Method, *Journal of Physics D: Applied Physics*, **38** 3469 - 3479 (2005), [Institute of Physics and IOP Publishing Limited, UK].
- Fluorescence Detection of Human Premalignant and Malignant Lesions, *Trends in Photochemistry & Photobiology*, **11**, 63 – 76 (2006).
- Extraction and characterization of gelatin from different marine fish species in Malaysia, *International Food Research Journal*, **16**, 381 - 389, 2009.
- Supercontinuum Generation in Nonlinear Optical Fibers with Higher Order Nonlinearity, *NANO-SciTech*, 2011.
- Interaction of Two Pulses in Defocusing Nonlinear Schrodinger Equation, Mathematical Physics and their Applications, IOP Publishing, *Journal of Physics: Conference Series*, **435** (2013) 012034
- Abstract Characterization of Conditional Expectation Operator on the Space of Measurable Sections, *Sains Malaysiana*, 2016.

**ii) Major publications (1987 – 2001) include:**

- Experimental Investigation of the Possibility of Enhanced Photon Detection in Einstein Podolsky Rosen (EPR) type Experiments, *Physics Letters A*, **123** 110 (1987), [Elsevier Science Publisher, the Netherlands].
- Polarization Correlation Analysis of the Radiation from a Two-Photon Deuterium Source Using Three Polarizers: A Test of Quantum Mechanics versus Local Realism, *Physical Review Letters*, **62** 237 (1989), [American Physical Society, USA].  
(This article was reviewed by A Rae, Physics Department, Birmingham University, UK, in *Physics World* **2**, page 17 April 1989).
- Circular Polarization Correlation of the Two-Photons Emitted in the Decay of Metastable Atomic Deuterium, *Journal of Physics B: At. Mol. Opt. Phys*, **24** 5035 (1991), [Institute of Physics and IOP Publishing Limited, UK].
- Experimental Study of the Effect of an Achromatic Half-Wave Plate on the Polarization State Vector of Correlated Two-Photon Radiations from Metastable



Atomic Deuterium, *Modern Physics Letters B*, **9** 113 (1995), [World Scientific Publishing Co, USA].

- Fractional Revival of Wave Packets in an Infinite Square Well: a Fourier Perspective, *European Journal of Physics*, **22** 395-402 (2001).

### **SCIENTIFIC AWARDS**

- Special Award, Seoul International Invention Fair (SIIF), **Korea** 2006.
- Gold Medal, Seoul International Invention Fair (SIIF), **Korea** 2006.
- Gold Medal, International Exhibition of Invention, Geneva, **Switzerland**, 2005.
- Silver Medal, International Exhibition of Invention, Geneva, **Switzerland**, 2005.
- Quality Research Award, **IIUM**, 2004.
- Silver Medal, 16<sup>th</sup> International Invention, Innovation, Industrial Design & Technology Exhibition 2005 KL, **Malaysia**.

### **CURRENTLY ON GOING PHD SUPERVISION**

#### 1. FARGANA AKTER

“Summation of the Spectral Expansion associated with the Solvability of the Engineering Problems”

#### 2. IED SHUKUR MAHMOOD AL-NIDAWI, thesis written in Arabic:

“The Allegation on the Contradiction of Hadith and Experimental Science: An Analytical Study”

### **RECENT ACTIVITIES**

#### **RESEARCH**

1. FRGS Research Grant RM54,000 Awarded “Dynamics of Excited States of Neutron-Rich Well Deformed Lanthanide Nuclei”, 2019
2. Soliton dynamics in a non intergrable continuous and discrete systems
3. Aigeio Pelagos, Arabia Eudaimon and Nusantara: Comparative Study of the Ancient Maritime Societies
4. As an External Member of the research group, “Investigation of the Properties of the Rotational States of Super heavy Transuranium and Rare-Earth Deformed Nuclei”. The amount of USD62,586 (2017 – 2020). Fundamental Grant by the Committee for the Coordination of the Development of Science and Technology, the Cabinet Ministers of the Republic of Uzbekistan

### **PUBLICATIONS AND PAPERS PRESENTED IN SEMINARS/CONFERENCES (2017-2018)**

1. A Fargana, A A Rakhimov, A A Khan and T B H Hassan  
Equiconvergence in Summation Associated with Elliptic Polynomial, *Journal of Physics: Con Series* 949 (2017) 012001 doi:10.1088/17426596/949/1/012001.

2. Ahmad Fadly Nurullah Rasedee, Abdumalik A. Rakhimov, Anvarjon A. Ahmedov, Torla Hassan (2017). On the Lebesgue constants of FourierLaplace series by Riesz Mean, Journal of Physics: Con Series, 819 (1). , pp. 012018-1-8. ISSN 1742-6588.
3. Inomjon G Ganiev, Torla Hassan, Abstract characterization of a conditional expectation operator on the space of measurable sections, Sains Malaysiana, 46 (1)(2017): pp 175-179. ISSN 0126-6039.
4. Keynote Speaker at the International Multidisciplinary Congress of Eurasia, the University of Rome (Sapienza Universita di Roma), August 2017, Rome, Italy.
5. Keynote Speaker at the National Symposium on the Internationalisation and Integration of Knowledge, 10 October 2017, IAIN Surakarta, Indonesia.
6. Fully sponsored to participate in the International Islamic Studies Conference (4th IISC) on “Islamic Education as a Driving Force for a Peaceful Coexistence and Development”, 24-26 July 2017, PSU, Thailand.
7. Electric quadrupole  $E2$  Transition of  $^{170-174}$  Yb Isotopes, , 6<sup>th</sup> International Conference on Functional Materials and Devices 2017 (ICFMD – 2017), Malaysia.
8. Flat top solitons on linear gaussian potential, 1st International Conference on Applied & Industrial Mathematics and Statistics 2017 (ICoAIMS 2017), 8-10 August 2017, Malaysia.
9. Localized solutions of extended discrete nonlinear schrödinger equation, 1st International Conference on Applied & Industrial Mathematics and Statistics 2017 (ICoAIMS 2017), 8-10 August 2017, Malaysia.
10. Equiconvergence in Summation Associated with Elliptic Polynomial 4th International Conference on Mathematical Applications in Engineering (ICMAE 2017), 8-9 August 2017, Malaysia.

11. Analyzing energy spectra and structure of ground and low excited state of  $^{170,172,174}\text{Yb}$  Isotopes, 6<sup>th</sup> International Conference on Functional Materials and Devices 2017 (ICFMD – 2017), Malaysia.
12. Keynote Speaker at the International Conference on Contemporary Issues in Business & Economics (ICCIBE), Turkey, July 14 – 15, 2018.
13. Keynote Speaker “Perkembangan Ilmu Pengetahuan dan Teknologi di Era Revolusi Industri 4.0 Perspektif Islam dan Perlunya Integrasi Ilmu Pengetahuan” at Fakultas Sains dan Teknologi UIN Maulana Malik Ibrahim Malang, Indonesia, 20 October 2018.
14. Keynote Speaker “Physics and the Rise of Islam”, at Fakultas Sains dan Teknologi, Universitas Islam Negeri Sunan Ampel Surabaya, Indonesia, 15 October 2018.
15. Keynote Speaker “Ilmu al Kalam dan Sains Modern” at Sarasehan Islam dan Ilmu Pengetahuan, Aula Pusat Studi Islam dan Ilmu Pengetahuan, Malang, Jawa Timor, Indonesia, 20 Oct 2018.
16. Keynote Speaker “Perkembangan Ilmu Pengetahuan di Era Industri 4.0” at Universitas Muhammadiyah Malang, Indonesia, 21 October 2018.

### **AWARDS OF HONOUR**

Darjah Sultan Ahmad Shah Pahang (**DSAP**), 2017.

Ahli Yang Ketiga (Paduka) Bagi Darjah Kebesaran Setia Mahkota Kelantan Yang Amat Terbilang (**PSK**), 2003.

**END**

23 JUNE 2022