Asst. Prof. Dr. Mohd. Fairullazi bin Ayob

Kullliyyah of Architecture and Environmental Design,
International Islamic University Malaysia

Academic/Professional Qualification

2014 International Islamic University Malaysia – Kuala Lumpur, Malaysia
Doctor of Philosophy in Built Environment (PhD)
Title: Development of Life Cycle Cost Strategy and Protocol on Cost Data Input in Malaysia
With Best Student Award for Doctor of Philosophy (Built Environment)

2005 Griffith University – Gold Coast, Australia.
Master of Business Administration (International)
With Second Class Honors (Upper Division)

2004 Griffith University – Gold Coast, Australia.
Master of Construction Engineering and Management
With First Class Honors

2001 Universiti Teknologi – Johor, Malaysia.
Bachelor of Civil Engineering
With Second Class Honors (Upper Division)

1996 Technical Secondary School –Johor Bahru, Johor, Malaysia.
Malaysian Certificate of Education (SPM)
With Best Student Award for Civil Engineering subject.

Expertise

Life Cycle Cost (LCC), Building Life Cycle, Road Pavement Life Cycle, Civil Engineering

Research Interest

Life Cycle Cost (LCC), Building Life Cycle, Road Pavement Life Cycle, Value Management, Civil Engineering, Facilities Management, Building Sustainability.

INTRODUCTION

Dr. Mohd. Fairullazi is currently an Assistant Professor at the Department of Quantity Surveying, Kulliyyah of Architecture and Environmental Design (KAED), International Islamic University Malaysia. He joined the academic profession in July 2013 after completed a three-year research Doctorate programme at the International Islamic University Malaysia.

He was recognized with the awards of "Best Student for Doctor of Philosophy (Built Environment)" in the 30th Convocation of International Islamic University Malaysia, "Best Paper 2014" and "Special Mention Paper 2015" in the 13th and 14th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting, at the Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Silver winner (2nd place) in the International Research Invention & Innovation Exhibition for 2014 (IRIIE 2014). Apart from that, he was awarded with the "University Outstanding Promising Researcher 2016" from the Office of the Deputy Rector (Research and Innovation), International Islamic University Malaysia

He has held several administrative and academic positions including Information and Communication Technology (ICT) Coordinator, Member of 20 Years KAED Anniversary Celebration, Member of Management Committee Meeting, Coordinator and Internal Review Committee of Master of Business Administration (Construction Business) programme of Kulliyyah of Architecture and Environmental Design (KAED). He was also actively involved in several local and international conferences and academic events organized by the Kulliyyah of Architecture and Environmental Design. He held several positions including Secretariat, Organizing Committee and Scientific Review Committee of the Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting, Colloquium Governors of the 2nd IIUM – Kyoto University Research Colloquium – Shari'ah Compliance Issues in Construction, Committee of the KAED Homecoming Alumni 2014, and Editorial Board Committee of KAED Bulletin.

On research and consultancy, he has led and completed several research and consultancy projects for Daya Bersih, a subsidiary of IIUM Holdings. Currently, he leads a research project on the identification of cost data inputs in life cycle cost data input of road pavement types funded by the Ministry of Education Malaysia. He has produced several inventions of Life Cycle Cost (LCC) analysis and its data input requirements process that had been registered for copyright and patent with the Intellectual Property Corporation of Malaysia (MyIPO) in 2015 and 2016.

SUMMARY OF RESEARCH WORKS

Online data research works and publications:
https://plu.mx/iium/u/iium-mohdfairullazi-ayob/

Life Cycle Cost (LCC) has been identified and recognized as a useful economic assessment technique to provide cost information which facilitates the Government agencies, stakeholders, cost estimators, value management team, professionals in the built environment to make better decision in the process of determining the most optimum total ownership costs of an asset or in comparing the most cost-effective of mutually exclusive alternatives. The Malaysian Government through the Economic Planning Unit (EPU) and Public Works Department (PWD) have confirmed in the national standard guidelines that LCC is mandatory to be used as an economic assessment technique to provide crucial cost information which can facilitate the Government in making better investment decisions to achieve the best value for money and potential cost saving especially in the newer approaches and techniques of project delivery systems. These include the Public Private Partnership (PPP), Value Management (VM), Total Asset Management (TAM), and Green Building Rating system.

In the Malaysian construction industry, the Government through the Economic Planning Unit (EPU) and Public Works Department (PWD) have confirmed in the national standard guidelines that LCC is mandatory to be used as an economic assessment technique to provide crucial cost information which can facilitate the Government in making better investment decisions to achieve the best value for money and potential cost saving especially in the newer approaches and techniques of project delivery systems. These include the Public Private Partnership (3PU, 2009a:6; 3PU, 2009b:5; 3PU 2010a, 2010b), Value Management (EPU, 2011; PROKOM, 2013), Total Asset Management (Malaysia Government, 2009), Green Building Rating system (CIDB, 2007), and the Red Book procurement system of the Government-Linked Companies (PGC, 2006a, 2006b). Furthermore, the Ministry of Works Malaysia, Construction Industry Development Board (CIDB) and the Building Industry President Council (BIPC) have strongly recommended in the Construction Industry Transformation Programme (CITP) 2016-2020, and Construction Industry Master Plan (CIMP) 2006-2015 that the clients' organization and building owners in the Malaysian construction industry should adopt LCC as an economic assessment technique in the investment decision making process in effort to achieve the best value for money (CIDB, 2015, 2011c, 2007; Muhammad Zuhry, 2010).

The LCC analysis process can be categorized into three main phases, i.e. data inputs, conversion and outputs. The scope of cost for LCC analysis of a building is within the boundary of the total cost of a building. There are different types of data required for each category of cost components of a comprehensive LCC analysis of the building. Past studies have confirmed that quality, currency and adequacy of cost data used as inputs as well as the method used for the LCC analysis are of paramount importance in effort to produce reliable LCC outputs. There are different kinds of data to be used as inputs in LCC analysis and the type of data to be used is contingent upon the intended output of the LCC analysis. Nevertheless, the LCC technique has not been widely implemented in the Malaysian construction industry due to the fact of data unavailability, incomprehensiveness and inaccuracy.

The study carried out by Mohd Fairullazi (2014) has established the following as the key setbacks of LCC practice in producing reliable outputs in the Malaysian construction industry:

i. Lack of reliable, quality and current cost data to be used as inputs and inadequacy in the understanding of LCC have led to difficulties for LCC estimators to produce reliable LCC outputs (Mohd Fairullazi and Khairuddin, 2011a, 2011b, 2011c, 2012),

ii. The main focus of practitioners and scholars on LCC is on LCC conversion, which includes the methodology and models of computing LCC, but very little emphasis is given on the state of cost data availability, accessibility, currency and reliability to be used as inputs into the process of producing reliable LCC outputs in present time (Mohamed, 2007; Muhammad Zuhry, 2010; Mohd Fairullazi and Khairuddin, 2011a, 2011b, 2011c, 2012),

iii. No model, system or guideline has been established to trace, define, collect, collate and manage cost data inputs of buildings to provide cost data to the clients, estimators and researchers in facilitating them to carry out reliable LCC analysis (Mohd Fairullazi and Khairuddin, 2011a, 2011b; 2012), and

iv. No policy with regard to LCC analysis has been produced and mandated by the Government that requires its agencies to carry out LCC analysis for public projects (Ahmad Nazib, 2005; Zulkifly Yaacob and Elizuan Rafys, personal communication, November 18, 2011)

A Protocol of LCC Data Input Requirement Process was developed by Mohd Fairullazi to purposely enhance the quality of LCC outputs through the enhancement of quality data input requirements. The Protocol has undergone evaluation, validation and test with a group of panellists that have expertise, knowledge and skills in LCC. The developed Protocol comprising three (3) components:

i. A flow chart that presents an overall view of the procedures,

ii. Step by step procedures on how to acquire cost data inputs of LCC in order to meet the LCC quality data input requirements; and

iii. Remarks that provide additional information to ease understand the developed protocol

The Protocol of LCC Data Input Requirement Process is a copy of documents that is carefully prepared to provide step by step descriptive instructions or procedures on how to do the assignment with the objectives to solve the problem and to achieve specific results. The protocol provides extensive information, which includes a description of the problem, diagrams, mathematical notations and detailed step by step procedures on how to do and when to do the assignment to achieve the desired results

The Protocol of LCC Data Input Requirement Process is expected to provide the following benefits to the Malaysian construction industry:

i. The protocol is constructed in a simple and concise format to provide relatively simple procedures that are easy to understand for the LCC practitioners to identify and gather current and reliable data as inputs for estimating the total cost of the public or private building throughout the anticipated life. It provides procedures of how cost data in the Malaysian

construction industry could be made more available, accessible, current and reliable as inputs into the process of producing reliable LCC outputs in present time. It can facilitate the LCC practitioners in the Malaysian construction industry to overcome the deficiency on data of LCC analysis.

ii. The protocol provides procedures and techniques that can facilitate the LCC practitioners in the Malaysian construction industry to identify and gather current and reliable data in reinforcing the practice of LCC analysis in the investment decision making process of the various clients' organization and building owners to attain the best value for money.

iii. The protocol perhaps can become useful reference for the government agencies (e.g. EPU, PWD) to identify and gather current and reliable data as inputs in producing reliable LCC analysis in effort to attain potential cost saving in the newer approaches and techniques of project delivery system, i.e. the Public Private Partnership, Value Management, Facilities Management, Industrialised Building System (IBS), Sustainable Building and the Red Book procurement system of the GLC.

A. LIST OF COPYRIGHTS AND PATENTS

The developed Protocol of LCC Data Input Requirement Process has been identified as the first and the newest invention in Malaysia to provide useful procedures and information to the Government agencies, clients, cost estimators, value management practitioners and researchers on how to identify, access, check and update the reliability of data before the data can be used as inputs into the process of producing a comprehensive LCC estimation for building works in the Malaysian construction industry. No rival currently available in Malaysia and perhaps worldwide with regard to data input requirements process for a comprehensive LCC estimation for building works in the construction industry. Due to its novelty, the Protocol has been registered and filed for copyright and patent with the Intellectual Property Corporation of Malaysia (MyIPO) by the Research Management Centre of International Islamic University Malaysia in 2016.

1. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016-2018). *A Life Cycle Cost Analysis System and Method.* PCT International Application for PI 2015704486, File Ref: PT/5391/UIAM/15/PCT, Application no.: PCT/MY2016/050084, supported by the Research Management Centre, International Islamic University Malaysia.

2. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016-2018). *Life Cycle Cost Analysis System and Method.* Request for Grant of Patent from MyIPO, Application no. PI 2015704486, Ref: PT/5391/UIAM/15, supported by the Research Management Centre, International Islamic University Malaysia.

3. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016-2018). *Protocol of Life Cycle Cost (LCC) Data Input Requirements Process*. Certificate of Copyright Voluntary Notification: CRLY00002485, copyright registered as per section 26B of the Copyright Act 1987 from MyIPO, supported by the Research Management Centre, International Islamic University Malaysia.

4. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016-2018). *Protocol of Life Cycle Cost (LCC) Data Input Requirements Process*. Copyright registered with the Intellectual Property Corporation of Malaysia (MyIPO), Ref.: LY2015000324 from MyIPO, supported by the Research Management Centre, International Islamic University Malaysia.

B. LIST OF PUBLICATIONS

a) **Monograph**

1. Ayob, Mohd Fairullazi, Abdul Rashid, Khairuddin, Aripin, Srazali, Abdullah, Shamsul Nahar (2015). *The Comparison of Building Maintenance Services Rates between International Islamic University (IIUM) With Other Universities and Related Education Buildings.* C14-031-0078, Daya Bersih Sdn Bhd, IIUM Holdings subsidiary.
2. Ayob, Mohd Fairullazi (2014) *Special Talk on Delphi Approach in Research Methodology course of Postgraduate class.* Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Gombak, Selangor, Malaysia. (Unpublished).

b) **Journal/ Article**

1. Oseni, Umar Aimhanosi, Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2017). *Legal Issues in Sharī'ah-Compliant Home Financing in Malaysia: A Case Study of Legal Issues in Bai Bithaman Ājil Contract.* International Journal of Islamic and Middle Eastern Finance and Management (Indexed by Scopus). In Press
2. Mansor, Nur Syaimasyaza, and Abdul Rashid, Khairuddin, and Ayob, Mohd Fairullazi, and Hassan, Sharina Farihah (2017). *Application of modified Delphi in Identifying the Presence of Incomplete Contract (IC) in Private Finance Initiative (PFI) Projects.* Malaysian Construction Research Journal (MCRJ), Volume 22, Issue 1, 2017. Publisher: Construction Research Institute of Malaysia (Indexed by Scopus Elsevier). In Press.
3. Ayob, Mohd Fairullazi and Bidi, Nor Khalisah and Ahmad Jasmani, Siti Zulaiha and Wan Omar, Wan Imran and Ali, Maisarah (2017). *Life Cycle Cost and Performance Assessment: Comparison between Reconstruction and Cold-In-Place Recycling (CIPR) Methods.* Malaysian Construction Research Journal (MCRJ), Volume 21, Issue 1, 2017. Publisher: Construction Research Institute of Malaysia (Indexed by Scopus Elsevier).
4. Mansor, Nur Syaimasyaza and Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2017). *Incomplete Contract in PFI: A Modified Delphi Study.* Advanced Science Letters. ISSN 1936-7317 (O), 1936-6612 (P). Publisher: American Scientific Publishers, (Indexed by Scopus). In Press.
5. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016). *Review Of Methodology Designed To Investigate Quality Of Cost Data Input In Life Cycle Cost.* Malaysian Construction Research Journal (MCRJ), Volume 18, Issue 1, 2016. ISSN No.: 1985-3807. Publisher: Construction Research Institute of Malaysia (Indexed by Scopus Elsevier).
6. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2015). *Investigation of Quality of Cost Data Input In Life Cycle Cost (LCC) Analysis In Malaysia.* Journal of Architecture, Planning and Construction Management, Volume 5, Issue 2. ISSN 2231-9514. Publisher: Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, Google Scholar, Open Access (Indexed by Google Scholar and Open Access).
7. Ayob, Mohd Fairullazi (2013). *Should students be discouraged from studying overseas because of the problems they may face as a result of culture shock?* KAED Bulletin. (Unpublished)
8. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2013). *Strategies to enhance quality data input requirements of life cycle cost (LCC).* Journal of Architecture, Planning and Construction Management, Volume 3, Issue 2. pp. 44-67. ISSN 2231-9514. Publisher: Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia (Indexed by Google Scholar and Open Access).

c) **Book**

1. Ayob, Mohd Fairullazi and Ibrahim, Mohd Shariffuddin, eds. (2016). *Cost and contract administration and contract administration in construction - divine perspectives.* IIUM Press, International Islamic University Malaysia. ISBN: 978-967-418-426-1.

d) **Book Section**

1. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016). *Current status of life cycle cost practice in Malaysian construction industry.* In: Cost and Contract Administration in Construction – Divine Perspectives. IIUM Press, Kuala Lumpur, pp. 38-46. ISBN: 978-967-418-426-1.
2. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016). *Investigation on reliability and validity of Life Cycle Cost (LCC) data inputs of building.* In: Cost and contract administration in construction – divine perspectives. IIUM Press, Research Management Centre, International Islamic University Malaysia, pp. 47-59. ISBN: 978-967-418-426-1.

e) **Conference Proceeding**

1. Ang, Salem, and Olanrewaju, AbdulLateef, and Ayob, Mohd Fairullazi (2016). *Perception of Developers toward Sustainable Affordable Housing in Malaysia* In: 15th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting (2016), 8th December, 2016, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia.
2. Olanrewaju, AbdulLateef and Tan, Yeow Seong and Lee, Tat Lim and Ayob, Mohd Fairullazi and Ang Saleem (2016). *Investigating the Compatibility of Affordable Housing with Sustainability Criteria: A Conceptual Framework.* Paper in the Proceedings of Putrajaya International and Built Environment, Technology and Engineering Conference (PIBEC2016), 24th to 25th September 2016, Bangi, Malaysia. ISBN: 978-967-13952-8-8.
3. Oseni, Umar Aimhanosi, Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016). *Legal Issues in Sharī'ah-Compliant Home Financing in Malaysia: A Case Study of Legal Issues in Bai Bithaman Ājil Contract.* In the National Seminar on Abandoned Housing Projects: Causes & Solutions organized by IIUM Institute of Islamic Banking and Finance (IIiBF) in collaboration with Association of Shariah Advisors in Islamic Finance (ASAS), 7th to 8th September 2016, International Islamic University Malaysia. (Unpublished).
4. Mansor, Nur Syaimasyaza and Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016, March). *Incomplete Contract in PFI: A Modified Delphi Study*. Paper in the Proceedings of the 2016 Advanced Research on Business, Management and Humanities (ARBUHUM2016), Bandung, Indonesia.
5. Ayob, Mohd Fairullazi and Wan Omar, Wan Imran and Ali, Maisarah Ali (2015). *Comparative Study of Life Cycle Cost and Pavement Performance on Road Rehabilitation Methods*. Special Paper in the 14th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting (2015), 12th & 13th November 2015, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished)
6. Bidi, Nor Khalisah and Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2015). *Investigation of Life Cycle Cost (LCC) Data Inputs of Flexible Pavement in Klang Valley.* In: 14th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting (2015), 12th & 13th November 2015, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished)
7. Bidi, Nor Khalisah and Ayob, Mohd Fairullazi (2015). *Investigation of Quality of Cost Data for Life Cycle Cost Analysis in University Building Maintenance.* In: 14th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting (2015), 12th & 13th November 2015, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished).

8. Ahmad Jasmi, Siti Zulaiha and Ayob, Mohd Fairullazi (2015). *Evaluating Energy Efficiency of Lighting System in University Library Building.* In: 14th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting (2015), 12th & 13th November 2015, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished).

9. Ahmad Jasmi, Siti Zulaiha and Ayob, Mohd Fairullazi and and Abdul Rashid, Khairuddin (2015). *Investigation of Quality of Data Input In Life Cycle Cost Analysis of Rigid Pavement Type.* In: 14th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting (2015), 12th & 13th November 2015, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished).

10. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2014). *Identification of cost data input problems in life cycle cost analysis and the mitigation strategies.* Special Paper in the 13th Management in Construction Researchers' Association (MiCRA 2014) Annual Conference and Annual General Meeting (2014), 6th November 2014, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished)

11. Oseni, Umar Aimhanosi, Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2014). *Sharī'ah-compliant home financing in Malaysia: a case study of legal issues in Bai Bithaman Ājil contract.* In the 13th Management in Construction Researchers' Association (MiCRA) Annual Conference and General Meeting 2014, 6th November 2014, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished)

12. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2014). *Identification of cost data input in life cycle cost (LCC) for building projects.* In: International Research Invention & Innovation Exhibition for 2014 (IRIIE 2014), 11-13 June 2014 International Islamic University Malaysia.

13. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2013). *Constraint of the results of modified Delphi study on enhancing the quality data input requirements of Life Cycle Cost (LCC).* In: 12th Management in Construction Researchers' Association (MiCRA 2013) Conference and Annual General Meeting, 9th December 2013, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished).

14. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2013). *Strategies to enhance quality data input requirements of life cycle cost (LCC).* In: International Conference of Architecture and Built Environment 2013 (ICABE2013), 7th - 8th November 2013, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished)

15. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2012). *Issues on data availability, accessibility, currency and its reliability as inputs in the LCC studies in Malaysia.* In: Management in Construction Researchers' Association (MiCRA) and Postgraduate Conference, December 5, 2012, Kuala Lumpur. (Unpublished)

16. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2011). *Investigating the reliability and validity of data inputs for building life cycle cost (LCC).* In: Seventh International Conference on Multi-National Joint Venture for Construction Works: Joint Venture for Infrastructure Development in the context of Decentralization and Globalization, 28-29 September 2011, Institut Teknologi Bandung, Bandung, Indonesia.

17. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2011). *Proposing a methodology to investigate the reliability and validity of data inputs for building (LCC).* In: Management in Construction Researcher's Association (MICRA) 10th Annual Conference and Meeting 25, 25th-26th July 2011, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia. (Unpublished)

18. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2011). *A literature review on the state and*

practice of life cycle cost (LCC) in Malaysia. In: International Building and Infrastructure Technology Conference 2011 (BITECH 2011), 7-8 June 2011, Penang, Malaysia.

C. FORUM/ TALK/WORKSHOP

1. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016). *Special Talk on Life Cycle Cost (LCC) strategy and protocol on cost data input in Malaysia.* FIABCI Malaysia Brown Paper Bag Seminar: Data Input Requirements in Life Cycle Cost (LCC) Estimation 2016. International Islamic University Malaysia, Gombak, Selangor, Malaysia.
2. Ayob, Mohd Fairullazi and Abdul Rashid, Khairuddin (2016). *Life Cycle Cost (LCC).* FIABCI Malaysia Brown Paper Bag Seminar: Data Input Requirements in Life Cycle Cost (LCC) Estimation 2016. International Islamic University Malaysia, Gombak, Selangor, Malaysia.
3. Ayob, Mohd Fairullazi (2014). *Special Talk on Delphi Approach in Research Methodology course of Postgraduate class.* Kulliyyah of Architecture and Enviromental Design, International Islamic University Malaysia, Gombak, Selangor, Malaysia. (Unpublished).

D. ARTICLE/BOOK/GUIDELINE REVIEWER

1. Ayob, Mohd Fairullazi (2016). Publication Reviewer for the PWD (JKR) Guideline "Nota Teknik (Jalan) 11/87 (Pindaan 2016) – A Guide to the Design of At Grade Intersections." Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
2. Ayob, Mohd Fairullazi (2016). Publication Reviewer for the PWD (JKR) Guideline "Nota Teknik (Jalan) 35/2016 – Geometric Guideline for Exclusive Motorcycle Lane." Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
3. Ayob, Mohd Fairullazi (2016). Reviewer for Article "Market Motivations for Corporate Carbon Disclosure in Real Estate Industry". International Conference on Architecture and Built Environment – ICABE 2016, 5th – 6th October 2016 Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia.
4. Ayob, Mohd Fairullazi (2015). Reviewer for Book Chapters "Managing Building Obsolescence and Building Energy for Sustainable Property Investment", from 18 February to 9 March, 2015. To be published by UTM Press, Univesiti Teknologi Malaysia.
5. Ayob, Mohd Fairullazi (2015). Reviewer for Article "The Effectiveness of Maintenance Management through Implementation of Building Maintenance Policy in High Rise Office Building in Perak." 14th Management in Construction Researchers' Association (MiCRA 2015) Conference and Annual General Meeting, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
6. Ayob, Mohd Fairullazi (2015). Reviewer for Article "An Assessment of the Maintenance of Public Estate Infrastructure for Sustainable Development in Nigeria". Journal of Quantity Surveying & Construction Business, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
7. Ayob, Mohd Fairullazi (2014). Reviewer for Article "Criteria and Factors of Project Implementation in Yemen." Journal of Surveying, Construction and Property, Faculty of Built Environment, University of Malaya.
8. Ayob, Mohd Fairullazi (2014). Reviewer for Article "Study on the Financial Viability of Loadbearing Brick wall for Housing." 13th Management in Construction Researchers' Association (MiCRA 2014) Conference and Annual General Meeting, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.

9. Ayob, Mohd Fairullazi (2014). Reviewer for Article "Green Buildings Actual Life Cycle Cost Control: A Framework for Investigation." 13th Management in Construction Researchers' Association (MiCRA 2014) Conference and Annual General Meeting, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
10. Ayob, Mohd Fairullazi (2014). Reviewer for Article "Teaching Value Management Course in Quantity Surveying Programme at University Level: A Problem-Based Learning Approach." 13th Management in Construction Researchers' Association (MiCRA 2014) Conference and Annual General Meeting, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
11. Ayob, Mohd Fairullazi (2014). Scientific Reviewer for Article "A Study on Job Satisfaction and Turnover Intention among Quantity Surveyors." UMRAN 2014: Fostering Ecosphere in the Built Environment, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
12. Ayob, Mohd Fairullazi (2013). Reviewer for Article "Production Of Controlled Low-Strength Material Using Only Recycled Fine And Coarse Aggregates Without Adding Portland Cement." 12th Management in Construction Researchers' Association (MiCRA 2013) Conference And Annual General Meeting, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia
13. Ayob, Mohd Fairullazi (2013). Reviewer for Article "Using 4D Dynamic Model for Construction Site Management." 12th Management in Construction Researchers' Association (MiCRA 2013) Conference and Annual General Meeting, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.
14. Ayob, Mohd Fairullazi (2013). Reviewer for Article "Development of Value Engineering Advisory System Model in Averting Cost Overrun." 12th Management in Construction Researchers' Association (MiCRA 2013) Conference and Annual General Meeting, Kulliyyah of Architecture & Environmental Design, International Islamic University Malaysia.

E. RESEARCH CONSULTANCY

1. Co-Researcher (December 2016- November 2019). *Development of a Protocol to Empower Wakaf-Zakat in the Provision of Housing for the Ummah.* TRGS. Status: In Progress.
2. Co-Researcher. *Kajian Semula Dasar Perumahan Negara (DRN) (2018-2022).* Majlis Profesor Negara & Kementerian Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan. Status: In Progress.
3. Principle Investigator (1 December 2014 to 28 February 2017). *Identification of Cost Data Inputs in Life Cycle Cost (LCC) of Alternative Road Pavement Types*. RAGS14-042-0105, Ministry of Education Malaysia. Status: In-Progress.
4. Co-Researcher (1st February 2016 to 31st January 2017). *Scheme to Deliver Sustainable Housing in Malaysia.* Faculty of Engineering and Green Technology, Universiti Tunku Abdul Rahman. Status: In-Progress.
5. Co-Researcher (15 April to 15 August 2016). *Customer Satisfaction Survey of Facilities at IIUM Gombak Campus.* Daya Bersih Sdn. Bhd. Status: Completed.
6. Principle Investigator (September 2014 to July 2015). *The Comparison Of Building Maintenance Services Rates Between International Islamic University (IIUM) With Other Universities And Related Education Buildings.* C14-031-0078, Daya Bersih Sdn Bhd, IIUM Holdings subsidiary. Status: Completed.

F. TEACHING

2016-present

Master (Science) in Asset and Facilities Management

- Infrastructure Rehabilitation Technology (Year 1, semester I of 2016/2017)
- Building Maintenance Technology 1 (Envelope) (semester II of 2015/2016, 2016/2017)
- Cost, Value and Financial Management (semester II of 2015/2016, 2016/2017)

Bachelor of Quantity Surveying (Honours)

- Civil Engineering Construction 1 (Year 1, semester I of 2016/2017)
- Principles of Structure 1 (Year 1, semester I of 2016/2017)
- Principles of Structure 2 (Year 1, semester II of 2015/2016, 2016/2017)

2015

Bachelor of Quantity Surveying (Honours)

- Principles of Structure 1 (Year 1, semester I of 2015/2016)
- Civil Engineering Construction 1 (Year 3, semester I of 2015/2016)
- Integrated and Multidisciplinary Project 1 (Year 1, semester III 2014/2015)
- Principles of Structure 2 (Year 1, semester II of 2014/2015)
- Advanced Building Construction (Year 2, semester II of 2014/2015)

2014

Bachelor of Quantity Surveying (Honours)

- Principles of Structure 2 (Year 1, semester II of 2013/2014)
- Principles of Building Construction 2 (Year 1, semester II of 2013/2014)
- Principles of Structure 1 (Year 1, semester I of 2014/2015)
- Civil Engineering Construction 1 (Year 3, semester I of 2014/2015)
- Environmental and Material Sciences (Year 1, semester I of 2014/2015)

2013

Bachelor of Quantity Surveying (Honours)

- Principles of Structure 1 (Year 1, semester I of 2013/2014)
- Civil Engineering Construction 1 (Year 3, semester I of 2013/2014)