

RAJA RAFIDAH BT RAJA MUHAMMAD ROOSHDI (Dr)

Senior Lecturer

School of Construction and Quantity Surveying
College of Built Environment (CBE)
Universiti Teknologi MARA,
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Selangor, Malaysia.

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Areas of Expertise

Sustainable Construction, Project Management, Building Services, Construction Economics

Personal Information

Sr Dr Raja Rafidah bt Raja Muhammad Rooshdi
Studies for Quantity Surveying

<https://expert.uitm.edu.my/profile.php?id=JttIlmhlxwT/hETADVgLTfYBysqTSCS3CSdp14J+0Wg=>
<https://www.webofscience.com/wos/author/record/ABB-9188-2020>
<https://www.scopus.com/authid/detail.uri?authorId=57194236110>
<https://www.researchgate.net/profile/Raja-Rafidah-Raja-Muhammad-Rooshdi>
<https://scholar.google.com/citations?hl=en&user=wJ8cdTgAAAAJ>
<https://orcid.org/0000-0001-7923-8377>

Academic Qualifications

PhD in Civil Engineering, 2019, Universiti Teknologi Malaysia
Master of Science (Integrated Construction Project Management), 2006, Universiti Teknologi MARA
Bachelor of Quantity Surveying (Hons.), 2005, Universiti Teknologi MARA
Diploma in Quantity Surveying, 2003, Universiti Teknologi MARA

Professional Members

1. Board of Quantity Surveyors Malaysia (BQSM), Provisional Quantity Surveyor (PVQS), 2018-2022
2. Board of Quantity Surveyors Malaysia (BQSM), Professional Quantity Surveyor (PQS), 2022-now
3. Royal Institution of Surveyors Malaysia (RISM), Member, 2022-now

Teaching and Learning

1. Measurement of construction works II (QSM452)
2. Construction Technology I (QSM402)
3. Construction Technology III (QMS502)
4. Construction Technology V (QMS552)
5. Construction Economics I (QSM506)
6. Construction Economics I (BQS506)
7. Construction Economics IV (BQS656)
8. Building services II (QSM554)
9. Building services II (BQS554)
10. Building services III (QSM605)
11. Project Management I (QSM560)
12. Project Management I (BQS560)
13. Project Management II (QSM610)
14. Sustainable Construction (BQS568)
15. Computer aided design and drawing (BQS516)
16. Applied studies I (BQS612)
17. Applied studies I (QSM612)
18. Applied studies I (BQS662)
19. Applied studies II (QSM662)
20. Dissertation (BQS664)
21. Final project/Dissertation (QSM664)
22. Measurement of Construction Works III (QSD231)
23. Measurement of Construction Works IV (QSD281)
24. Construction Technology III (QSD232)
25. Construction Technology IV (QSD282)
26. Construction Economics IV (QSD386)
27. Information Technology (QSD135)
28. Applied Studies (QSD382)
29. Data Analysis (QSD288)
30. Principles of Structure (QSD133)

Student Supervision

MSc (BY RESEARCH) THESIS:

1. Muhammad Akmal Hafiz Mohamad, Integrative Assessment Framework of Building Information Modelling (BIM) and Sustainable Design for Green Highway Construction, Co-Supervisor – on-going

MSc (COURSEWORK) DISSERTATION:

1. Mohd Faidhi Aiman Bin Mohd Yasin, Strategies Of Implementing Building Information Modelling In Infrastructure Green Assessment Tools, Supervisor - Completed
2. Farah Aiman Binti Rashid, Time Overrun In Construction Of Telecommunications Tower In Malaysia, Supervisor - Completed

3. Siti Aminah Binti Ayob, The Impacts Of Bim (Building Information Modeling) Usage In Bridge Design And Construction, Supervisor - Completed

BACHELOR DEGREE (2020 onwards)

1. Alisha Syahirah Binti Asmadi, The Implementation Of 3d Printing Technology In Building Construction
2. Aniq Zakwan Bin Zainal Abidin, Cybersecurity In Construction: Views From Professional Construction Player
3. Nur Ain Afifa Binti Ghazali, The Implementation Of Artificial Intelligence (Ai) In Malaysia Smart Building
4. Hazirah Binti Khairu Azwan, Readiness Of Malaysian Contractor In Use Of Artificial Intelligence (Ai) In Construction Project
5. Muhammad Azib Bin Mohd Jamari, Abolition Of First House Scheme In Malaysia : Developer Perspective
6. Norshahirul Iqhwah Shah Bin Azman Shah, Implementation Of Life Cycle Costing In Consultant Perspective
7. Nik Nawal Zulaikha Binti Nik Ab Rasik, Application Of Ai In Resources Usage In Construction Site
8. Muhamad Nur Aklihi Bin Mustapa, A Study Review : The Use Of Drone In Managing The Construction Project In Malaysia
9. Nurin Najwa Binti Asrul, Factor Influencing Women's Participation In Construction Industry
10. Izzatul A'lia Binti Harjimi, The Critical Success Factor Of Local Labour Employment In Malaysian Construction Industry
11. Hashimie Haslinda The Challenges Of Bim Implementation In Sarawak Construction Industry
12. Nur Alia Binti Hamidzun, Construction Stakeholder Perception On Green Home Development In Malaysia
13. Mohamad Adib Bin Norpandi, Environmental Management System On IBS Projects In Malaysia
14. Nursasha Fareesha Binti Marzuki, Implementation Of Virtual Reality Application Emerging In Malaysian Construction Industry In Klang Valley
15. Mohamad Razin Bin Md Izan, Challenges Of Fourth Industrial Revolution Toward Qs Profession In Malaysia.
16. Nur Alia Najwa Binti Abdul Aziz, A Study On The Factors Affecting Building In Malaysia That Unsatisfy The Green Building Index Criteria
17. Nur Syazleen Binti Abdul Razak, The Implementation Of Malaysia Green Highway Index
18. Muhammad Aiman Bin Aminudin, Critical Success Factors Of Green Highway In Malaysia
19. Hamimie Fatihah Binti Husman, Barriers In The Implementation Of Autonomous Equipment As Part Of Industrial Revolution At Construction Site
20. Hafizuddin Haziq Bin Yahya, Fire Safety Implementation In Buildings : From Consultant Perspective
21. Farah Salwani Binti Abd Razab, Safety Standars For Highway Construction: Comparison Between New Klang Valley And Damansara- Shah Alam
22. Afiq Imran Bin Yusni, Employer Acceptancy Toward Odl Qs Fresh Graduates From All Universities In Malaysia
23. Muhammad Azim Bin Ahmad Dahari The Way Forward For Toll Operation System In Malaysian Highway
24. Dania Aneez Binti Mohamad Zaidi The Health Of Professionals Practice: The Happy Index Of Quantity Surveying Profession In Malaysia
25. Siti Nabilah Binti Rizaudin, Assessing Schedule Performance In The Construction Of Green Building
26. Siti Nurshameera Binti Shaharuzzaman, Environmental And Biological Factors In Green Building
27. Nur Alia Najwa Binti Abdul Aziz, A Study On The Factor Affecting Building In Malaysia
28. Nur Syazleen Binti Abdul Razak, The Implementation Of Malaysia Green Highway Index

29. Muhammad Aiman Bin Aminudin, Critical Success Factor Of Green Highway In Malaysia
30. Hamimie Fatimah Binti Husman, Barriers In The Implementation Of Autonomous Equipment As Part Of Industrial Revolution At Construction Site
31. Hafizuddin Haziq Bin Yahya, Fire Safety Implementation In Building: Consultant Perspective
32. Farah Salwani Binti Abd Razab, Safety Standard For Highway Construction
33. Nurul Irka Syafirra Binti Baharun, The Strategies For Effective Online Teaching Among Lecturers In Public Universities In Malaysia.
34. Aina Aida Binti Airil Anuar, Maintenance Of Structure And Facility At Putrajaya Lake And Wetland
35. Nur Atiqah Binti Mohd Nazarrudin, Strategies In Implementing Building Information Modelling In Green Assessment Tools
36. Muhamad Ilham Shah Bin Norazuwa, Supply Chain Issue In Industrialized Building System For Housing Works Programme In Malaysia
37. Muhammad Izzat Bin Alib, Fire Safety Management In Factories In Klang
38. Siti Zafirah Binti Mohd Nor, The Level Of Contractors' Awareness Regarding Carbon Footprint In The Construction Process
39. Nurul Fathiah Binti Mohamad Hizraiee, The Challenges Faced By Quantity Surveyor During Work From Home Compared To Working In Office
40. Nur Shafiqah Nadia Binti Jaafar, A Review On Occupant's Satisfaction And Wellnes Level In Government Secondary School
41. Mohamad Asyraf Bin Azahari, A Study On The Implementation Of Big Data Analytics On Construction Cost Management In Malaysia
42. Ammar Asyraf Bin Rosnan, Adoption Of Unmanned Aerial Vehicle (Uav) In Construction Project
43. Farah Naqibah Binti Aznan, The Implementation Of Bioclimatic Design In Construction Industry
44. Muhammad Fahmi Akmal Bin Mohd Rasul, The Challenges Of Implementing An Energy Management System For Smart Building In Selangor
45. Nurul Natasha Binti Zainul Falah, Design And Cost Of Kuala Lumpur Air Traffic Control Centre (KI ATCC) At KLIA
46. Siti Nur Ain Binti Sukeri, Environmental Legislation Awareness During Construction Among Contractors
47. Muhammad Alif Azfar Bin Zamzuri, The Influence Of Automation And Robotics On The Performance In Construction Industry In Malaysia

Publications

Paper in indexed journal (SCOPUS/ISI)

1. Ismail, N. A. A., **Rooshdi, R. R. R. M.**, Sahamir, S. R. & Marhani, M. A. (2023). A Systematic Literature Review on BIM-based Facilities Management towards Sustainable Construction. Chemical Engineering Transactions, 106. – co-author
2. Mohamad, M. A. H., Ismail, N. A. A. & **Rooshdi, R. R. R. M** (2023). Challenges of Integrating Building Information Modelling (BIM) into Sustainable Design for Green Highway Construction. Chemical Engineering Transactions, 106. – co-author
3. Ismail, N. A. A., Hasbullah, I. S., Marhani, M. A., **Rooshdi, R. R. R. M.**, Sahamir, S. R. & Golizadeh, H (2023). Lean-BIM Collaborative Approach for Sustainable Construction Projects in Malaysia. Journal of Advanced Research in Applied Sciences and Engineering Technology. - main author
4. Rafidi, A. A. A., Marhani, M. A., **Rooshdi, R. R. R. M.**, Ismail, N. A. A. & Sahamir, S. R. (2023). Challenges of Implementing Effective Solid Waste Management in Construction Projects. Jurnal Penyelidikan Sains Sosial (JOSSR), 6(18), 1-7. – co-author

5. Kamil, A. I. M., Ismail, N. A. A., Hassan, A. A., **Rooshdi, R. R. R. M.** & Marhani, M. A. (2022). Satisfaction of Quantity Surveying Students towards Online Distance Learning (ODL) during Covid-19 Pandemic. *Asian Journal of University Education*, 18(2), 422-429. – co-author
6. **Rooshdi, R. R. R. M.**, Ismail, N. A. A., Sahamir, S. R. & Marhani, M. A. (2021). Integrative Assessment Framework of Building Information Modelling (BIM) and Sustainable Design for Green Highway Construction: A Review. *Chemical Engineering Transactions*, 89, 55-60. – main-author
7. Sahamir, S. R., Ismail, N. A. A., **Rooshdi, R. R. R. M.** & Zainordin, Z. M. (2021). Barriers Impeding the Adoption of Information and Communication Technology (ICT) in Construction Project Management. *International Journal of Integrated Engineering*, 13(5), 211-219. – co-author
8. Ismail, N. A. A., **Rooshdi, R. R. R. M.**, Sahamir, S. R. and Ramli, H. (2021). Assessing BIM Adoption towards Reliability in QS Cost Estimates. *Engineering Journal* 25 (1), 155-164. – main author
9. **Rooshdi, R.**, Abd Majid, M., Sahamir, S. and Ismail, N. (2018). Relative Importance Index of Sustainable Design and Construction Activities Criteria for Green Highway. *Chemical Engineering Transactions* 63, 151-156. Main Author.
10. **Rooshdi, R. R. R. M.**, Majid, M. Z. A., & Sahamir, S. R. (2017). Weightage factor for criteria of design & construction for green highway. *Chemical Engineering Transactions*, 56, 355-360. doi:10.3303/CET1756060. Main Author.
11. **Muhd Rooshdi, R. R. R.**, Abd Majid, M. Z., & Sahamir, S. R. (2015). Sustainable design and construction elements in green highway. *Jurnal Teknologi*, 77(16), 113-118. doi:10.11113/jt.v77.6407. Main Author.
12. Sahamir, S., Zakaria, R., **Rooshdi, R.**, MA Adenan, M., Shamsuddin, S., Abidin, N., Ismail, N. and Aminudin, E. (2018). Multi-Criteria Decision Analysis for Evaluating Sustainable Lifts Design of Public Hospital Buildings. *Chemical Engineering Transactions* 63, 199-204. Co-author.
13. Ismail, N., Idris, N., Ramli, H., **Rooshdi, R.** and Sahamir, S. (2018). Sustainable BIM-Based Cost Estimating for Quantity Surveyors. *Chemical Engineering Transactions* 63 (235-240). Co-author.
14. Sahamir, S. R., Zakaria, R., Alqaifi, G., Abidin, N. I., & **Rooshdi, R. R. R. M.** (2017). Investigation of green assessment criteria & sub-criteria for public hospital building development in Malaysia. *Chemical Engineering Transactions*, 56, 307-312. doi:10.3303/CET1756052. Co-author.
15. Balubaid, S., Bujang, M., Aifa, W. N., Seng, F. K., **Rooshdi, R. R. R. M.**, Hamzah, N., . . . Ismail, H. H. (2015). Assessment index tool for green highway in Malaysia. *Jurnal Teknologi*, 77(16), 99-104. doi:10.11113/jt.v77.6405. Co-author.
16. Zakaria, R., Seng, F. K., Abd. Majid, M. Z., Zin, R. M., Hainin, M. R., Puan, O. C., Moayed, F. (2013). Energy efficiency criteria for green highways in Malaysia. *Jurnal Teknologi (Sciences and Engineering)*, 65(3), 91-95. doi:10.11113/jt.v65.2152. Co-author.

Proceeding Paper

1. Rooshdi, R. R. R. M., Nazaruddin, N. A., Ismail, N. A. A., Sahamir, S. R. & Marhani, M. (2023). Challenges of implementing building information modeling (BIM) in green assessment tools. *AIP Conference Proceedings*, 2881 (1). – main-author
2. Sahamir, S. R., Ibrahim, F. D. Q., Zakaria, R., Ismail, N. A. A., **Rooshdi, R. R. R. M.**, Abidin, N. I. & Shamsuddin, S. M. (2023). Key barriers in managing construction site for green building projects. *AIP Conference Proceedings*, 2881 (1). – co-author
3. Wan Alias Wan Muda, **Raja Rafidah Bt Raja Muhammad Rooshdi**, Noor Akmal Adillah Binti Ismail, Mohd Arif Bin Marhani, (2020). Rehabilitation of abandoned school project: constructions and costs involved. In *Proceedings of Quantity Surveying Research and Innovation Presentation 2019 (QSRI 2019)*. Co-author.

4. Siti Nur Aishah Nasroon, Noor Akmal Adillah Binti Ismail, Mohd Arif Bin Marhani, Raja Rafidah Bt Raja Muhammad Rooshdi, (2020). Improving safety management through building information modelling (BIM) technology in the Malaysian construction industry. In Proceedings of Quantity Surveying Research and Innovation Presentation 2019 (QSRI 2019). Co-author.
5. Muhammad Zahir Bin Mohd Zainal, Mohd Arif Bin Marhani, Noor Akmal Adillah Binti Ismail, **Raja Rafidah Bt Raja Muhammad Rooshdi**, (2020). The challenges of lean construction implementation in the Malaysian construction industry. In Proceedings of Quantity Surveying Research and Innovation Presentation 2019 (QSRI 2019). Co-author.
6. Fatin Najwa Binti Azman, Mohd Arif Bin Marhani, Noor Akmal Adillah Binti Ismail, **Raja Rafidah Bt Raja Muhammad Rooshdi**, (2020). The challenges in the implementation of construction waste management in the Malaysian construction industry. In Proceedings of Quantity Surveying Research and Innovation Presentation 2019 (QSRI 2019). Co-author.
7. Nur Azimah Binti Kapli, Mohd Arif Bin Marhani, Noor Akmal Adillah Binti Ismail, Raja Rafidah Bt Raja Muhammad Rooshdi, (2020). The success factors of adopting the lean construction approach in the Malaysian construction industry. In Proceedings of Quantity Surveying Research and Innovation Presentation 2019 (QSRI 2019). Co-author.
8. Nur Ain Abu Bakar, Noor Akmal Adillah Binti Ismail, Mohd Arif Bin Marhani, **Raja Rafidah Bt Raja Muhammad Rooshdi**, (2020). The understanding of building information modelling concepts amongst stakeholders in the Malaysian construction industry. In Proceedings of Quantity Surveying Research and Innovation Presentation 2019 (QSRI 2019). Co-author.
9. Noor Akmal Adillah Binti Ismail, Mysarah Binti Maisham, Zulkhairi Affandy Bin Mohd Zaki, **Raja Rafidah Bt Raja Muhammad Rooshdi**, Sahamir, Shaza Rina, (2019). The mediating effects of cost estimates reliability on BIM adoption: SEM model analysis. IOP Conf. Ser.: Earth Environ. Sci. 385 012070. Co-author.
10. Sahamir, Shaza Rina, Rozana Zakaria, Raja Rafidah Bt Raja Muhammad Rooshdi, Noor Akmal Adillah Binti Ismail, Zainab Binti Mohmad Zainordin , (2019). Key influencing factors for green public hospital building development in Malaysia. MATEC Web of Conferences 266(6):01025. Co-author.
11. Muhammad Syarifuddin Bin Murat, Raja Rafidah Bt Raja Muhammad Rooshdi, (2018). Impact of design changes on construction project performance. In Proceedings of Quantity Surveying Research and Innovation Presentation 2018 (QSRI 2018). Co-author.
12. Muhamad Isma Fahmi Bin Mohd Ismail, Raja Rafidah Bt Raja Muhammad Rooshdi, (2018). The implementation of Industrialised Building System (IBS) score system in the Malaysian construction industry . In Proceedings of Quantity Surveying Research and Innovation Presentation 2018 (QSRI 2018). Co-author.
13. Noor Akmal Adillah Binti Ismail, Hazwani Ramli, Elma Dewiyana Binti Ismail, Raja Rafidah Bt Raja Muhammad Rooshdi, Shaza Rina Sahamir, Nur Hidayah Idris, (2018). A review on green BIM potentials in enhancing the construction industry practice. MATEC Web of Conferences 266, 01023. Co-author.
14. Noor Akmal Adillah Binti Ismail, Nur Hidayah Binti Idris, Raja Rafidah Bt Raja Muhammad Rooshdi, Sahamir, Shaza Rina, (2018). The relationship between cost estimates reliability and BIM adoption: SEM analysis. IOP Conference Series Earth and Environmental Science 117(1):012045. Co-author.
15. Zainab Binti Mohmad Zainordin, Noorsaidi Mahat, Mohamad Ezad Hafez Mohd Pahraraji, Nurul Asra Binti Abd. Rahman, Raja Rafidah Bt Raja Muhammad Rooshdi, (2009). Penyediaan dokumen tender bagi pelaksanaan kerja-kerja penyelenggaraan masjid:kajian kes di Kota Samarahan, Sarawak. Seminar Serantau Perkembangan Islam Borneo 2009. Co-author.

16. Shahela Binti Mamter, Jamaludin B Mohd Aris (Haji), Noor Akmal Adillah Binti Ismail, Noorsaidi Mahat, Raja Rafidah Bt Raja Muhammad Rooshdi, (2008), Vandalisme Di Kampus UiTM Sarawak (UiTMS, Kota Samarahan). Satu Tinjauan ke Kolej-kolej Seri Serapi, Seri Mulu dan Seri Gading. Konferensi UiTM Sarawak 'Advancing Towards International Standing'. Co-author.

General Publication

1. Raja Rafidah Bt Raja Muhammad Rooshdi, 2014, Manual Malaysia Green Highway Index.

Research Grants and Contracts

1. Fundamental Research Grant Scheme (FRGS) (2021-2024), RM 83,000, Integrated Building Information Modelling-Cost Benefit Analysis (BIM-CBA) for Public Projects – project member
2. Smart lean-BIM collaborative framework in harnessing sustainability for construction projects in Malaysia. Research Amount RACER RM 25,200. 2019. On-going. Co-researcher.
3. Investigation Of Sustainable Fuel Consumption On Highway Construction Machineries. Research Amount LESTARI RM 20,000. 2016-2018. Completed. Principal researcher.

Consultation & Expertise

N/A

Innovation, Commercialization & Entrepreneurial

1. Bronze - The International Virtual e-Content Development Competition 2023 (e-ConDev), UMC239 - Introduction to Electrical Systems for Quantity Surveyors (MC – _Micro Credential) - developer
2. Gold - The International Virtual e-Content Development Competition 2023 (e-ConDev), Woodworking Projects Guide - Machines and Tools (OER – Educator) – developer
3. The International Virtual e-Content Development Competition 2022 (e-ConDev), Sustainable Construction (MOOC - Massive Open Online Course) – developer
4. Bronze Medal - International Invention, Innovation & Design UiTM Cawangan Negeri Sembilan (IIID UiTMCNS) 2018 (A Practical Framework for Fuel Consumption Reduction On Highway Construction Machineries)
5. Silver Medal - National e-Content Development Competition 2018 (e-ConDev). Building Construction Fundamentals I and Building Services and Sustainability)
6. Silver Award - Malaysia Green Highway Manual (MyGHI) at Malaysian Road Conference 2014
7. Silver Medal - Malaysia Green Highway Manual (MyGHI) at Seoul International Invention Fair 2015

Work and Collaboration Experience

1. Committee, 2022, ASEAN Quantity Surveyors Association (AQSA), ASEAN Quantity Surveying Association Academic Conference.
2. Committee, 2016, Board of Quantity Surveyors Malaysia (BQSM), Programme for QS Registration Scheme (PQRS)

Awards & Recognitions

1. Bronze - The International Virtual e-Content Development Competition 2023 (e-ConDev), UMC239 - Introduction to Electrical Systems for Quantity Surveyors (MC – _Micro Credential) - developer
2. Gold - The International Virtual e-Content Development Competition 2023 (e-ConDev), Woodworking Projects Guide - Machines and Tools (OER – Educator) – developer
3. The International Virtual e-Content Development Competition 2022 (e-ConDev), Sustainable Construction (MOOC - Massive Open Online Course) – developer
4. Bronze Medal - International Invention, Innovation & Design UiTM Cawangan Negeri Sembilan (IIID UiTMCNS) 2018 (A Practical Framework for Fuel Consumption Reduction On Highway Construction Machineries)
5. Silver Medal - National e-Content Development Competition 2018 (e-ConDev). Building Construction Fundamentals I and Building Services and Sustainability)
6. Silver Award - Malaysia Green Highway Manual (MyGHI) at Malaysian Road Conference 2014
7. Silver Medal - Malaysia Green Highway Manual (MyGHI) at Seoul International Invention Fair 2015

Contribution to Society

1. Aktiviti Masyarakat Prihatin 2020. Jawatankuasa Pembangunan Staf, Centre of Studies for Quantity Surveying. 2020. Participation.

Other Activities

N/A