



Professor Ts. Dr. Rahinah Ibrahim, FASc.

Specializations

Architecture, Integrated Design Management, Built Environment Informatics, Industrialized Building Systems, Research Methodologies, EAGLE Program

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Professional Qualifications

- ❖ MBOT #PT20060129
- ❖ IVMM #IVMM0077
- ❖ CIOB UK #2024547
- ❖ HRDF TTT Exemption

Researcher ID

- ❖ [Auth. ID:](#) 35874723500
- ❖ [ORCID ID:](#) 0000-0001-6741-6439
- ❖ [WoS ResearcherID:](#) K-1875-2019

Publications

- ❖ Google Scholar H-Index 17
- ❖ Scopus H-Index 11
- ❖ Scopus Publications 56
- ❖ Scopus Citations 485

Research Projects as PI

- ❖ Projects 21
- ❖ Funds RM4,050,738
- ❖ IPs 22

Education

- PhD (Construction Engineering & Management), Stanford University, USA (2005)
- Engr. (Construction Engineering & Management), Stanford University, USA (2005)
- M. Architecture, SCI-Arc, USA (1990)
- B.A. (Architecture), University of Washington, USA (1987)

Profile

An entrepreneurial design scientist who strives working with transdisciplinary peers especially when Arts and Humanities merge with S&T to produce an invention appropriate to serve vulnerable communities. Trained by Stanford Research Institute and Oxford University Innovations in innovations and entrepreneurship and permitted to become Co-Founder of Grounded Learning (M) Sdn. Bhd.—a startup company under UPM's Innohub—to commercialize the EAGLE Program. Believes that having innovation and entrepreneurship knowledge during R&D phase would improve an invention's market acceptance later. Moreover, applying proven R&D outputs in classrooms would allow students to jump start their life-long learning before a product even hits the market. Advocate for Social Sciences and Arts & Humanities to make STEAM impacts to the world.

Key Awards/Achievements

International

- United Nations' SDG Good Practice 2021 (Smart Sanitation for Water Settlements).
- National Finalist (Malaysia) for Underwriters Laboratory - ASEAN-US Science Prize for Women 2021, Jakarta.
- Fellow, Leadership in Innovation Fellowship (LIF5) 2019, Newton-Ungku Omar Fund
- First Winner, GIST-APEC Startup Competition 2018.
- Highly Commended Award, CIOB Intl Innovations & Research Award 2016.
- Best New Innovation, Greenbuild Asia 2012.
- Certificate of Special Congressional Recognition by Congresswoman Anna Eshoo in recognition of outstanding and invaluable service to the community (9 December 2004).

Malaysia

- National Academic Award 2013 (Arts and Creativity), MOHE.
- Finalist, National Academic Award 2022 (Applied Sciences), MOHE.
- Fellow, Academy Sciences of Malaysia 2021, ASM.
- Fellow, Institute of Value Management Malaysia 2017, IVMM
- Top Research Scientists Malaysia 2012 & 2018, ASM.
- Gold Medal, IPicTL 2022 for "EAGLE Navigator", UPM.

Recognitions

- Project Advisor, Science for Global Goals Guide on Sustainable Communities, Smithsonian Institute, USA (2021-2022)
- Regional Associate Editor, *Smart and Sustainable Built Environment*, (2020 – present) ISSN: 2046-6099 SCOPUS Q1 Emerald.
- International Scientific Committee, *International Journal on Architectural Research (Arch-Net IJAR)* (2020-present) ISSN: 1938-7806 SCOPUS Q1 Emerald.
- Local Chair, International Association of Studies of Traditional Environments (IASTE) 2014, organized with UC Berkeley 14-17 Dec 2014.
- Member, BIM Working Committee, CITP 2016-2020, Ministry of Works.
- Vice President/Council Member, Institute of Value Management Malaysia (2013-2021)



Smart Sanitation Project, Sabah



ISTP Wastewater Treatment Plant



AAN 2013



RAE, SASBE Journal

New Curriculum Development

- ❖ Chair for Bachelor Science (Architecture) started in 2000.
- ❖ Chair for Master in Construction Technology Management started in 2023.

Language Competencies

Malay - Excellent
English - Excellent

Graduated Students

Chairperson 19 PhD
Chairperson 12 Master
2 Full Professors < 10 years graduation

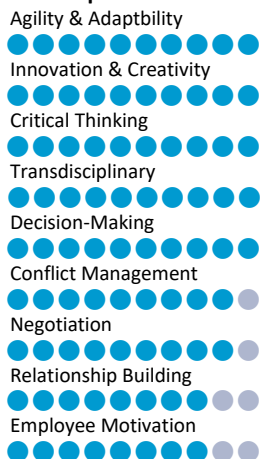
Academic Leadership

- ❖ UPM Senate 2015-2025
- ❖ Dean FRSB 2011-2014
- ❖ Deputy Dean (Research, Innovations & Graduate Studies) 2006-2011

Academic Position

- ❖ Professor VK6 2015-present
- ❖ Professor VK7 2011-2015
- ❖ Assoc. Professor DS54 2007-2011
- ❖ Lecturer DS45 1997-2006

Leadership Skills



Communication

- ❖ Microsoft 365
- ❖ Google Apps
- ❖ LinkedIn Rahinah Ibrahim
- ❖ SimVision



FAST Diagram for FRSB
Transformation Strategy 2011-2014



Architectonic Spacer Building System
Showhouse @ FRSB

Professor (VK6), Universiti Putra Malaysia (2015-present)

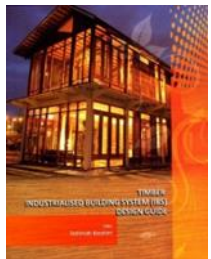
- Elected University Senate by peers for 2017-2020, 2020-2023 and 2023-2025 terms.
- Senate Representative in University's Committees i.e. Promotion Committee for Professors, Promotion Committee for Associate Professors, Curriculum Committee, Accreditation Committee, and Selection Committee for Deans/Directors.
- Oversee conceptualisation, development, approval and accreditation of new Master in Construction Technology Management Program starting in October 2023. Program founded on localised BIM, VM, and organisational culture theories to train multi-disciplinary building professionals in integrated project delivery (IPD). Program accreditation by MQA, Institute of Value Management Malaysia and CIDB MyBIM Educational Centre.
- *Chief Innovation Officer*. Commercialisation of EAGLE Training Program for worldwide dissemination with Grounded Learning (M) Sdn. Bhd., a startup company under Innohub, since 2016. Automated EAGLE Table with Innohub RM80,000 grant, and integrated theory building features in extended EAGLE System with PlatCOM Ventures RM630,000 grant. Expand EAGLE System market to Japan and China with more than 1,000 users worldwide. Now, developing trainers for China market. PhD upskilling at Chiba University since 2020.
- *Advisor for ISTP*. Collaborated with Action Caring Team (M) Berhad, a civil society organisation, to promote ISTP technology to UNEP. UNEP gave USD78,500 grant to install 10 tanks for Smart Sanitation for Water Settlements project in Sabah 2020-2022. Project is recognized as United Nations SDG Good Practice Project 2021. Was appointed as Focal Lead for Implementation Working Group for Global Wastewater Initiative Program. Project helps UNEP raise awareness on stopping sewerage pollution at the sources, balancing economic equity for vulnerable communities, and improving ocean biodiversity.
- Among two Malaysian entrepreneurs from 2,000 entrepreneurs sponsored by US and Netherlands Governments to Global Entrepreneurship Summit 2019 at The Hague, Netherlands.
- Among 37 entrepreneur-scientists selected and sponsored for raining at Leaders ini Fellowship (LIF) Newton-Ungku Omar Fund program in London 2019. Graduated among 1000 LIF Fellows from 17 countries.
- Sponsored by US Embassy to GIST-APEC 2018 Startup Competition in Australia. Won First Winner for ISTP from 14 teams from 8 APEC countries.
- Awarded "Highly Commended" for Innovations' Achievers Award from CIOB UK in 2016 for ISTP, first Malaysian technology to win after 184 years of CIOB's establishment.
- Regional Associate Editor, *Smart and Sustainable Built Environment*, SCOPUS Q1 Emerald journal. SASBE elevated from Q2 to Q1 in 2 years.
- Member, Working Committee for *Value Management Competency Standards* (IVMM, 2020)
- Member, Working Committee for *National Value Management Guide* (IVMM, 2018)
- Member, BIM Working Committee for CITP 2016-2020, Ministry of Works Malaysia.

Professor (VK7), Universiti Putra Malaysia (2011-2015)

- Appointed as Dean, Faculty of Design and Architecture. Joined Senate Committee and Deans Council of UPM.
- Established Transformation Vision (2011-2014) to raise the prospect of design and architecture as contributing fields for a Research University. Modified FAST Diagram in Value Engineering method to plan strategy to turn Faculty into a Design School. Received RM200,000 funding from the University Management Committee activities including creating a Virtual Design Exhibition website based on STEDEX exhibition.
- Personally trained 12 young tutors to develop impactful research proposals and obtained placement at top 100 universities. Terminated 3 tutors for their inability to continue to PhD studies. The efforts were expected to produce better quality researchers who well connected to international researchers and institutions.
- Member, Working Committee for National Design Roadmap for Furniture and Timber-based Product, MPIC (2012-2015).
- Advocacy for Social Science & Humanities scoring system and KPIs for staff which were burdensome. Contributed and supported SSH equivalence scores.



Architectonic Spacer Building System Showhouse @ CIDB



Timber IBS Design Guide



Riverside Place, Santa Clara (Mid-Peninsula Housing Coalition)



Putra Blok™

- Invited by UC Berkeley as Local Chair for the organisation of IASTE 2014 Conference. Received more than 150 international delegates (more than 95% participants) to Kuala Lumpur despite economic downturn and lack of local support.
- Teaching by showing approach was extended to creating new technological products for architecture/construction and commercializing them. SABSystem was first product from faculty to be commercialized. It won international awards for new construction methods, and led to National Academic Award (Arts and Creativity Category) in 2013.
- Filed for copyright on EAGLE Training Program (in English, Malay, Farsi and Arabic).

Associate Professor (DS54), Universiti Putra Malaysia (2006-2011)

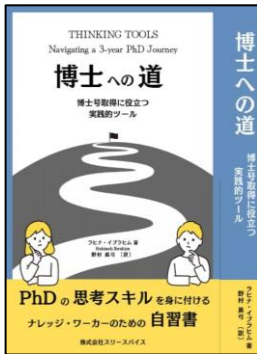
- Appointed Deputy Dean (Research, Innovations & Graduate Students) for 2006-2009 and 2009-2011 terms. Oversighted first MyRA assessment where 2/3 of publications and grants from Faculty were contributed by one individual named Rahinah Ibrahim.
- Initiated STEDEX index exhibition as an alternative venue for design lecturers to publish CIJ publications. Led discussions with ICOM, Paris and ProQuest, Cambridge University to obtain DAAI Indexing for exhibition catalogues. Worked closely with studio masters in developing indexing procedures from design works into indexed exhibition artifacts that met ICOM's exhibition quality. The publication of one STEDEX catalogue successfully provided faculty with at least 1 book, 15 chapters and at least 45 copyrights each year.
- Took over teaching of RSB5001 Research Methodologies in Design course in order to nurture graduate students who in turn will train their supervisors indirectly about research and supervising thesis. Working in class, developed and refined the EAGLE Table for fast comprehension about developing a research proposal. Presented the EAGLE Table at European Conference on Research Methodology in Business 2011 to obtain peer validation on the efficacy of the EAGLE Table.
- Chair to Timber IBS Taskforce for MTIB to promote timber for construction. Awarded RM1.49 million grant from MPIC to develop timber IBS product. Led a national team of 25 timber stakeholders and researchers in developing a *Design Guideline for Timber IBS* for MTIB and trained 650 timber entrepreneurs and design consultants in 14 states. Registered Architectonic Spacer Timber Framing System patent for UPM.
- Founding Editor-in-Chief of *Alam Cipta Journal*. Strategise publication for design and architecture. Refocused activities under 3 groups led by an Associate Professor.

PhD Student, Stanford University, USA (2000-2005)

- First HRD Fund scholar under MOSTI to attend the School of Engineering, Stanford University.
- Graduated with Engineer Degree in Construction & Engineering Management studying the "Feasibility of 4D CAD in Housing Development".
- Established the "Discontinuity in Organizations (DIO)" theory in PhD thesis that identifies four environmental factors causing time and cost losses during property development projects. The results helped streamlined the asset management documentation system assisted Mid-Peninsula Housing Coalition, a top nonprofit housing developers in Santa Clara, to build 2,000 units of affordable housing in 2 years compared to 5 years prior.
- Co-led the Muslim Volunteers Group at Stanford Hospital and established spiritual care services procedures for Muslim volunteers adopted by ISNA for 3,000 hospitals in USA. Part of annual USD2 million savings for Stanford Hospital in volunteers' hours.

Lecturer, Universiti Putra Malaysia (1997 – 2000)

- First architecture lecturer and appointed Architecture Program Coordinator for Faculty of Design and Architecture.
- Oversee conceptualisation, development, approval and accreditation of BSc. in Architecture program offered in 2000.
- Contributed architectural inputs in first research project—a RM1.2 million Putra Blok Affordable Housing research project under Faculty of Engineering. Designed AQH house, integrated structural requirements, determined modular sizing and assembly. Putra Blok filed for 8 Malaysian and international patents and won many international awards.



UNEP-ACT Malaysia (2020-2022)



Mentee to Rev. John Hester, Stanford Hospital (2001-2004)

Commercialized IPs

- **Rahinah Ibrahim.** “E.A.G.L.E. Intellectual Capability Training Program” in English. SD filed 2 July 2015 Ref. UPM/100-45-2(C); Ref LY2015001810 filed 3 Nov 2015 to MyIPO.
- **Rahinah Ibrahim & Siva Jaganathan.** “Architectonic Spacer Building System”, MYPO PI20097019, filed 1 October 2009; Patent No MY-158546A dated 14 Oct 2016.
- **Rahinah Ibrahim, Azni Idris, Thamer AlThanoon, Navid Nasrollah & Mustafa Kamal Mohd Zaini.** “Sewerage Treatment Plant” PCT/MY2017/050003 filed 24 Januari 2017.
- **Rahinah Ibrahim, Rafeah Mustafa Kamal and Mohd Fikrie Salam.** “An Intellectual Knowledge Ideation Management System” PCT/MY2020/050079 filed 31 Aug 2020.

Books

- **Rahinah Ibrahim & Mayumi Nomura.** 2022. *Thinking Tools: Navigating a 3-Year PhD Journey (in Japanese).* Tokyo: 3Spices, Ltd. 160 pg. ISBN 9784949999120; e-ISBN1923000020009.
- **Rahinah Ibrahim.** 2020. *Thinking Tools: Navigating a 3-Year PhD Journey.* Singapore: Partridge. 140 pg. ISBN 978-1-5437-5771-2.
- **Rahinah Ibrahim, et al.** 2010. *Timber Industrialised Building Systems (IBS) Design Guide.* Serdang: Penerbit UPM (ISBN 978-967-960-262-3).
- **Nasir Baharuddin, Rahinah Ibrahim & Norsidah Ujang.** 2011. *STEdex'11* Vol. 3 Serdang: UPM Press (ISSN 2180-0685).

Significant Publications

- **Ibrahim, R., Mustafa Kamal, R., Mohd. Rasdi, R.** (2021). Online Assistive Learning System as Actual Behavioral Control for Adult Learners in A Planned Behaviour for Graduating on Time. *Proceedings for the Joint Conference of AHRD-ARACD 2021* organized by UPM on 16-18 November 2021 in Serdang.
- **Ibrahim, R.** 2011. Demystifying the arduous doctoral journey: The eagle vision of a research proposal. *The Electronic Journal of Business Research Methods* 9 (2): 130-140.
- **Pour Rahimian, F. and R. Ibrahim.** 2011. Impacts of VR 3D sketching on novice designers’ spatial cognition during collaborative architectural design. *Design Studies* 32 (3): 255-291
- **Ibrahim, R. and F. Pour Rahimian.** 2010. Comparison on design synthesis strategies by architectural students when using traditional CAD and manual sketching tools. *Automation in Construction* 19 (8): 978-987.
- **Ibrahim, R. and O. Mohd Tahir.** 2009. “Breaking the glass ceiling of S&T publications-The design perspective.” *STEdex'09*, Serdang, UPM: 7-15.
- **Ibrahim, R., R. Fruchter, and R. Sharif.** 2007. Framework for Innovative Architectural-Construction Integration Design Studio for Cross-Borders Transdisciplinary Education. *Archnet-IJAR: Intl. J. of Architectural Research* 1 (3): 88-100.

Impactful Research Projects

- Smart Sanitation for Water Settlements Ph 1 & Ph 2, UNEP (USD78,600).
- National IBS Awareness Programme for Timber Industry, MTIB (RM1,496,000).
- Pre-commercialisation of SABSystem in 2 units staff quarters for UPM (RM488,000).
- E.A.G.L.E. Intellectual Capability Training Program, Innohub (RM80,000).

Community Works

- Focal Lead, Implementation Working Group, Global Wastewater Initiative Committee, UNEP for Lok Urai Project (Sept 2020 – July 2022).
- Advisor, ACT Malaysia. Coconut trunk IBS construction for Padang earthquake’s shelter, 5-8 Nov. 2009. Locals completed 200 units per 2 months instead of 6 months.
- Trustee, ACT Malaysia Berhad, a civil society organization focusing on humanitarian, affordable housing, education for communities in need. (2008-present). Advisor for infrastructure and education product development.
- Advisor, Muslim Women Welfare Board, Kota Raja Branch, Selangor (2006-2018).
- Volunteer, Spiritual Care Services Department, Stanford Hospital (July 2001-Dec 2004). Served 313 in-patients during PhD study.
- Volunteer, Partners in Caring, Stanford Hospital (Sept 2003-Dec 2004). Served 10 outpatients during PhD study.

Corporate Experience

- ❖ Asst. Architect, Design PAC Sdn. Bhd. 1995-1997
- ❖ Project Manager, Riverbank Suites Sdn. Bhd. 1992-1995
- ❖ Asst. Project Architect, Pernas-OUE (KL) Sdn. Bhd. 1991-1992



Riverbank Suites, Kuching



Main Lounge, Hotel Istana



Suite Room, Hotel Istana



Chalet Suite, Pelangi Beach Resort

Asst. Project Architect, Design PAC Sdn. Bhd. (1995 – 1997)

- Documented 2-years architectural experience in practice. Responsible for meeting clients, design coordination, and authority liaisons for large housing projects. Prepare and supervised architectural documents for approval submissions.

Project Manager, Riverbank Suites Development Sdn Bhd (1992-1994)

- First female development project manager appointed to oversee development of the first condominium project in Kuching, Sarawak. Reports to CEO and Board of Directors.
- Assisted CEO and supported public relations with state officials, Mayor's Office, and multiple Kuching authority officials to obtain necessary approvals. Involved in public relations activities especially with the media for marketing and need to assure potential buyers of condominium safety when an earthquake was felt in Kuching.
- Negotiated final contract cost of RM32 million. Phase 1 only had RM8,000 variation order from RM12,000,000 budget due to diligent design coordination works with consultant team.
- Oversaw first controlled demolition for old building on site. Coordinated with Mayor Office, police and army to bring in explosives into Kuching and to coincide with project marketing activities.

Asst. Project Architect, Pernas-OUE (KL) Sdn Bhd (1991-1992)

Oversaw coordination and management of architecture and interior design consultants, main contractors, and hotel operators for conceptual design, architecture, interior design and furniture, fittings, and equipments (FFE) of following 5-star resorts:

- **Hotel Istana, Kuala Lumpur.** Managed and coordinated purchasing, delivery and on-site installations of architectural and FFE items. Inspected and verified all variation order claims by main contractor. Memorized locations of all spaces and equipments and facilitated international operator familiarization 6 months before launch. Prepared minutes of Coordination Meetings and project papers for Board Meetings.
- **Pelangi Beach Resort, Langkawi.** Managed and coordinated refurbishment program for 200 units timber beach resort. Managed systematic refurbishment scheduling to reduce environmental disturbances as resort must be in operation.
- **Resort Development Planning for Manmade Lakes**
 - i) **Tasik Banding Resort, Perak.** Involved in site visit by helicopters with Perak government officials and escorted by army personnel on land. Developed conceptual design based on *Orang Asli* theme concept, and researched for adequate materials for management's approval. Liaised with Singaporean concept architect for a 5-star lake resort to deliver conceptual proposal. Pre-qualified design consultants and lead design team site visit to Tasik Banding.
 - ii) **Tasik Pedu Resort, Kedah.** Involved in site visits by boats with Kedah government officials. Liaised with Singaporean concept architect for a 5-star lake resort based on Northern Kedah Siamese concept. Pre-qualified design consultants.