MOHD AMIRUL BIN MOHD SNIN

PhD (University of Bristol), MSc (UPM), BSc (UTM)
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PROFESSIONAL EXPERIENCE

June 2020 – Present: Research Officer – Structural Engineering
Engineering Campus, Universiti Sains Malaysia, Nibong Tebal, Penang.

Role and responsibilities:

- Lead and manage research and development (R&D) projects.
- Communicate regularly with research partners and manage their expectations throughout the project.
- Collect all the experiment data from laboratory works
- Support undergraduate students and research partners in the team.
- Provide analysis expert service to other research partners

Skills and experiences:

- Manage R&D projects from proposal stage to completion. This includes generating project plans, calculate grant budgets, allocate resources, and review risks to the project. I have experience proposing research projects and being reviewed by the professional panels from research panel.
- Proposing the two new research projects under Malaysian Timber Industry Board (MTIB) grant. Those two projects are related to the sustainable materials such as timber and bamboo as main structural sources and have been approved by MTIB.
- Publishing one article indexed by Scopus from the project of treated sago waste as replacement materials in fabricating concrete bricks. In this project, I have compared the treated sago waste as replacement in brick fabrication to another alternative wastes proposed by other researchers.
- Provide technical data of bamboo properties and the methodology of the bamboo connections testing.
- Reviewed the background of bamboo as main structural materials in constructions to figure out the current issues in the connection design.
- Reviewed the background of the timber hybrid houses in Malaysia to determine the best IBS system that can be used as new alternative in housing construction in Malaysia.

October 2015 – July 2021: PhD researcher funded by Malaysian Government
Department of Civil Engineering, University of Bristol, UK

Role and responsibilities:

- Carry out research project for developing the new empirical model of the timber to concrete connection design.
- Communicate the work progress and results to supervisor through regular meetings and reports.

Skills and experiences:

- Research methods, including literature review, theoretical hypothesis, testing and validations.
- Fabricating the timber-concrete composite connections in small scale double shear specimens.
- Have experience in setting up the double shear testing of timber-concrete connections using cyclic test by referring to the Eurocode standard.

- Have experience with the 2-dimensional and 3-dimensional scanner machine (FARO Model 1400) to analyze the plastic hinges of the screws after the test of double shear.
- Using the Matlab software to generate the scan imagery from the FARO model machine in 2D and 3D views.
- Expert in using the multiple linear regression to analyze the significant effects of the material properties on the strength and stiffness of the connections in timber-concrete composite structures.

Jan 2010– Jan 2014: MSc researcher funded by Malaysian Government
Department of Civil Engineering, Universiti Putra Malaysia, Serdang, Selangor

Role and responsibilities:

- Carry out research project for bond slip model between concrete to carbon fibre reinforced polymer (CFRP) plates.
- Communicate the work progress and results to supervisor through regular meetings and reports.
- Part-time undergraduate lab tutor in the department for finite element software (LUSAS). This covers assisting student in completing their tasks, and assessment of their work upon completion.

Skills and experiences:

- Research methods, including literature review, theoretical hypothesis, testing and validations.
- Using multiple linear regression to derive the empirical model of shear stress between concrete and CFRP surfaces.
- Finite element analysis (FEA) simulation of the interaction of concrete to CFRP surfaces.
- Design and carry out experiments for theoretical validations.
- Communication of the work and results through journal publications.

EDUCATION AND AFFILIATION

Oct 2015 - July 2021: University of Bristol (UOB)
PhD in Civil Engineering.
Thesis title: Development of the empirical model of shear strength and stiffness of the screw connections in timber-concrete composite structures.
Supervisor: Professor Crewe, A. (Main Supervisor) & Dr. Vardanega, P. (Supervisor)

Sept 2010 – Jan 2014: Universiti Putra Malaysia (UPM)
Master of Science in Structural Engineering. Thesis title: Bond slip model of FRP -to-concrete surfaces
Teaching assistant in LUSAS software for undergraduate students.
Supervisor: Associate Professor Farah Nora Aznieta (Main Supervisor) & Dr. Nor Azizi Safiee (Co-supervisor)

July 2005– Jan 2010: Universiti Teknologi Malaysia (UTM)
Bachelor of Civil Engineering (First class honour). Final year project title: Effects of the compaction of stabilized soil on the permeability.
Supervisor: Associate Professor Kamarudin Ahmad

TRAINING AND COURSES COMPLETED

- Mendeley Course for researchers and students, University of West England, 2018.
- Laboratory training in timber-concrete composite structure, November 2015 in Trento University, Italy.
- Research training course in Universiti Sains Malaysia, 2010

OTHER RELEVANTS SKILLS

- Competent with Microsoft Office package including Microsoft Project.
- Familiar with LUSAS software.

- Have experience with MATLAB and Solidworks.
- Clean full Malaysian driving license. Comfortable travelling for business.

PUBLICATIONS

M M.S. Mohd Amirul; M.R. Raizal Saifulnaz; N.A. Farah; S. Norazizi, (2014). Bond slip model of FRP-to-concrete surfaces,.*International Journal of Sustainable Materials and Structural Systems (IJSMSS),* **Vol. 1**, No. 4. https://dx.doi.org/10.1504/IJSMSS.2014.068809

Izwan B. Johari, Md Azlin Md Said, Mohd Amirul B. Mohd Snin, Nur F arah Aqilah Bt. Ayob, Nur Syafiqah Bt. Jamaluddin and Mohamad Rohaidzat Bin Mohamed Rashid, (2021). "Effect of Treated Sago Pith Waste Ash and Silica Fume to the Mechanical Properties of Fly Ash-Based Geopolymer Brick" *Key Engineering Materials,* **Vol. 879**, pp 100-114. https://www.scientific.net/KEM.879.100

Mohd Amirul B. Mohd Snin, Emily E. Ducas, Paul J. Vardanega, Adam J. Crewe and Wendel M. Sebastian, (2021). "Global and local characteristics of screw connections in timber -concrete composite structures". *Structures. Under review.*

Mohd Amirul B. Mohd Snin, Wendel Sebastian, Izwan B. Johari, Paul J. Vardanega & Adam Crewe, (2021). "Innovation of Timber and Connection Systems in Timber-Concrete Composite Structures: A Literature Review. *Australian Journal of Structural Engineering. Under review*