



UNIVERSITI
TEKNOLOGI
MARA

Cawangan Perak



BUILDCON2023

**COMPILATION OF PROJECT INNOVATION IDEAS
SEMESTER MARCH – AUGUST 2023**

EMBRACING SMART CONSTRUCTION TRANSFORMATION

BUILDERS' CONVENTION DAY 2023

**Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch**

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Organised by
Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch
Malaysia

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Editors

Siti Akhtar Mahayuddin

Noor Rizallinda Ishak

Nor Asma Hafizah Hadzaman

Sallehan Ismail

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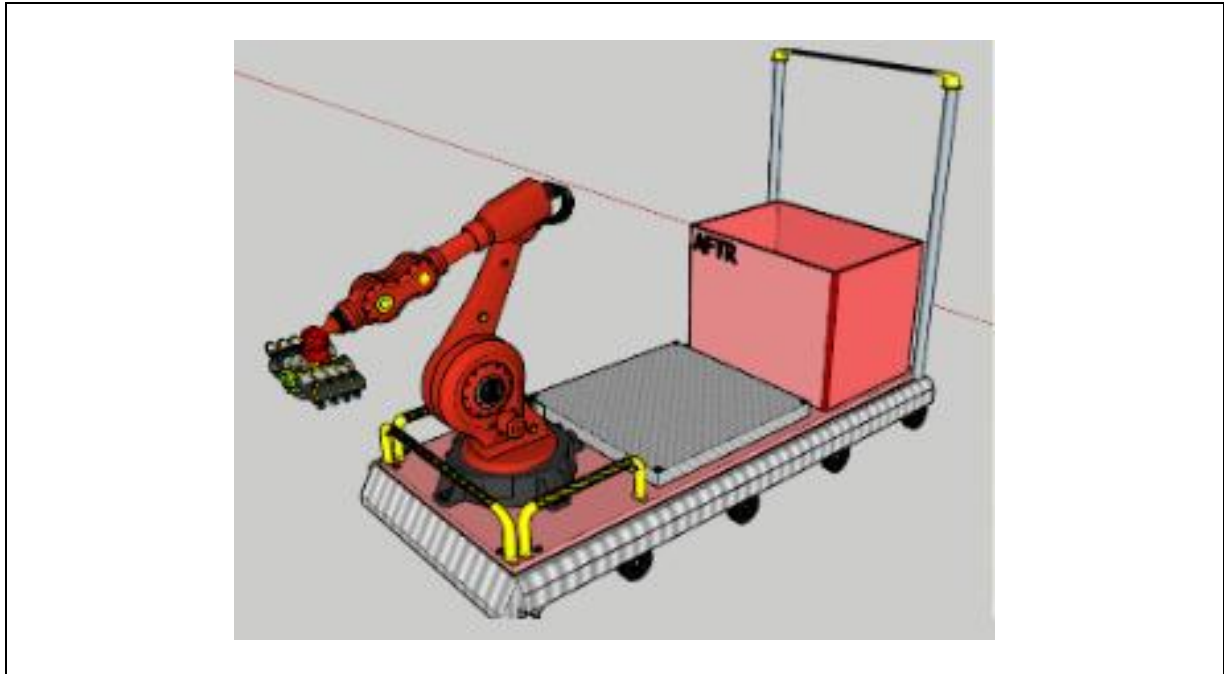
AUTOMATIC FLOOR TILING ROBOT

Khaznida Kamarudin¹ and Nurul Huda Abdul Hadi²

^{1,2}Department of Built Environment Studies and Technology, College of Built Environment, Universiti Teknologi MARA Perak Branch,

32610 Seri Iskandar, Perak

Email: 2021852852@student.uitm.edu.my¹, nurul499@uitm.edu.my²



Automatic Floor Tiling Robot

Innovation Idea:

Tiling is a finishing work, considered one of the important elements in building construction. The main purpose of tile installation is to enhance the overall appearance of the building. It is important to ensure that the installation work is executed with high quality, ensuring completion without any issues or problems. The conventional method of tile installation in the construction industry often encounters various problems and issues, both during and after the construction process. This includes challenges such as filth, dust, noise, dirt, and vibrations that can pose risks to the workers. Therefore, transitioning away from conventional methods and embracing construction automation, such as robots in the construction industry, are promising ideas for future competitiveness. The process involved identifying current problems, proposing and developing a new machine, and assessing the marketability of the product. This was done to rectify any shortcomings in the existing technology and enhance overall efficiency. However, previous studies on floor tiling robots is still insufficient, causing limitation to gather comprehensive data. The data was collected through a review of secondary data sources, utilising design thinking, and simulated using SketchUp software. The Automatic Floor Tiling Robot (AFTR) is proposed as an alternative solution to address problems such as excessive time consumption, labour-intensive work, poor working conditions, and subpar work quality. This product is expected to contribute to Sustainable Development Goals (SDGs) number 9, which aims to build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation.

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak



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Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

PROF. MADYA DR. NUR HISHAM IBRAHIM
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