

BUSINESS COMPANY

ROSO INDUSTRY



ROSO NEWS

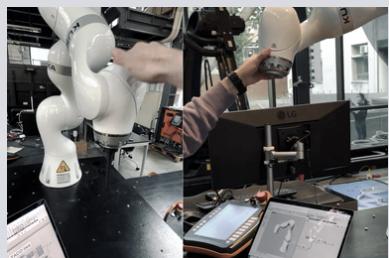
- 09 JUNE 2023 - Talk | 東海建築畢業設計——「赤色獨白 Monologues of Maroon」
- 20 JUNE 2023 - Formosa News | 民視新聞 | 異言堂
- 24 JUNE 2023 - 2023浪漫台三線藝術祭 | Falabidbog花啦哩噉 | RivingRoom 鑊廳
- 27 JUNE 2023 - Workshop | DigitalFutures 2023 | Place: Tongji University
- 13 JULY 2023 - Exhibition | ROSOx 好感空間展 | 地點: 大台南會展中心
- 19 JULY 2023 - Interview | IC之音 《跟著藝術慢慢走》節目 2023浪漫台三線藝術季-ROSO機器人建造實驗室專訪
- 30 JULY 2023 - Talk at TEDxTaichung | 年度主題《衡 SEESAW》

● Summary of the talk

On February 11, 2025, Universiti Teknologi Malaysia (UTM) organized an industry talk collaborate with Robotics Solution (ROSO), accompanied by Dr Pang Yee Yong which the title of the industrial talk is Technology Information System and Industrial talk. Students of the Faculty of Computing, Section 09 are invited to the industrial talk who the speaker is Professor Wang Shih Yuan, the assistant professor of National Yang Ming Chiao Tung University in Taiwan and the founder of ROSO industry. This talk is aim to provided a comprehensive understanding of robotic technology in construction and architecture design, focusing on cutting-edge advancements and real-world applications. The speaker shared his experiences and insights of the robotics, architecture, machine learning, materials and 3D printing. He also emphasize the impact of robotic technology on construction efficiency, safety and sustainability.

Technologies

Impedance Control of Human–Robot Collaboration



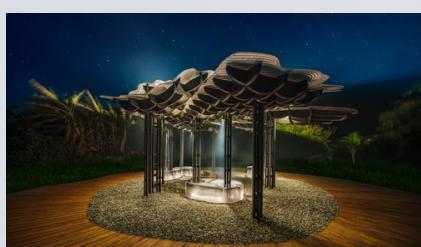
Glass Robotics



Glued Laminated Bamboo (GLB)



Robotic 3D Printed Formwork



The Issues

- Technological Innovations in Robotics
 - Development of a web-based general simulation tool for robotic motion.
 - Using robotic arm for compressed geometry and 3D printing.
- Advancement in Robotic Control and AI
 - Standalone software and control interfaces to interact with robotic systems.
 - Robot self-localization to localize robot motion and position on construction site.
 - Visual SLAM and ROS NAV2 to navigate robots in a space.
 - Isaac SIM and Proximal Policy Optimization (PPO) to enhance autonomous spray painting.

● Reflection

Through this talk, we get to know how robotic technology works in architecture design and construction sites. The production of compressed geometry and different products with different materials using 3D printing provides fascinating insights for us. Besides, we gain information about the use of concrete material to produce large landscape furniture using robotic technology. This makes the whole process more efficient as the furniture could be produced in the lab before moving it to the construction site. It is clear that robotic technology has reduced the risk of workplace injuries. This technology also makes complicated work easier and reduces the time used to produce a product.