



02 DEC, 2022

## Swinburne team is National Smart Uni IoT Hackathon first runner-up

Borneo Post (Kuching), Malaysia



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**KUCHING:** A team of students from Swinburne University of Technology Sarawak Campus (Swinburne) was announced as first runner-up at the Smart Uni IoT Hackathon National Edition 2022 held on Sept 3 with their 'Non-Zero: An IoT-based Personal Energy Harvesting Ecosystem' presentation.

Organised by Digital Internet Association Malaysia and supported by the Ministry of Education Malaysia, Ministry of Science, Technology and Innovation Malaysia, National Science Week and CyberSecurity Malaysia, the competition aims to present and develop IoT solutions at national stage.

Among themes included in the competition were smart cities, agriculture and many more. Countless teams took part, with only 25 qualifying into the first phase and only 10 shortlisted as finalists.

Team members of Swinburne Research Interest Group (SRIG); Paul Cornelius Bong, Eiton Ng Zie Teng and Jake Chieng Zen Yan was supervised by Computing and Science Lecturer Dr Mark Tee Kit Tsun from Swinburne Sarawak's Faculty of Engineering, and the School of Information and Communication Technologies.

The team's project began on Jul 25 with the ideation phase. Hoping to contribute to the makings of the next generation of Extravehicular Mobility Units, the team proposed a system that would be able to harvest energy through everyday activities to prolong spacesuit operation



The winning Swinburne Research Interest Group (SRIG) team (from left); Jake, Paul and Eiton.

time – from solar to motion.

The suit was attached with solar cells and a pair of small motor drivers on each limb. As a single renewable power source is only able to provide so much power to the suit, more sources would cumulatively provide a significantly greater amount of power.

The integration of IoT, allowed the team to remotely study the interaction of how multiple charging sources interact with simultaneously charging of a single battery. The study has been critical for the realisation of how multiple-source charging will result in the destruction of some, if not all power sources due to inconsistent and fluctuating electricity supply.

In the near future, a simplified version of the concept will see

people wearing a more modular and aesthetic system as it is an excellent opportunity to generate a considerable amount of electricity with little to no impediment as people carry out their everyday activities.

This will also see the future of microgrids soar as the world seeks renewable and effective ways to replace fossil fuel.

"It was an amazing chance to develop and present our idea at national stage. Winning the award means we're definitely heading in the right direction," said Paul in a statement yesterday.

Swinburne's 2025 Vision is to bring people and technology together in building a better world; with people driven by a shared sense of purpose to create tomorrow's technology and the human talent required

for a digital, tech-rich future.

Understanding the importance of being technologically savvy in today's world, Swinburne Sarawak offers Computing courses such as the Bachelor of Information and Communication Technology; and Bachelor of Computer Science with an IoT Major with Keysight Technologies; for industrial relevance and internationally acclaimed professional certification.

A certification in computing course leads to a future of opportunities in cybersecurity, data science, artificial intelligence, software development and beyond.

Swinburne currently ranks among the top 126-150 universities in the world for Computer Science in the Times Higher Education subject rankings, moving up two brackets since last year.

For further information on Swinburne Sarawak's Computing courses, call 082-415353 to chat with a Swinburne Sarawak education counsellor via WhatsApp at +6019-819 6353 or email to [study@swinburne.edu.my](mailto:study@swinburne.edu.my).

Appointment for on-campus education counselling is also available from Monday to Friday, 10am to 5pm.

For more information on Swinburne Sarawak, go to [www.swinburne.edu.my](http://www.swinburne.edu.my) or Facebook page [@swinburnesarawak](https://www.facebook.com/swinburnesarawak), Instagram [@swinburnesarawak](https://www.instagram.com/swinburnesarawak), Twitter [@Swinburne\\_Swk](https://twitter.com/Swinburne_Swk), or Swinburne Sarawak YouTube channel.



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### SUMMARIES

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