

## KENYATAAN MEDIA

### **UniMAP MALAYSIA'S INNOVATE FPGA 2019 ASIA PACIFIC/JAPAN REGIONAL FINALIST**

Kangar, 6 Ogos – A Universiti Malaysia Perlis (UniMAP) School of Computer and Communication Engineering (PPKKP) lecturer brought distinction to the university's name when his team's project was chosen as the Regional Finalist at the 2019 Innovate FPGA (Field Programmable Gate Array) Design contest.

The product of the ZHPro\_SCCE team headed by Dr Zulkifli Husin titled *Automated Non-Destructive Fruits Quality Assessment and Monitoring System* caught the attention of the Innovate FPGA Assessment Committee which consisted of experienced professors and scientists and will become one of three universities to represent the country in the Asia Pacific/Japan region this October.

Dr Zulkifli said that the system being developed monitors the quality of fruit using FPGA technology which three non-destructive testing methods, namely image, odour and capacitive techniques to determine their ripeness.

“This project will integrate fruit recognition and classification, and also fruit quality assessment by implementing expert vision, and sensing data acquisition through hybrid intelligent algorithms such as Support Vector Machine-Fuzzy Interference System (SVM-FIS).

“This system is implemented on a FPGA-SoC Intel Cyclone V SoC available on DE10-Nano Kit, for the purpose of collecting and analysing data concurrently through IoT-based technology implementation,” he said.

Because of this success, the team will receive a DE10-Nano Kit for free to advance to the next level before being selected for the finals in China at year's end.

He added that the project was developed as a problem solver in the agricultural sector experiencing difficulties determining the grade of the fruit and preserving its quality before and after harvest.

He said that they hoped that this system would efficiently solve agricultural problems, removing the need for humans to identify ripe fruits to be sold.

“Furthermore, wasting time and human error in categorising of the fruits could be minimised, increasing the productivity of the orchards to ultimately positively impact the industry from entrepreneurs to consumers nationwide,” he said.

Besides Dr Zulkifli, ZHPro\_SCCE roster included PhD candidate Tan Wei Keong, Master's degree student Muhamad Farid Mavi, third year PPKP students Muhamad Amir Hakim Ismail, Muhamad Luqman Yasruddin and Kisookumar Raguntahan, along with UniMAP industrial training student Muhammad Lukman Hakim Derani.

UniMAP Vice Chancellor Prof Ir Ts Dr R Badlishah Ahmad had earlier expressed his pride on this success which would be able to help the farming community in the future.

“All the expertise possessed at UniMAP are not exclusively used to promote the university's performance but also to benefit the people in improving the national economy.

“Hence, I hope that the success of Dr. Zulkifli and his group of students will inspire other researchers and students,” he said.

Innovate FPGA is a global FPGA design contest where teams from all over the world compete to design the future of Artificial Intelligence and FPGA with Terasic and Intel. It is open to all students, professors, designers and industry, and organised by Terasic, a leading developer and provider for FPGA-based hardware & complex system solution based in Taiwan.

By :

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