

Fall detector, soups and solar car at S'pore Poly show

By **ANDREA NG**

WHEN Singapore Polytechnic (SP) student Yeo Yong Ming's father had a stroke that left him paralysed on the left side of his body 10 years ago, his family struggled to find ways for them to be alerted if he fell.

At the SP Engineering Show yesterday, the 20-year-old Aerospace Electronics student and his team displayed what they hope will help people in a similar situation – fall detection sensors converted from Kinect sensors, which are normally used in Xbox 360 consoles.

The concept was originally conceived by researchers at Nanyang Technological University, but the SP team modified it so that two motion sensors, instead of one, are placed in a room to pick up sudden movements and relay the information to carers on their mobile phones. "When the accuracy of these (sensors) increases, it'll be a good system to get help for my dad," Mr Yeo said.

Sixty-five projects were exhibited at the fourth SP Engineering Show, which has been held annually since 2012. In addition to 53 final-year projects by graduating engineering students, 12 projects by SP staff and researchers were showcased. These included ready-to-eat soups and Nasi Go! – a form of onigiri (Japanese rice balls), with flavours of traditional favourites such as chicken rice.

Another group showcased the fourth edition of the "Intellisense Bed", equipped with features such as a mattress cooling system and exit sensors to alert nurses when a patient tries to get up on his own. Project supervisor Jaichandar KS said the cooling system reduces the risk of bedsores developing.

Another team showed off its SunSPEC 4 solar car, which will race in this year's World Solar Challenge in Australia in which a vehicle must travel 3,000km on just two charges.

SunSPEC 3 had dropped out of the 2013 race on day four. Team member Darren Ng, 19, hopes to drive the new model, if he is not called up for national service. He said: "We built this car from scratch so I hope we can finish the race."

The SP Engineering Show is open to the public today from 9am to 5pm.

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