



The Institution of Engineers, Singapore

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## News Release

### **The Institution of Engineers, Singapore (IES) presents the IES Design Awards 2013 to Polytechnic Students for Brilliant Innovations to Help the Elderly and Handicapped**

**Temasek Polytechnic team became first all-girls group to clinch Gold Awards in cross-polytechnic competition**

IES announced the winners of the annual IES Design Awards today, recognising outstanding innovations for the elderly and handicapped by polytechnic students at the awards ceremony. Emerging winners amongst 15 teams, the top teams presented their ideas and prototypes to members of the engineering fraternity.

Launched in 2001 by IES, the IES Design Awards aim to inculcate the importance of community service to the younger generation and to encourage them to think more for the handicapped and the less-fortunate. The 2013 Gold Award goes to Zheng Hui Yun Vera, Cecelia Tay Sin Yee and Rebecca Tan Li Kiat from Temasek Polytechnic for “H-frame”; the Silver Award goes to Samuel Kew Zhi En, Mohit Pundir, Amit Chong Bang and Ang Yew Chien also from Temasek Polytechnic for “WeCare Smart Application”; and the Bronze Award goes to Afiq Abdullah, Aminur Rashid, Lee Huan Wei from Ngee Ann Polytechnic for “Tennis Elbowciser”.

Armed with the task to build devices that will enhance the lives of the elderly or handicapped and enable them to lead fulfilling lives, the students had to draw on their sense of empathy as much as their engineering knowledge and skills. Working with a budget of \$2000, the teams’ submissions not only had to display potential to

solve real-life problems that the elderly or handicapped face, but also to showcase the ability to optimise the use of material and equipment.

“Engineers have the special ability to make lives better for people. As the national society of engineers, IES wants to inculcate this simple yet compelling truth to young engineering students, by providing a platform for them to display their engineering ingenuity and passion for the community,” said Professor S. K. Chou, IES President. “We hope that through the IES Design Awards, these students will be intrigued with the marvels of engineering and inspired to make a difference to the lives of the elderly and the less fortunate.”

Drawing inspiration from witnessing an old lady struggling up the stairs with a flimsy walking stick, the Gold Award recipients put their engineering skills to the test by creating a walking device that is light to carry around yet sturdy enough to provide adequate support. Named the H-frame and branded as DARLing, representing Dual Assistive & Rehabilitative Linkages, the brainchild of the three young engineering students is the first ever bipod walking frame and can also be easily converted into a walking stick.

Having spent six months producing the prototype and going through the entire process of research, conceptualisation, fabrication and field testing, the young innovators are still tweaking and improving the product to better cater to unmet needs in hopes of bringing it to the market.

Rather than let their age and inexperience hinder their innovation process, the girls think that “most youths are bold enough to step out of the comfort zone and are less conventional in their thinking – which can be advantageous in creating an innovative product”.

“We are delighted by the quality of submissions for this year’s IES Design Awards, which demonstrated the students’ abilities to apply the engineering skills they have picked up in school, and their passion in contributing to the community. The H-frame stood out in its simplicity and could potentially be an affordable answer for many with walking difficulties,” said Er. Dr Lock Kai Sang, Chief Judge, IES Design Awards.

The IES Design Awards has grown to become an annual engineering competition where all five polytechnics in Singapore battle their engineering skills and creativity

against each other. Previous winning submissions that have been commercialised include the Auto Hill Assist (AHA) Wheelchair.

The presentation of the IES Design Awards 2013 was held at IES' 47<sup>th</sup> Annual General Meeting, presided by Professor Chou.

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### **About The Institution of Engineers, Singapore (IES)**

The Institution of Engineers, Singapore (IES) was formally established in July 1966 as the national society of engineers in Singapore. IES is the premier engineering institution in Singapore and is called upon by the Government to provide feedback on professional engineering matters.

IES is well represented among the faculty members of the major engineering institutions of higher learning in Singapore. Through close collaboration with the local universities and polytechnics, IES organises courses, seminars and talks for engineers and IES members to advance the continuous development of engineers.

The Institution maintains close links with professional organisations of engineers regionally and throughout the world. These include organisations in Australia, China, Japan, United Kingdom and the United States. The Institution also represents Singapore in the ASEAN Federation of Engineering Organizations (AFEO) and the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) in promoting goodwill and fellowship among all engineers in ASEAN and the Asia-Pacific region.

Through its Engineering Accreditation Board (EAB), IES obtained full signatory status in the Washington Accord (WA) in June 2006. The entry grants IES the authority to represent Singapore, the first country within the ASEAN region which has obtained full signatory status in the WA, to vet education systems under the WA mutual recognition framework.

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