

Nanyang Technological University holds first 3-D printing festival



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Tuesday, December 17, 2013 - 17:53

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The Straits Times

Held at the Nanyang Technological University (NTU), the festival marked the conclusion of two international 3-D printing competitions organised by NTU, in which the top winners in both categories - fashion and abacus-themed - walked away with \$10,000 each. The winners of the abacus design section were Xiao Zefeng, Liu Ruicheng, Yang Yongqiang from China, while the winners of the fashion category were a duo from Australia from XYZ Workshop, Lim Kae Woei and Elena Low.

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Here is the press release in full:

Creative juices flow today at Nanyang Technological University (NTU) as fashion models strut out in unique outfits produced from 3D printing technology.

Besides staging Singapore's first 3D printing festival, NTU, a front-runner in the world for 3D technologies, also organised two international 3D printing competitions on wearable fashion and abacus design.

Featuring diverse custom-shaped creations from butterfly-inspired bodices and fantastical skirts, to abacus-bangles and other eye-catching accessories, the festival showcases the countless possibilities of 3D printing technology and gives a preview of where it is headed in the near future.

Among the festival highlights are an exhibition of 3D-printed fashion pieces from award-winning fashion designer Melinda Looi and artworks from Italian designer and architect Niccolo Casas.

The festival also marks the finale of the two international 3D printing competitions where four teams from Australia, China, Vietnam and Singapore successfully clinched the top prizes of S\$10,000 and \$3,000 in each category.

NTU President, Professor Bertil Andersson said he is heartened to see the quality of the entries from local and international participants for the competitions.

"Today we are witnessing the many marvels of 3D printing, which is widely regarded as a revolutionary

technology that is changing the face of innovation," said Prof Andersson at the festival's launch this morning.

"I hope our 3D printing competitions will fuel the creative juices of young people all around the world, and inspire both engineers and artists alike to embrace the technology to better our lives."

Professor Chua Chee Kai, Chair of NTU's School of Mechanical and Aerospace Engineering that organised the festival, said, "This festival aims to highlight the various possibilities which 3D printing can do."

"In future, it is my hope that every home and office can have a 3D printer and it is used to create useful products which enhance our daily lives." added Prof Chua, the world's most cited academic in the field of 3D printing,

Water-inspired design wins top prize for Wearable Fashion

The top prize in the Wearable Fashion category went to Lim Kae Woei and Elena Low Lee Wei, from XYZ Workshop, a 3D printing workshop in Australia. Their design, inspired by the competition's theme of water technologies and sustainability, focuses on the transience of water and its changing states.

The bodice features a series of solid and hollow spheres that echoes the traditional Chinese cheongsam. The final design is made up of 26 different sections and had taken the duo about 160 hours to print.

The commendation prize went to a team of seven NTU students who synthesised both art and technology to design a flowing 'chainmail' inspired by the Chinese word for water (水), with patterns of large drops of water at the shoulders giving way to smaller drops of water as it unfolds from top to bottom.

Top abacus design combines ancient coin and abacus

Clinching the top prize in the Abacus Design category was a trio from China who used the latest techniques in 3D metal laser printing to create a small abacus hinged within a large ancient coin with intricate wordings embossed on its sides, complete with two doors and mini handles.

The winners, Xiao Zefeng, Liu Ruicheng, and Yang Yongqiang, who had fabricated their coin abacus using stainless steel, said they had hoped to combine the abacus and the ancient copper coin to fabricate a functional part which can showcase the history of Chinese commercial economy.

The commendation prize winner Vietnamese Nguyen Phuc Hung had printed his complex abacus design with finesse, resulting in a wrist-worn 'calculator', which marries both the bangle and the abacus.

He said that he had designed this with personal fabrication in mind - meaning that others should be able to print it easily within a few hours. This stands as a great example of 3D printing's excellent customisation ability, which leaves us limited only by our human imagination, he said.

The competition received a total of 30 submissions with 20 entries from Singapore. For the local entries, seven pieces of fashion and seven pieces of abacus were submitted by NTU student teams, while six abacus entries came from Nanyang Polytechnic, Pasir Ris Crest Secondary School, as well as other local individuals and companies.

The remaining eight abacus and two fashion entries were international, from individuals, companies, and foreign universities such as the South China University of Technology and University of South Denmark.

Moving forward, Prof Chua hopes to hold the Singapore International 3D Printing Competitions yearly with different themes to inspire the young and to spread the awareness that these capabilities are within the reach of everyone.

The 3D printing festival comes on the heels of the newly established NTU Additive Manufacturing Centre (NAMC) - a S\$30 million dollar 3D-printing research centre announced in September this year. The centre, which aims to keep Singapore at the forefront of 3D printing technologies, is supported by the Singapore Economic Development Board and houses the latest 3D printing machines, such as laser-aided machines for printing metal parts for industry, and bio printers which are able to print real human tissues. The research centre is located at NTU's School of Mechanical and Aerospace Engineering.