

Swiss Federal Institute of Technology Zurich Invests in Multiple Stratasys 3D Printers to Stimulate Engineering Curriculum

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University invests in professional FDM 3D printing to enhance model customization and hone engineering design skills

<u>Stratasys Ltd.</u> (NASDAQ: SSYS), a leading global provider of 3D printing and additive manufacturing solutions has announced that the <u>Swiss Federal Institute of Technology</u> <u>Zürich^[1](ETH Zürich)</u> has invested in multiple Stratasys uPrint SE Plus 3D Printers to enrich undergraduate engineering design training and aid research students.

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(Photo: <u>https://photos.prnewswire.com/prnh/20150520/744983-b</u>)

The investment in the haul of professional<u>uPrint SE Plus</u> 3D Printers, from Swiss Stratasys reseller, Alphacam, follows ETH's objective to completely modernize its Technical Drawing and CAD course by installing the very latest technologies available. According to Professor Dr. Kristina Shea, head of the Engineering Design and Computing Laboratory (EDAC) at ETH Zürich, Stratasys' uPrint SE Plus 3D Printer was selected specifically for its reliability and ability to produce higher-quality, functional parts in comparison to other similar options available on the market.

"The course has between 450-500 students, so reliability was essential and a big part of our decision to invest in a professional 3D printer," says Dr. Shea. "We had previously relied on CAD and modeling on a screen, but using high-quality, functional physical models ensures students are far more engaged."

All of the work undertaken on ETH Zürich's arsenal of 3D printers is achieved using ivory ABS*plus*® FDM material, a mechanically strong and stable thermoplastic which is ideal for functional prototyping.

The ability of the uPrint SE Plus 3D Printer to print layer thicknesses of 0.330mm and 0.254mm provides the needed precision for students requiring accurate parts.

Customization, automation and motivation

One of the key projects on the course is the customization and building of a balloon-powered

car model, which challenges students to design and 3D print various iterations of two parts for the car.

"Thanks to 3D printing technology, we've given students the tools to design and prototype the wheel spokes and the top of the cars," states Dr Shea. "The first time we 3D printed parts, we did it in six days, running overnight. With nine parts to each car, it was a huge job, therefore you can see why the reliability of a professional 3D printer was integral to such a large investment. We now call them our 'little workhorses!"

Dr. Shea continues: "I was particularly interested in the effect of using 3D printed models on students' motivation. With 3D printing, we saw increased motivation in learning to use the CAD software. The appreciation of scale and the importance of production tolerances grew when the customized parts the students had designed were 3D printed and assembled. Even though design manufacturing guidelines were provided, there were marked increases in understanding as a result of the material realization of their designs."

As Sig Behrens, General Manager, Global Education at Stratasys, explains; "We believe in empowering engineering students with 3D printing skills of the modern workplace and this is a strategy that many leading institutions, like ETH Zürich, are committing to and investing in.

"The ability to access and familiarize students with professional 3D printing technology is incredibly important, because these are tomorrow's designers and engineers," adds Behrens. "With its desire to embrace 3D printing, ETH Zurich is bridging the gap between academia and industry by fulfilling the demand for skills that employers are seeking."

^[1] Eidgenössische Technische Hochschule Zürich

About Stratasys

Stratasys Ltd. (Nasdaq:SSYS), headquartered in Minneapolis, Minnesota and Rehovot, Israel, is a leading global provider of 3D printing and additive manufacturing solutions. The company's patented FDM[®] and PolyJet[™] 3D Printing technologies produce prototypes and manufactured goods directly from 3D CAD files or other 3D content. Systems include 3D printers for idea development, prototyping and direct digital manufacturing. Stratasys subsidiaries include MakerBot and Solidscape, and the company operates the digital parts manufacturing service, Stratasys Direct Manufacturing. Stratasys has more than 3,000 employees, holds over 800 granted or pending additive manufacturing patents globally, and has received more than 30 awards for its technology and leadership. Online at: <u>http://www.stratasys.com</u> or <u>http://blog.stratasys.com</u>

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