OPTITEX

CORNELL UNIVERSITY: VIRTUAL FIT RESEARCH POSSIBLE WITH OPTITEX

Cornell University

AT A GLANCE

CORNELL UNIVERSITY
LOCATION: ITHACA, NEW YORK
WWW.CORNELL.EDU

Cornell is the only Ivy League research institute with an apparel design program. The Department of Fiber Science & Apparel Design at Cornell researches and teaches about both fashion and technical apparel design. Research in apparel covers many different topics, including sizing and fit apparel, with the use of full body 3D scanning.

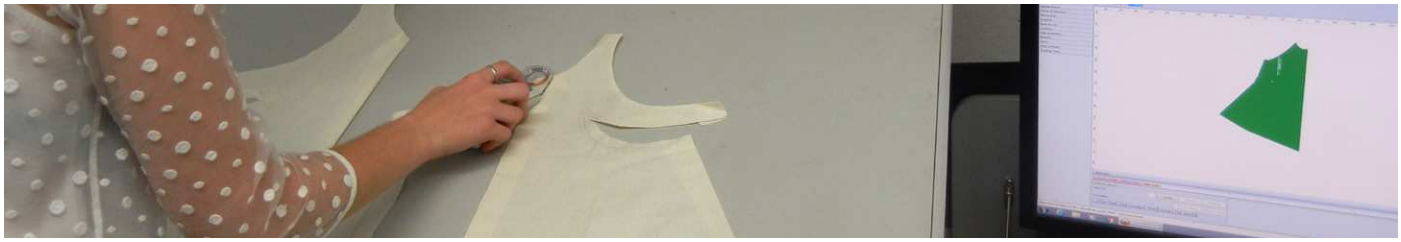
Since 2008, faculty at Cornell's Department of Fiber Science & Apparel, have been working with Optitex to help students create their own fashion collections, and research virtual fit, design and size with the help of body scanning technology.

"One of my previous graduate students made custom fitted bodices for a large number of subjects." says Susan P. Ashdown, Helen G. Canoyer Professor, Department of Textiles & Apparel. "This was a ground-breaking study to determine appropriate ease values for different body types using body scans to precisely measure and analyze the results," Ashdown says. "It would not have been possible without Optitex technology."

At Cornell, it's important for students to create and develop their own collections. "Technology not only lets you shorten product development time, but also improve pattern quality," says Professor Ashdown. "It doesn't make sense to just quicken time, but also to make better patterns, and better designs."

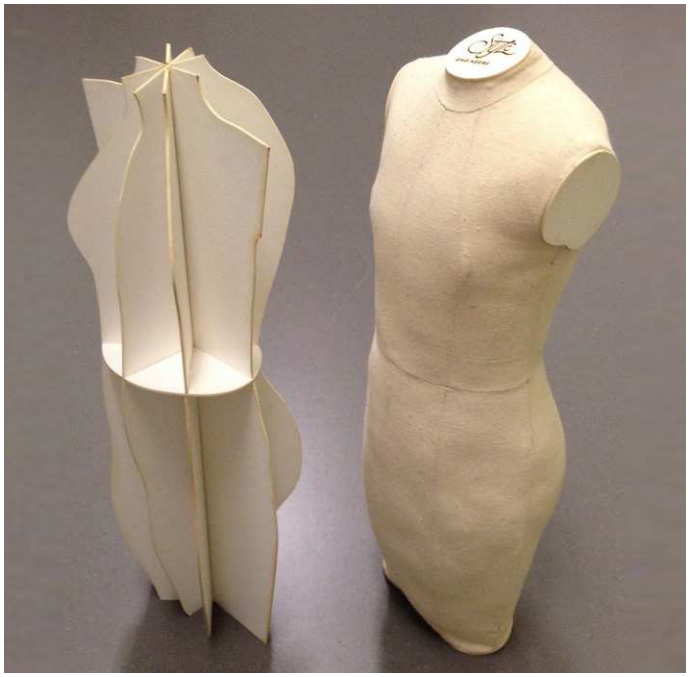
For Professor Ashdown, it's important to teach students at an early stage and give them tools to help them realize their visions, but also to have them work, develop and think about what they are making.

"A way forward for the industry is to really explore the relationship between the body, and the fabric and style silhouette of a garment," she says. "There is so much variation and the body is not well represented in a ready-to-wear size system. What if companies could use virtual technology to fit garments for each size, and then check their styles and the way they look in each size?"



Through the institute, students can take advantage of the virtual world - using technology such as avatars and CAD software - to work on creating a better fit. One project works with 3D printed half-scale forms - to capture the body and scale dimensions by 50 percent - which means less material wasted in creating pattern shapes, but the individual body shape is still retained. Using forms 3D printed from the body scan, students then cover them using patterns created by unwrapping the body in Optitex in order to make a surface that can be pinned into and create new styles.

"On a half-scale form you can make many models in the time it takes to make one full-scale model," says Professor Ashdown. This allows students to perfect patterns, shapes and proportions. These half-scale patterns are then scaled up to full scale using Optitex.



In a National Science Foundation funded project at Cornell (in collaboration with the University of Minnesota) faculty and students are developing activities to engage middle school girls in STEM topics. In order to create the tools for these activities, patterns were developed by unwrapping a body scan of a middle school girl using Optitex.

While fashion is still an industry in which the work of the hand is important, and prototypes made from fabric and fitted to the body will always be part of the development process, Professor Ashdown believes that technology allows students, the future designers, to have morev freedom to experiment in the early stages in the development of new ideas. Students can take advantage of the virtual world, such as avatars, and create better products, with better fit.

ABOUT OPTITEX

Optitex empowers apparel and soft goods companies to revolutionize the way they develop, produce, and market their products. Optitex is the world's leading provider of an integrated 2D/3D software platform that enables customers to quickly create true-to-life 3D digital garments that inspire. Brands, retailers, and manufacturers can now view their collections in all styles and colors months earlier, and leverage digital garments to collaborate, market, and sell better than ever before. Since its founding in 1988, Optitex has worked to keep thousands of companies and tens of thousands of users at the forefront of technology, enabling them to greatly reduce their time to market and costs, and increase their competitive advantage.

Optitex USA
www.optitex.com
T 212 629-9053
F 212 629-9055
333 West 39th Street Suite 301
New York, NY 10018

OPTITEX