Yunghee Sohn is hoping to push the apparel industry into the future.

An assistant professor in HES’ Textile and Apparel Management (TAM) Department, Sohn has placed herself at the nexus of cutting-edge 3D technology and apparel development. Working with the department of Architectural Studies’ Immersive Visualization Lab (iLab), Sohn has begun to utilize high-tech body scanning, three-dimensional virtual design and motion capture systems in an attempt to revolutionize the way the industry approaches garment fit.

Computer-assisted design technology has already begun to make waves in the apparel industry, says Sohn, who joined TAM in 2012 after receiving her Ph.D. in apparel studies from the University of Minnesota. Sohn was drawn to Mizzou, she says, because it was one of just a few institutions with the capability for three-dimensional body-scanning technology. Such systems, Sohn predicts, are poised to transform the garment industry.

Sohn sees garment fit as one of the most fundamental elements of apparel product development, because it’s certain to directly impact the wearer’s comfort level, garment performance and garment appearance. Getting an ideal fit requires good body measurements and then applying those measurements to the apparel design.

Getting useful body measurements, however, can be an incredibly difficult task, Sohn says. Bodies vary in shape, posture, and movement. Sohn’s research now focuses, in part, on developing new body measurement methods that incorporate motion-capture technology to ensure better garment design.

Sohn now uses 3D imaging as a teaching tool for TAM students. Sohn recently collaborated with colleagues from Mizzou’s Architectural Studies and Art departments to oversee a “digital and virtual student project showcase team.” TAM and art students developed garments using 3D software, which were then showcased in a virtual-reality environment created by Architectural Studies students. “Through interdisciplinary collaborations, the students learned not only cutting-edge technologies, but also the importance of collaborations throughout the industry,” Sohn said.