Jovana Andrejević Kim minimizes fabric waste

Research scientist, CLO Virtual Fashion

BS, engineering physics, Cornell University, 2016
PhD, applied physics, Harvard University, 2022

(Photo courtesy of Jovana Andrejević Kim.) | (Image courtesy of CLO Virtual Fashion.)

What was your research focus?

Modeling how paper crumples. It was a fun mathematical problem, and our explanation tied into other fragmentation -inspired models, such as how rocks fragment and how glass shatters.

What were you looking for in a job?

One thing that was lacking in academia was being able to see an immediate impact of my work. During my postdoc, I decided it might be good to give industry a try. I did not know what was out there for physicists.

I was open-minded, but I had always loved the intersection of art and science. It turned out that the computer graphics industry has what I was looking for.

How did you get your job?

My husband had seen a video about CLO Virtual Fashion on YouTube. Later, when I was looking for a job, I saw on LinkedIn that CLO was hiring. I applied. I started in 2023.

How do you spend your time?

My day-to-day looks like academic research: reading papers and programming—developing and improving software. But the projects are driven by user needs.

One project involved figuring out how to cut pattern pieces with a goal of minimizing fabric waste. You have to contain the pieces within boundaries, allow for seams, and account for the grain line of the fabric. Recently, the project extended to include respecting print placement.

How does your work transfer to actual fashion?

Brands, fashion houses, and vendors use the software CLO creates to help design garments. They can visualize in 3D how a garment will fit and how it will look as the wearer moves—all before moving into production

What do you like about your job?

The same things I loved about research: the creative aspects and trying to solve challenging problems.

How do you use your physics in your job?

My physics background was a way in. And there are similarities between how paper and fabric sheets behave. My background influences my approach to problem-solving, even if the problem is not inherently a physics one.

What new skills have you learned?

I've learned about the fashion design and production process and how to discuss my technical research in that context. I've also gained skills in collaborative software development.