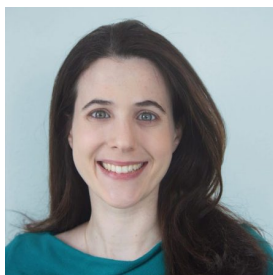




Visionaries

Their innovations are leading to breakthroughs in AI, quantum computing, and medical implants.



Adriana Schulz

AGE: 34

AFFILIATION: UNIVERSITY OF WASHINGTON

COUNTRY OF BIRTH: BRAZIL

Her tools let anyone design products without having to understand materials science or engineering.

Adriana Schulz's computer-based design tools let average users and engineers alike use graphical drag-and-drop interfaces to create functional, complex objects as diverse as robots and birdhouses without having to understand their underlying mechanics, geometries, or materials.

"What excites me is that we're about to enter the next phase in manufacturing—a new manufacturing revolution," says Schulz.

One of her creations is Interactive Robogami, a tool she built to let anyone design rudimentary robots. A user designs the shape and trajectory of a ground-based robot on the screen. Schulz's system automatically translates the raw design into a schematic that can be built from standard or 3D-printed parts.

Another of the tools she and her collaborators built lets users design drones to meet their chosen requirements for payload, battery life, and cost. The algorithms in her system incorporate materials science and control systems, and they automatically output a fabrication plan and control software.

Schulz is now helping start the University of Washington Center for Digital Fabrication, which she will co-direct. She will work with local technology and manufacturing companies to move her tools out of the lab.

Photo by David Curtis

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