



Carnegie Mellon Graphics Colloquium

Thursday, 30 November 2023

4:30-5:30pm

ASA Conference Room, Gates Hillman 6115

Can Computers Beat Humans At Design?

Wojciech Matusik
Professor, MIT CSAIL

Design is everywhere: high-performance turbines, polymers with outstanding material properties, unmanned aerial vehicles, metamaterials, or computer algorithms. However, the best designs are a product of tremendous work of high-skilled domain experts. I will show that we are on the verge of a transition where computational methods start beating humans at design. I will describe a series of questions that need to be addressed to move the field of computational design forward: how to represent a design, how to represent design space, how to find designs with optimal performance, and how to bridge the gap between simulation and reality.

Bio: Wojciech Matusik is a professor in MIT's Department of Electrical Engineering and Computer Science, and leads the Computational Design and Fabrication Group at the Computer Science and Artificial Intelligence Laboratory. His research interests are in computer graphics, computational design and fabrication, computer vision, robotics and human-computer interaction. Before coming to MIT, he worked at Mitsubishi Electric Research Laboratories, Adobe Systems and Disney Research Zurich. He has received a Ruth and Joel Spira Award for Excellence in Teaching, a DARPA Young Faculty Award and a Sloan Foundation fellowship. He has been named one of the world's top 100 young innovators by MIT Technology Review and received a Significant New Researcher Award from ACM Siggraph.



Web Page: <https://cdfg.mit.edu/>

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→ <http://graphics.cs.cmu.edu>