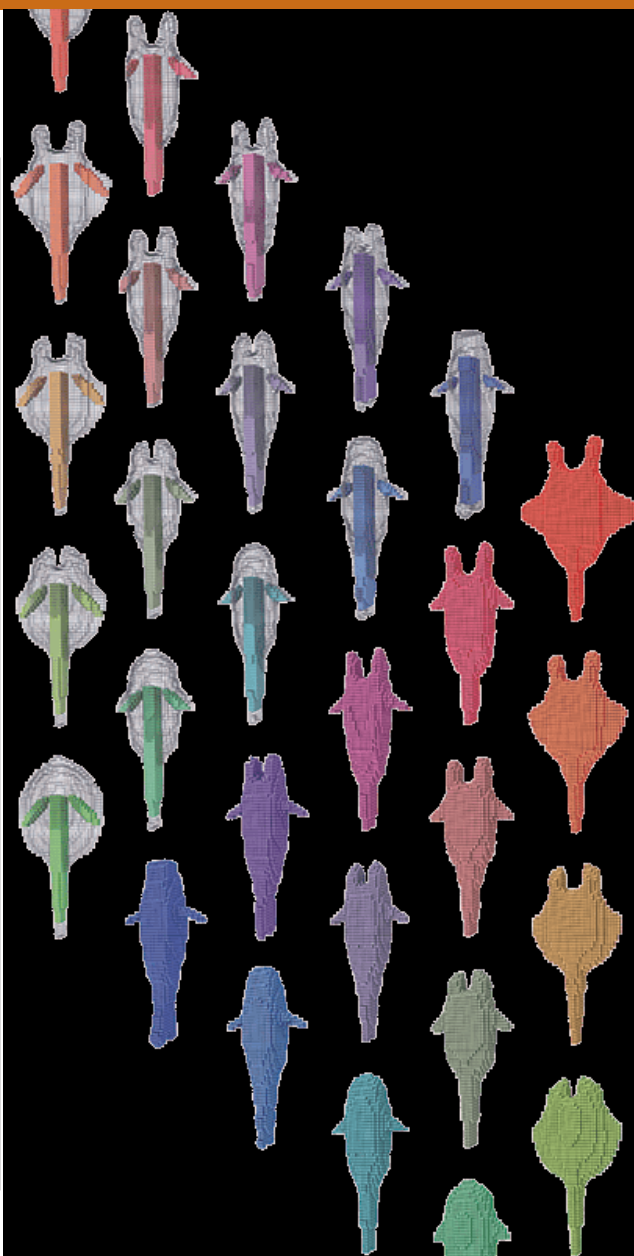




COMPUTATIONAL DESIGN AND FABRICATION GROUP



The Computational Design and Fabrication Group centers on digital manufacturing, 3D printing and computer graphics, as well as computational photography and displays, and virtual humans and robotics.



Group Lead

Professor Wojciech Matusik
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CSAIL / MIT

Website:
cdfg.mit.edu

Location:

The Computational Design and Fabrication Group is located in the Ray and Maria Stata Center at MIT.

Research Group Address:

Computational Design and Fabrication Group
MIT CSAIL
32 Vassar Street
Cambridge, MA 02139

Research Vision

We investigate problems in digital manufacturing and computer graphics, with the goal of designing accurate mathematical models that accurately represent and predict real-world properties, blending custom hardware and novel algorithms for computational photography, and creating realistic virtual humans.

Areas of Research

- Human-computer interaction
- Robotics
- Graphics and vision

Research Activities

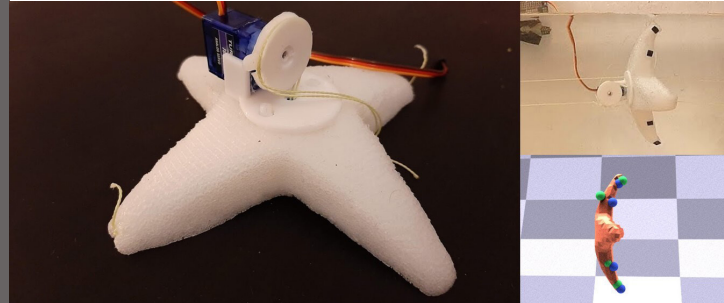
- Computational knitting: patterning and shaping for everyone
- 3D-printed organic solar cells
- Crowdsourcing in graphics and vision

Industry Applications

- Manufacturing
- Entertainment

“We want to let casual users get access to [high-tech knitting] machines without needing programming expertise, so they can reap the benefits of customization by making use of machine learning for design and manufacturing.”

– *Alexandre Kaspar, PhD student*



Current People in the Computational Design and Fabrication Group

Principal Investigator
Wojciech Matusik

Research Staff
Michael Foshey

Postdoc, Graduate, and MEng Students

Mina Konaković Luković
Alexandre Kaspar
Allan Zhao
Beichen Li
Jie Xu
Lara Zlokapa
Liane Makatura
Liang Shi
Pingchuan Ma
Tao Du
Yifei Li
Yiyue 'Alyssa' Luo
Yunsheng Tian
Ruitao Su
Minghao Guo



In the News

- CSAIL researchers have come up with a new system and design tool for [automating knitted garments](#).
- An automated system developed by the MIT researchers designs and 3D prints complex [robotic parts](#) for novel tasks.