

# Computational Design for Manufacturing

July 16-18, 2018

Professor Wojciech Matusik

**Monday**

**Tuesday**

**Wednesday**

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>
<b>9:00-10:00 am</b>	Course overview and introduction to multi-material additive manufacturing	Introduction to generative design	Expert systems for computational design
<b>10:00-11:00 am</b>	Introduction to digital materials and multi-material composites	Topology optimization	Data-driven/machine learning methods for computational design
<b>11:00 am-Noon</b>	Translating between multi-material composites and material properties	Multi-material generative design	Automated material discovery
<b>Noon-1:00 pm</b>	Lunch	Lunch	Lunch
<b>1:00-2:15 pm</b>	Voxel-level design	Interactive design space exploration and optimization	Introduction to concurrent design
<b>2:15-3:30 pm</b>	Multi-material hierarchical design	Translating functional requirements to manufacturable designs	Integrated design tools for domain-specific applications
<b>3:30-5:00 pm</b>	Lab 1: Multi-material design and additive manufacturing	Lab 2: Design for 3D printing using topology optimization	Lab 3: Integrated design and optimization of custom drones
<b>5:00 pm</b>	Adjourn	Adjourn	Adjourn