## Computational Design for Manufacturing

### July 16-18, 2018

**Professor Wojciech Matusik**

### Monday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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| 9:00-10:00 am | Course overview and introduction to additive manufacturing  
Matusik       |
| 10:00-11:00 am | Solid modeling  
Matusik/Schulz |
| 11:00 am - Noon | Material modeling for additive manufacturing  
Matusik/Schulz |
| Noon-1:00 pm | Lunch                                                                 |
| 1:00-2:15 pm | Material modeling for physical simulation  
Matusik       |
| 2:15-3:30 pm | New directions for direct design  
Matusik       |
| 3:30-5:00 pm | Lab 1: Direct design for additive manufacturing  
Matusik/Spielberg |
| 5:00 pm    | Adjourn                                                                |

### Tuesday

<table>
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| 9:00-10:00 am | Introduction to generative design  
Matusik       |
| 10:00-11:00 am | Topology optimization  
Matusik       |
| 11:00 am - Noon | Multi-material generative design  
Matusik       |
| Noon-1:00 pm | Lunch                                                                 |
| 1:00-2:15 pm | Introduction to optimization and design space reduction  
Matusik/Schulz |
| 2:15-3:30 pm | Interactive design space exploration and optimization  
Matusik/Schulz |
| 3:30-5:00 pm | Lab 2: Topology optimization  
Matusik/Spielberg |
| 5:00 pm    | Adjourn                                                                |

### Wednesday

<table>
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| 9:00-10:00 am | Automating design across multiple domains  
Matusik/Schulz |
| 10:00-11:00 am | Lab 3: Automating design across multiple domains  
Matusik/Schulz |
| Noon-1:00 pm | Lunch                                                                 |
| 1:00-2:15 pm | Expert systems for computational designs  
Matusik/Schulz |
| 2:15-3:30 pm | Data-driven methods for computational design  
Matusik       |
| 3:30-5:00 pm | Automated discovery of optimal designs  
Matusik       |
| 5:00 pm    | Adjourn                                                                |