



Kinetic Spider Dress by Anouk Wipprecht: "What does fashion lack? - Microcontrollers"

2016 Design and Make I Summer Workshop

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Summer 2016 | Friday, July 10-15 and July 17-22 | 9:30am-12:30pm and 1:30pm – 5:00pm
Workshop Location: Weston Hall

WORKSHOP DESCRIPTION:

Today's designers combine art, technology, and science to develop products that not only look good but also address 21st-century needs. Participants will experience how it feels to be a designer working on the forefront of these emerging practices and how they relate to challenges of our contemporary environment. The workshop will introduce the concept of *design thinking*, a process that will take you from brainstorming, to developing, to prototyping, to "pitching" your creations. Workshop participants will get an opportunity to learn about new trends in personal fabrication through the use of state-of-the-art additive and subtractive digital tools and equipment. The workshop will also provide participants with an opportunity to learn software that will be instrumental in the use of digital fabrication technologies.

Participants will work hands-on with a "smart" material – a shape memory alloy – that acts as an artificial muscle to create kinetic assemblies. Digital scanning techniques will be introduced as a means of bringing the physical world into the digital world and laser cutting, 3D printing and CNC cutting as a way of bringing the digital world into the physical world.

PROJECTS:

During this one week workshop you will be working on two projects, using various techniques and tools, both digital and analogue. The projects will be an important vehicle for you to learn about design thinking and workflow.

2D - 3D Kinetic Artifacts:

Initially, you will get introduced to working with artificial muscles by assembling kinetic objects that perform simple tasks. In a second exercise you will embark on the creation of a kinetic object of your own design. Using a selection of laser cut sheet materials and artificial muscles you will create evocative objects that explore materiality, opacity, translucency, form and physics.

Scan – Print

In this second project you will be introduced to scanning techniques that allow you to turn various physical objects into digital objects. These objects will be manipulated in a 3D digital environment to create new playful and expressive objects of your own creation. The objects will be 3d printed, finished and assembled.

Fieldtrip:

Cooper Hewitt Smithsonian Design Museum – Design Triennial Exhibit

Exhibition

The workshop will culminate in a gallery exhibition of your creations. All participants will work together to curate and assemble a group exhibition for invited parents and guests. You will have the opportunity to display and demonstrate your work and gather feedback from guests.

Schedule:

Sunday	Welcome Dinner	
Monday	Workshop Introduction	Kinetic Artifacts
	Initial Shape Memory Alloy Tutorial	
	Drawing Tutorial I Working Session	
	Submit Files for Laser Cutting	
	Documentation of Work - Day 1	
Tuesday	Assembly of Laser Cut Components	
	Integration of Shape Memory Alloys	
	Documentation of Work - Day 2	
	Field Trip	
Wednesday	Introduction to 3D Scanning and 3D Modeling	Scan - Print
	Tutorial I Working Session	
	Submit Files for 3D Printing	
	Documentation of Work - Day 3	
Thursday	Assembly of 3D Objects	
	Further 3D Printing	Final Gallery Show
	Documentation of Work - Day 4	
Friday	Gallery Setup	
	General Viewing of Work and Demonstrations	
	Lunch with Family and Friends - All Programs	
	Show - All Programs	