
TEI 2015 Studio Interactive Inflatables – Amplifying Human Behaviors

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Abstract

In the Interactive Inflatables studio, participants will create bio-responsive inflatable structures to amplify human behaviors. Methods to concept and craft unique expansive designs will be taught. The interactive inflatable structures will respond to special and biological sensors. The studio is organized in stages and will involve and introduction of materials and media, concept generation, hands on making within partners, and a display of new tangible embedded and embodied interfaces.

Author Keywords

Wearable, Inflatable, Sensor.

ACM Classification Keywords

B.1.m Hardware: CONTROL STRUCTURES AND MICROPROGRAMMING, Miscellaneous

Introduction

We will create conceptual interactive inflatables that respond to human bodies systems like heart rate or proximity of human movement. A variety of materials will be present and based on concept of project we can accommodate slow or quick response inflatables. The participants will design and build the inflatable and assemble electronics programmed with behaviors.

Studio Proposal

This workshop will design new concepts to animate space and human expression with inflatable architecture.

We will workshop new concepts to animate space and human expression with inflatable architecture. In this one day workshop participants will learn techniques to animate the body with responsive technology.

Activities include sewing, fusing plastic, inflating, and programming the Arduino interface. Participants are welcome to bring their own projects too add to or create something new.

We will be fusing recycled plastic, sewing kite fabric, or taping plastic to create inflatables.

Our Studio will evolve in five phases: introduction activity, materials introduction, group concept activity, pairing build, sharing and presentation.

Hour 1 – Introduction hour: we will gather and the coordinators will provide an introduction of materials and participants will introduce themselves how they see themselves embodied and interacting tangibly.

Hour 2 – Hands on with materials containing (if desired) a short introduction workshop in physical computing (Arduino, sensors, control).

Hour 3-5 – Make! Participants will be assisted by the instructors on individual projects.

Hour 6 - Show and Tell! Select and refine creations to wear during the following days of the conference. Participants might take their creations with them in return of the costs of the used materials.

No prior skills required. Basic Arduino programming and pattern drafting skills would be helpful, but not necessary. We will teach basics and offer an easy kit of the electronic components.



figure 1. Inflatable pocket protector student project from Interactive Inflatables workshop.

Studio Topics to be covered

- Concept generation
- Introspection of intangible moments
- Electronic components for sensory inflation
- Plastic fusing techniques
- Basic programming for Arduino
- Pattern drafting and draping
- Rapid prototyping

Studio Learning Goals

The goals of the studio are to evoke imagination and animate otherwise intangible interactions of the body. Participants are encouraged to heighten their senses during concept phase. They will gain new skills of programming, hands on pattern drafting and draping, and construction of new materials, the inflatables.

Studio Supporting Web Documents

We plan to create an Instructable and make electronic kits with basic components for sale on the Sensoree website as well as available at the workshop. (<http://www.instructable.com>, <http://www.sensoree.com>)

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