

**—Workshops of
Interaction Design**

**—Andreas Gysin
5-6-7-8 May 2011**

**—Massimo Banzi
2-3-4-5 June 2011**

**—Paolo Solcia
23-24-25-26 June 2011**

**—Campus Trevano SUPSI
Lugano, Switzerland**

—SUPSI-University of Applied Sciences and Arts of Southern
Switzerland

OVERVIEW

—The technological evolution of the past years is changing the way we live, work, learn, and entertain ourselves. It is the age of pervasive and ubiquitous computing, of augmented reality and contamination between digital and real world: designers need to familiarize with new branches of knowledge and competences in order to design spaces that can interpret users' needs, influence their behavior, and generate visual or tangible experiences.

—The goal of these series of workshops is to provide designers, artists and amateurs with practical notions for the design of interactive environments, one of the main field of interaction design, the discipline combining design culture with technological innovation and focusing on the modalities of interaction between human beings and electronic, mechanic, and information systems, such as interactive artifacts, environments, and services.

—Through the approach of “learning by doing”, participants will acquire on a short term methodologies and techniques to manipulate and control all elements, both physical and digital, composing the software/hardware system of an interactive environment, such as sensors, projections, lights, and sound. Each workshop will focus on a precise issue in the field of interactive environments. Through the support of teachers, participants will acquire competences on technological and design issues in order to produce a functioning prototype.

—The workshops are promoted by the Laboratory of Visual Culture/Interaction Design Lab within the activities of the Master of Advanced Studies in Interaction Design, the new MAS program offered by SUPSI, starting next September 2011.

—The participation is open to all concerned people regardless their educational background (visual arts, design, information technologies, engineering). Participants will receive a certificate of attendance, recognizing two ECTS. The credits can be transferred to the Master of Advanced Studies in Interaction Design.

PROGRAM

5-6-7-8 May 2011

Processing digital environments

Generative and interactive design

—Andreas Gysin

www.gysin-vanetti.com

2-3-4-5 June 2011

Designing responsive objects and environments

Physical computing

—Massimo Banzi

www.arduino.cc

23-24-25-26 June 2011

Mixed media installations

Real time interaction design

—Paolo Solcia

www.paolosolcia.com



5-6-7-8 May 2011

***Processing digital environments
Generative and interactive
design***

—Andreas Gysin

www.gysin-vanetti.com

The evolution of digital technologies is providing artists and designers with many possibilities to create interactive environments featuring creative contents: software for generative graphics, animation algorithms and several kinds of responsive technologies allow to develop worlds inhabited by fictitious living entities able to interact with each other or the users. The workshop proposes the implementation of a digital environment featuring widgets-creatures developed by participants through the software Processing.

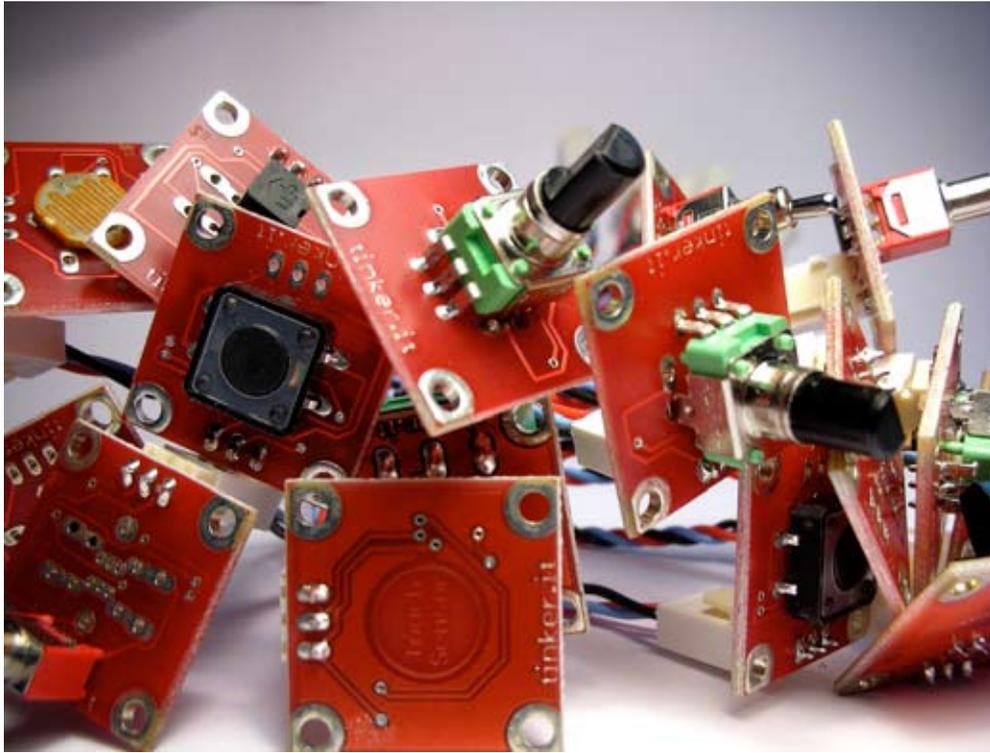
GOALS

The workshop aims to provide basic and advanced competences of Processing for developing applications of generative and interactive graphics. The applications will be integrated in a digital environment – an abyss – displaying programmed creatures designed by participants: through a common interface the creatures in the abyss will interact with each other and the users.

Beginners will work on simple codes by using the basic shapes of Processing and algorithms for managing animations and movements. Participants at an advanced level will work on the integration of further functionalities such as the interaction between creatures and users. Experienced participants will develop generative graphics by processing web data and environmental real time inputs (tweets, sounds, etc.).

Main topics of the workshop:

- introduction to the software Processing and its graphic API;
- procedural animation: linear, tween, sine wave, random, Perlin;
- Object Oriented Programming;
- polymorphism;
- reflection (Java).



2-3-4-5 June 2011

*Designing responsive objects
and environments*

Physical computing

—Massimo Banzi

www.arduino.cc

How to design objects and spaces that respond to inputs from the physical world? How to connect real environments with digital information by using interactive technologies? The workshop *Designing responsive objects and spaces* is dedicated to the design and prototyping, through the Arduino platform, of systems that sense, interpret and react to the real world by providing the user with information or visual, tangible and metaphorical experiences.

GOALS

The goal of the workshop is the design and the implementation of interactive environments through a system based on sensors and actuators controlled by Arduino, the open-source platform for electronic prototyping. Participants will learn how to use Arduino, how to program it, how to handle sensors and actuators by implementing a prototype of an interactive object or space. During the first phase of the workshop, basic notions of physical computing will be provided together with an introduction to the platform Arduino and to different typologies of sensor and actuators compatible with it. The realization of the projects will be supported by specific intermediate presentations according to the features of the prototypes proposed by participants (i.e. how to manage light, how to track movements, etc.).



23-24-25-26 June 2011
Mixed media installations
Real time interaction design
—Paolo Solcia
www.paolosolcia.com

The most interesting opportunities offered by the application of new interactive technologies to art and design is to merge different languages, to manage several media - sounds, images, videos, lights, colors - and to create one composite thought by combining digital materials and real environments in real time.

GOALS

The workshop aims at providing fundamental concepts and tools to design and implement interactive mixed media installations.

During the workshop, basic knowledge about interactive programming will be taught through the use of the software MAX/MSP/JITTER (www.cycling74.com). Some algorithms for real time processing of sounds (MSP) and images (JITTER) will be analyzed and experimented to support the development of interactive installations prototypes that will feature audiovisual projections generated in real time.

