# AIR Lab Workshop #1

## Interactive Projections with Kinect and Processing

AIR LAB
Affective Interactions & Relations
IT UNIVERSITY OF CPH

# Today's Programme

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|---|---|
| 14.15 - 14.45 | Introduction |
| | Welcome to AIR Lab |
| | Purpose of today's workshop |
| | Intro to Processing and Kinect |
| | Examples |
| 14.45 - 16.00 | Workshop |
| 16.00 - 17.00 | Presentations and Play |

# What is a Kinect?

The Kinect measures depth for each pixel via a infrared sensor setup

- Sort of similar to a regular webcam measuring color for each pixel

Today we making use of Computer Vision via a so-called “Blob Detection” algorithm

- A “blob” is a collection of pixels with similar features, in this case relating to depth
- Used to understand and track what’s going on and moving about in the space beneath

Furthermore, we have a projector mapped to the space in which the Kinect measures data

# What is Processing?

Open-source programming language with built-in IDE (integrated development environment)

- Often used to teach programming in a visual context

Can also be used in relation to graphic design, visual arts, interactive exhibitions, sound design, game design and electronic art installations

- Goes well hand in hand with the Arduino environment

Uses simplified Java syntax to create drawings, animations, and interactive programs.

- Programs created in Processing are called "sketches"

# What is Processing?

*“Processing seeks to ruin the careers of talented designers by tempting them away from their usual tools and into the world of programming and computation. Similarly, the project is designed to turn engineers and computer scientists to less gainful employment as artists and designers.”*

Wired (2013)

https://www.wired.com/2013/06/processing-2-0-released/

# Getting started with Processing

Introduction to the Processing IDE

Has everyone installed it? If not, do it right away via this link

Install the oscP5 library for Processing

Sketch → Import Library → Add libraries → Search for “oscP5”

There are also dedicated Kinect libraries, which we will not use today

# Processing examples

Introduction to the Processing IDE

GitHub folder: Processing Basics

# Processing examples with Kinect

## Combining Processing with Kinect to use it as a controller

GitHub folder: Kinect Examples

# Workshop Format

We will be working in small groups

- How many of you are familiar with Processing or coding in general?
- People with less experience can work with people with more experience

Getting started with your work

- Use the GitHub examples as templates for your own sketches
- Use the mouse as you prototype. Later we will use the Kinect as the controller

Are there any questions before we begin?

# Happy coding! See you at 16.00

When you are done:

Compress/zip the whole sketch folder and send it to vbpe@itu.dk