

# Sketching with Hardware

## 10: Interaction Design

# What is Interaction Design?

- Part of User Experience Design
- Introduced by Bill Moggridge and Bill Verplank in the mid 80s
- Design of Human-Computer Interfaces
- Overlaps with User Interface Design
- Difference: The result of Interaction Design is not always a User Interface

# Five Pillars of Interaction Design

- Defined by Moggridge, extended by Gilliam Campton-Smith and Kevin Silver:
- Words
- Visual Representation
- **Physical Objects and Space**
- Time
- **Behavior**

# What does this mean?

- User-Centered approach (can't be done in the scope of this course due to time constraints)
  - Connection to cognitive psychology:
    - Mental Models
    - Interface Metaphors
    - **Affordances**
- “The Design of Everyday Things” (Norman, 1988)

# Affordances

*„The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill.“*

- James J. Gibson, 1979

*„Affordance is what the environment offers the individual.“*

- Wikipedia



Live Demo...











# Designing Tangible UIs

- Physical objects offer different affordances than GUIs:
  - Three dimensional
  - Tangible
  - Physical properties (size, weight, ...)
  - Collaboration between users is easy
- Affordances should be obvious
- Ideally, TUIs should work without a GUI/display
- Haptic feedback is possible

# Project Demos