Soft robotics education:
from concept to implementation

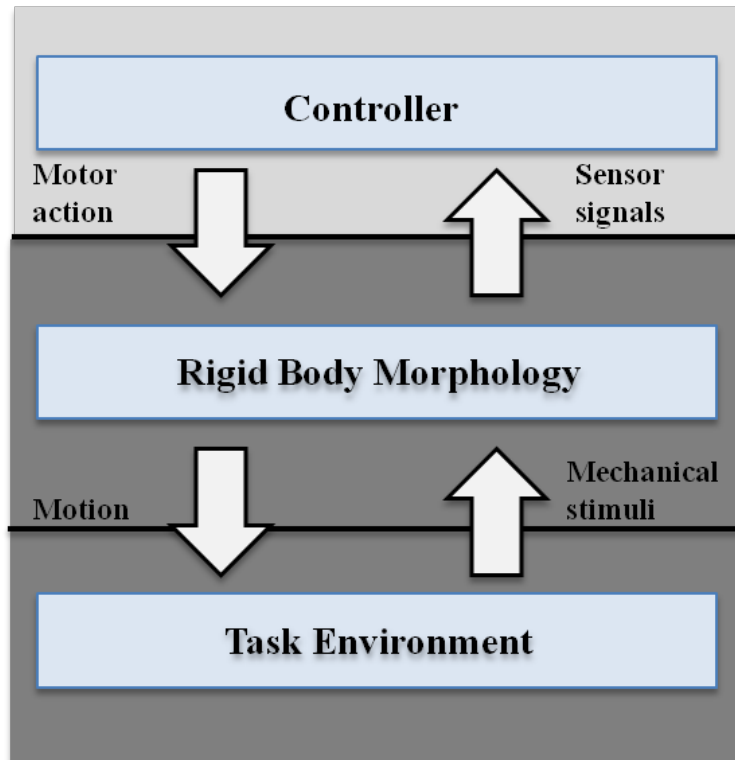Xiaoxiang Yu[1], Surya G. Nurzaman[1], Utku Culha[1], Fumiya Iida[1]

[1]Bio-inspired Robotics Laboratory, ETH Zurich, Switzerland
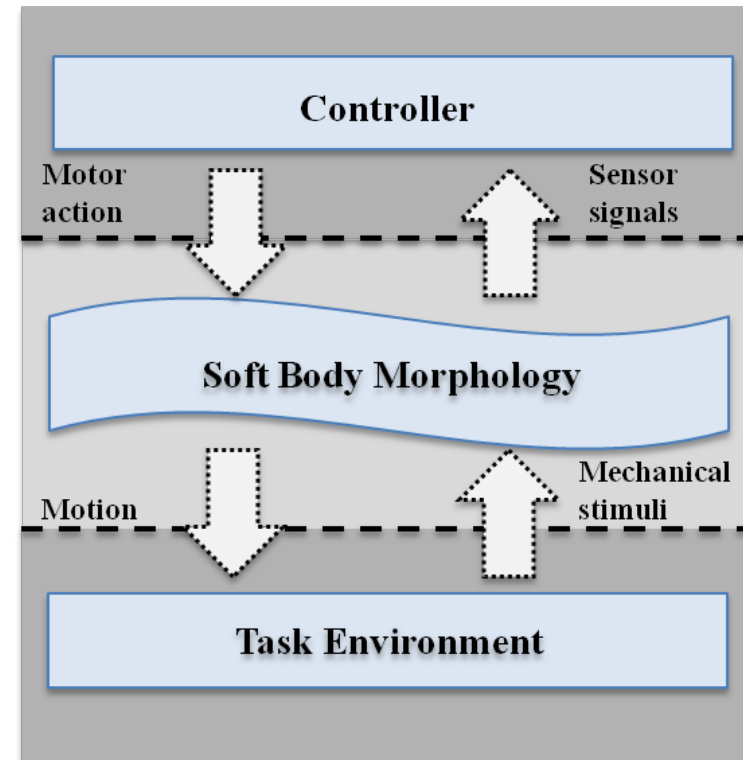
Robosoft Plenary Meeting

April 1, 2014

Concept

Conventional Rigid Robotics Education

Controller

Motor action / Sensor signals

Rigid Body Morphology

Motion / Mechanical stimuli

Task Environment

Soft Robotics Education

Controller

Motor action / Sensor signals

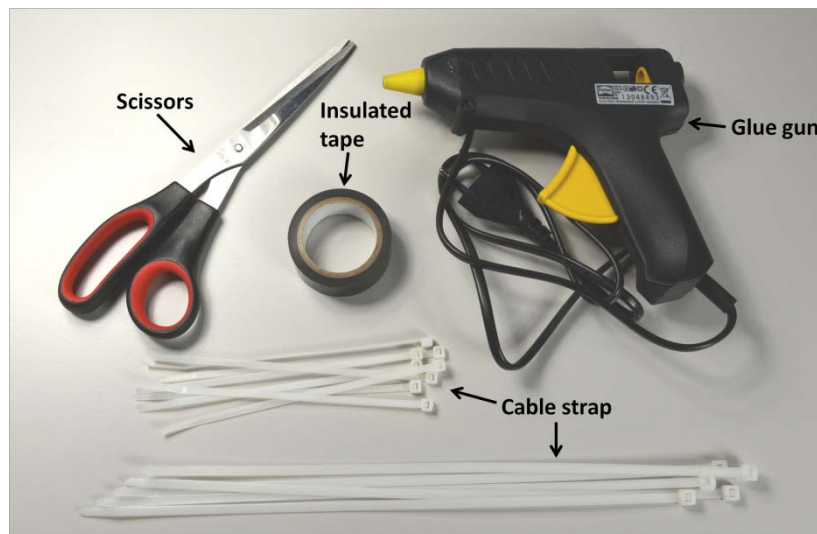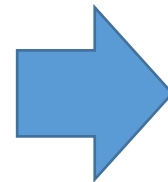Soft Body Morphology

Motion / Mechanical stimuli

Task Environment

Materials prepared by instructors — Main target of education

Bio-Inspired Robotics Lab

Implementation

Battery, Glue sticks, Server motor, Control board

Scissors, Insulated tape, Glue gun, Cable strap

Background

- Mechanical Engineering — 44
- Robotics System and Control — 21
- Electric Engineering — 18
- Computer Science — 6
- Mathematics — 1
- Health Sciences and Technology — 1
- Biology — 8
- Physics — 2
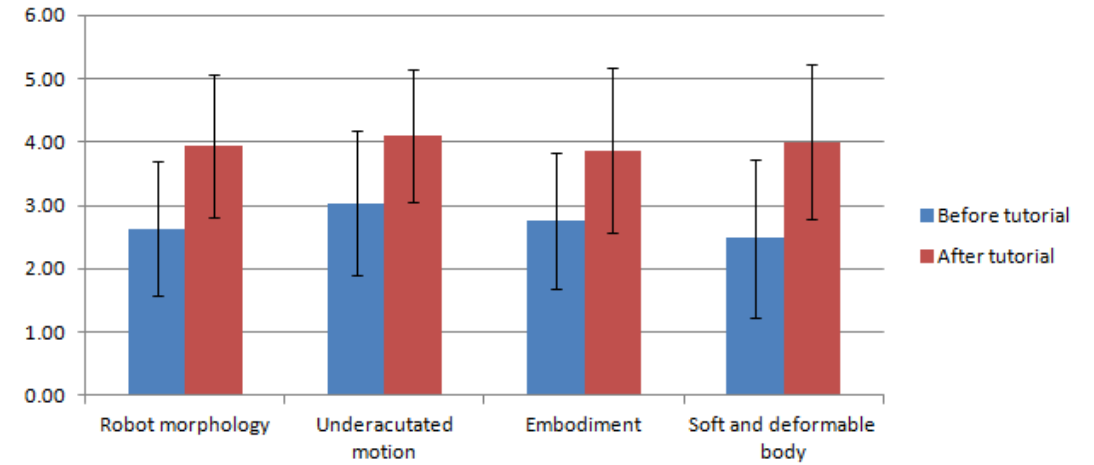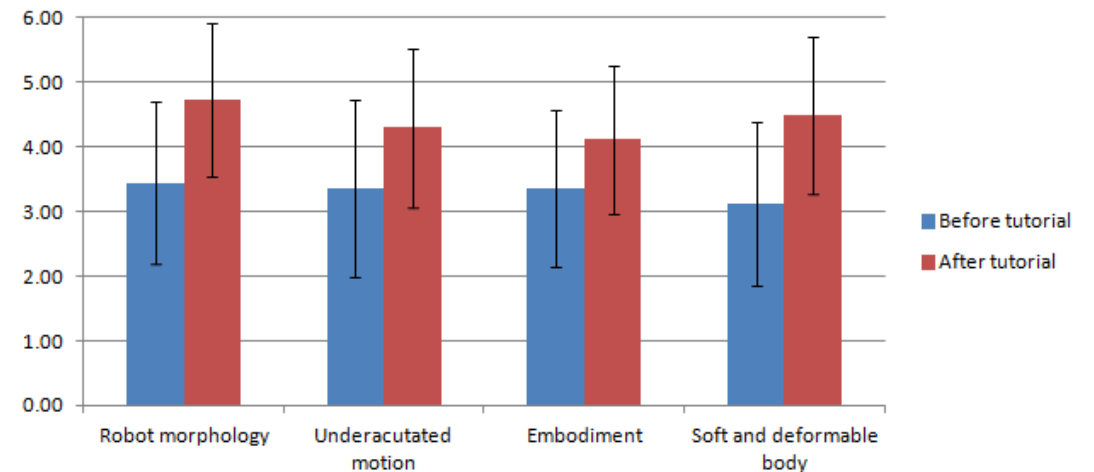- Art — 1
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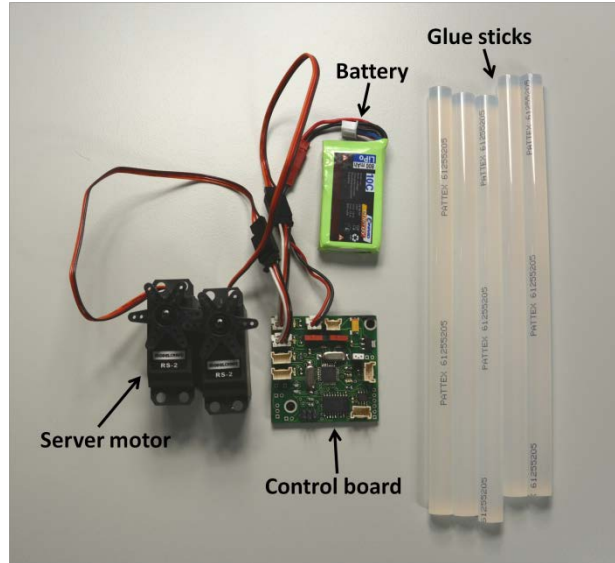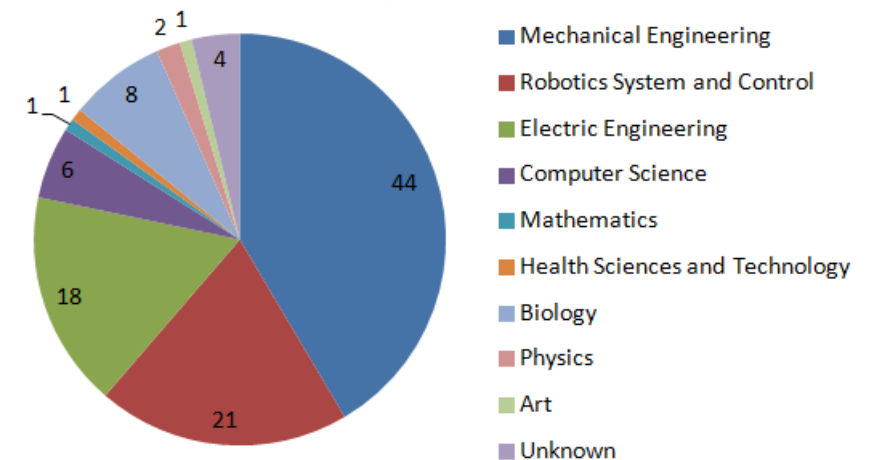
Results

How students rate their knowledge on several subjects before and after tutorial

How students rate the importance of the subjects

Yu X., Nurzaman S.G., Culha U. and Iida F., *Soft Robotics* (submitted)

Thank you for your attention