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B A C H E L O R  T H E S I S
for
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# Modeling and Control of a Kinetic Artistic Robot

Problem description:

Kinetic art is art from any medium that contains movement perceivable by the viewer or depends on motion for its effect. Dynamic Human Robot Interaction Lab aims to investigate experimental human robot interactive art with a combination of robotics technologies in a new form of kinetic art. In this work the student will design a robotic mechanism for a kinetic artistic robot and implement basic feedback control algorithms for it. The implemented controller will be analyzed in multiple perspectives from robotics and art. In particular, the application to a contemporary glass artwork, which is the work of Bongchull Shin [1], is expected by considering the effects of glass, view angles, and lighting.

Tasks:

- Brainstorm creative ideas for a kinectic artwork
- Design of a prototype for a kinetic glasscube module
- Design of a kinetic glasscubed artwork with multiple modules
- Control of the designed system
- Analysis of controllers
- Realization of interaction with humans (optional)

Bibliography:

[1] www.bongchull.com

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| Supervisor: | Dongheui Lee, Sangik An |
| Start: | 03.05.2016 |
| Intermediate Report: | 15.06.2016 |
| Delivery: | 03.08.2016 |

(D. Lee)
Univ.-Professor