DeMaMech exchange program

Summary

Tokyo University

Stay at Odaiba: Tokyo's artificial island

Experience lablife

Sampling Japanese culture

Advanced Mechatronics Laboratory

Electrostatic actuators

Focus on haptic applications

Expermintal setups rather than modeling

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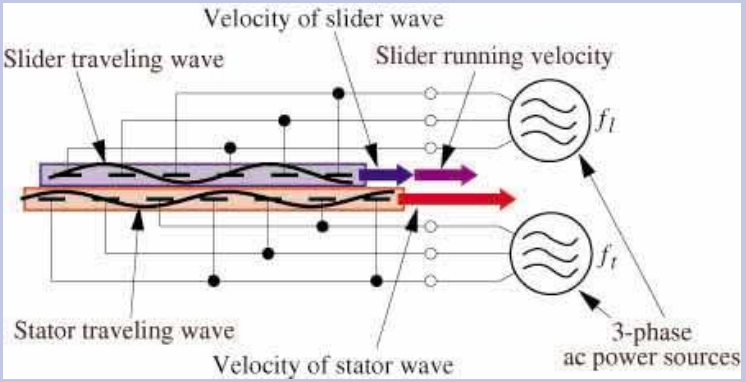
Research

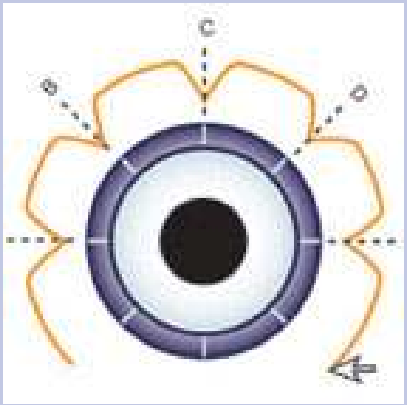
Electrostatic actuator:

electrode sheets with embedded electrodes

three-phase high-voltage driving signals

electrode sheets are stackable





Haptic device:

physical interface to the virtual world

user configurable sensory profile

applications in micro factory or car-industry

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Research

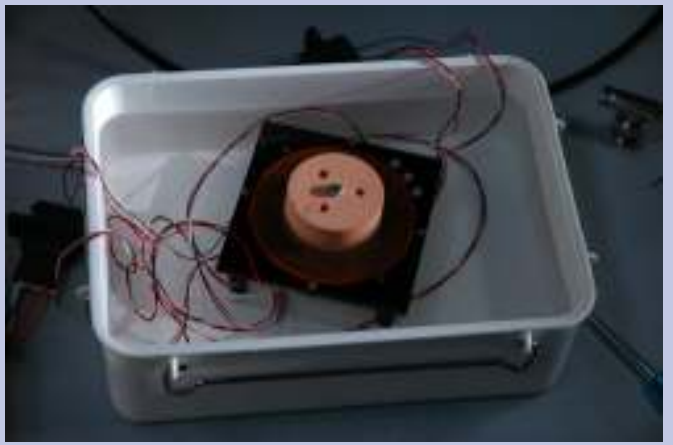
Objective: to develop a rotational haptic device using the electrostatic film motor

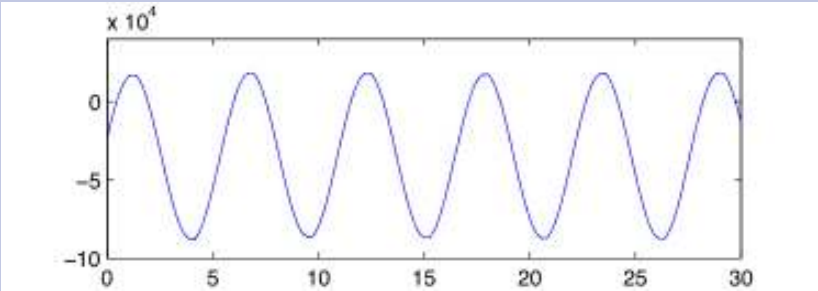
Setup:

4 pairs of electrode sheets for driving

1 pair for sensing

electronic circuitry





Result:

driving and sensing circuitry

accurate to 1 mrad

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Student life