

## 1 Workshop Title

SHAPE COMPLIANT ELECTROADHESIVE GRIPPER

## 2 Type and Duration of Workshop

Type of Activity: **Workshop**

Preferred time: **14:30 - 17:00**

## 3 Abstract (Objectives, Significance, and Impact)

This workshop is directed to providing a shape compliant electro-adhesive gripper capable of picking up an atypical object with a simplified structure and an easy mechanism while overcoming a limitation of the conventional gripper. Further, the subject is directed to providing a shape compliant electro-adhesive gripper capable of efficiently picking up various atypical objects through a combination of an electro-adhesive force and a mechanical gripping force.

One aspect of the proposal provides a shape compliant electro-adhesive gripper for picking up an atypical object, the gripper including a body, a shape compliant module disposed on the body and having rigidity which is variably controllable, and an electro-adhesive module disposed on the shape compliant module.

According to one embodiment, the shape compliant module may include a magnetorheological elastomer, and when a magnetic field is not applied, a shape of the shape compliant module may be changed according to a shape of an external object which is brought into contact with the shape compliant module, and when the magnetic field is applied, rigidity of the magnetorheological elastomer may be increased to maintain the shape of the shape compliant module.

## 4 Target Audience

**Robot hand, Electro-Adhesive Pad, adaptive skin, fiber Sensor**  
[hwangpa@dawooservo.co.kr](mailto:hwangpa@dawooservo.co.kr).

## 5 Speakers and Program (Tentative)

14:30 ~15:00	Using various high dielectric materials coated on FPCB Electro-Adhesion Pad	Dr. rer.nat. Hae-Sook Hwang Institute for R & D Center Dawoo F.A. Co., Ltd
15:00 ~ 15:30	Coffee Break	
15:30~16:00	Development of a two-finger gripper	Bong-sup Song, DGIST
16:00 ~16:30	Adaptive Skin for Robot Grippers	Eun-Jae Shin, KOREATECH
16:30~17:00	(Invited Lecture) Textile based sensors for novel wearable electronics	Prof. Dr. Tae-Yun Lee Yonsei University

## 6 List of Organizers

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