



The 19th Symposium on Theory of Machines and Mechanisms

Date: June 15, 2013

Place: Conference Room 304, 3rd Floor, Ishikawadai 3 Bldg. ,
Tokyo Institute of Technology (Ohokayama Campus)
2-12-1 Ohokayama, Meguro-ku, Tokyo 152-8552
(8 min. walk from Ohokayama Station, Tokyu Meguro-line and Ohimachi-line)

Program:

9:55 Opening Address by Haruo HOUJOH
President, Jc-IFTToMM (Tokyo Tech)

Session 1 : Human Support (10:00-11:00)
Chair: Yukio TAKEDA (Tokyo Tech.)

10:00 Development and Performace Evaluation of Skill-less Crane System
*Yuki HASHIZUME (Tokyo Univ. of Agriculture and Technology), Xiaochen ZHANG,
Keisuke SIMONO and Yasutaka TAGAWA

10:20 Dental Patient Robot - Reproduction of Patient's Hand to Fall Sick -
*Shota HAMAGUCHI (Kogakuin Univ.), Hideaki TAKANOBU, Kenji SUZUKI, Hiroaki MIURA,
Takashi ISHIGURO, Norio OKUBO, Kotaro MAKI (Showa Univ.), Yoshikazu MIYAZAKI,
Mutsumi MADOKORO, Takeshi TANZAWA, Kenichi MIYAMOTO (tmsuk Co., Ltd.),
Koichi TAKATSUJI, Yusuke ISHII, Akihisa OKINO (Okino Industries Ltd.) and
Atsuo TAKANISHI (Waseda Univ.)

10:40 Linear Reguression Modeling of Driver from Driving Information and Road Information Obtained
from Omni-Directional Point-Cloud
*Kohei HIROMATSU (Univ. of Tokyo), Wataru TAKANO and Yoshihiko NAKAMURA

Session 2 : Mechanisms and Actuators (11:20-12:20)
Chair: Haruo HOUJOH (Tokyo Tech.)

11:20 The Deformation Mechanism in Consideration of the Evolution of the Vertebrate
*Moritaka TANIGUCHI (Institute of Technologists), Hiroyuki MATSUMOTO and
Hisami OHISHI (Kogakuin Univ.)

11:40 Optimal Design of Gear Ratio for Jumping Robot with Non-circular Gear and Robustness
Assessment for Parameter Error
*Yushi TAKEDA (Tokyo Tech.) and Masafumi OKADA

12:00 A Cycloidal Motor Using Shape Memory Alloy Wires
*Donghyun HWANG (The Univ. of Tokyo), Toshiro HIGUCHI

12:20-13:50 Luncheon

Session 3 : Measurement

(13:50-14:50)

Chair: Nobuyuki IWATSUKI (Tokyo Tech)

13:50 Motion Pattern Recognition of Human Arms Motions using IMU

*Takashi AOKI (Tokyo Univ. of Agri. and Tech.), Dana KULIC (Univ. of Waterloo) and
Gentiane VENTURE (Tokyo Univ. of Agri. and Tech.)

14:10 Interaction Force Measurement of Arbitrary Objects Using Variable Stiffness Mechanism

*Pavel ADODIN (Tokyo Tech.), Daisuke MATSUURA and Yukio TAKEDA

14:30 Frequency Response Analysis in the Non-linear Vibration System Using the High Order Spectra

*Hiroyuki MATSUMOTO (Institute of Technologists) , Hisami OHISHI (Kogakuin Univ.) and
Shinji YAMAKAWA

Session 4 : Mobile Robots

(15:10-16:10)

Chair: Hisami OHISHI (Kogakuin Univ.)

15:10 Development of Mobile Robot with Elliptic Legs for Outdoor Locomotion

*Katsuaki TANAKA (Graduate School, Waseda Univ.), Sei SEKI, Shinichi KINOSHITA,
Hikaru SUGITA, Hiroyuki ISHII (Waseda Univ.), Yusuke SUGIHARA (Kokushikan Univ.),
Satoshi OKABAYASHI (Waseda Univ.) and Atsuo TAKANISHI

15:30 Development of Biped Running Robot Utilizing Pelvic Movement

- 2nd Report: Hopping Motion Using Pelvic Movement and Leg Elasticity -

*Masaaki YAHARA (Graduate School, Waseda Univ.), Takuya OTANI, Kazuhiro URYU,
Akihiro IIZUKA, Tatsuhiro KISHI, Nobutsuna ENDO, Kenji HASHIMOTO,
Masanori SAKAGUCHI (Waseda Univ.), Yasuo KAWAKAMI, Hun-ok LIM (Kanagawa Univ.),
Atsuo TAKANISHI (Waseda Univ.)

15:50 Research of Swarm Robot - Swarm Control by Function of Omni-directional Movement -

*Yuta SHIMIZU (Kogakuin Univ.), Hideaki TAKANOBU, Kenji SUZUKI, Hirofumi MIURA
and Yoshinobu INADA (Tokai Univ.)

16:10 Closing Address by Nobuyuki IWATSUKI

Vice President, Jc-IFTtoMM (Tokyo Tech)

16:30 Annual Meeting 2013

(16:30-17:30)

Address from president:

Haruo HOUJOH (Tokyo Tech.)

Chair : Yukio TAKEDA (Tokyo Tech.)

17:40 Wine party

(17:40-19:00)

at Room 305, 3rd Floor, Ishikawadai 3 Bldg.

The fee is 5,000 Jpn yen and free for students.