



The 21st Symposium on Theory of Machines and Mechanisms

Date: July 18, 2015

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

Program:

12:55 Opening Address by Haruo HOUJOH
President, Jc-IFTOMM (Tokyo Tech.)

Session 1 : Measurement and Analysis of Vibration (13:00-13:40)
Chair: Hithoshi KIMURA (Tokyo Tech.)

13:00 Experimental Identification and Higher Order Spectral Analysis of Vibration System with
a Non-linear Spring Characteristic

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

13:20 A Study on the Sidebands of Tooth Mesh Frequency Results of Planetary Gear System's Vibration
*Yusuke MIZUNO (Graduate School, Tokyo Tech.), Shigeki MATSUMURA (Tokyo Tech.),
Haruo HOUJOH and Takeshi IINO

Session 2 : Mechanisms and Mechanical Elements (14:00-15:00)
Chair: Masahito YASHIMA (National Defense Academy of Japan)

14:00 Design, Development and Generative Force Measurement of a 3D Magnetic Tweezer System Having
Pole Positioning Mechanism

*Hitoshi AOKI (Graduate School, Tokyo Tech.), Daisuke MATSUURA (Tokyo Tech.) and
Yukio TAKEDA

14:20 Small Mechanical Valve with High Flow Rate for Simultaneous Control of Multiple Flow Channels
and Its Experiment

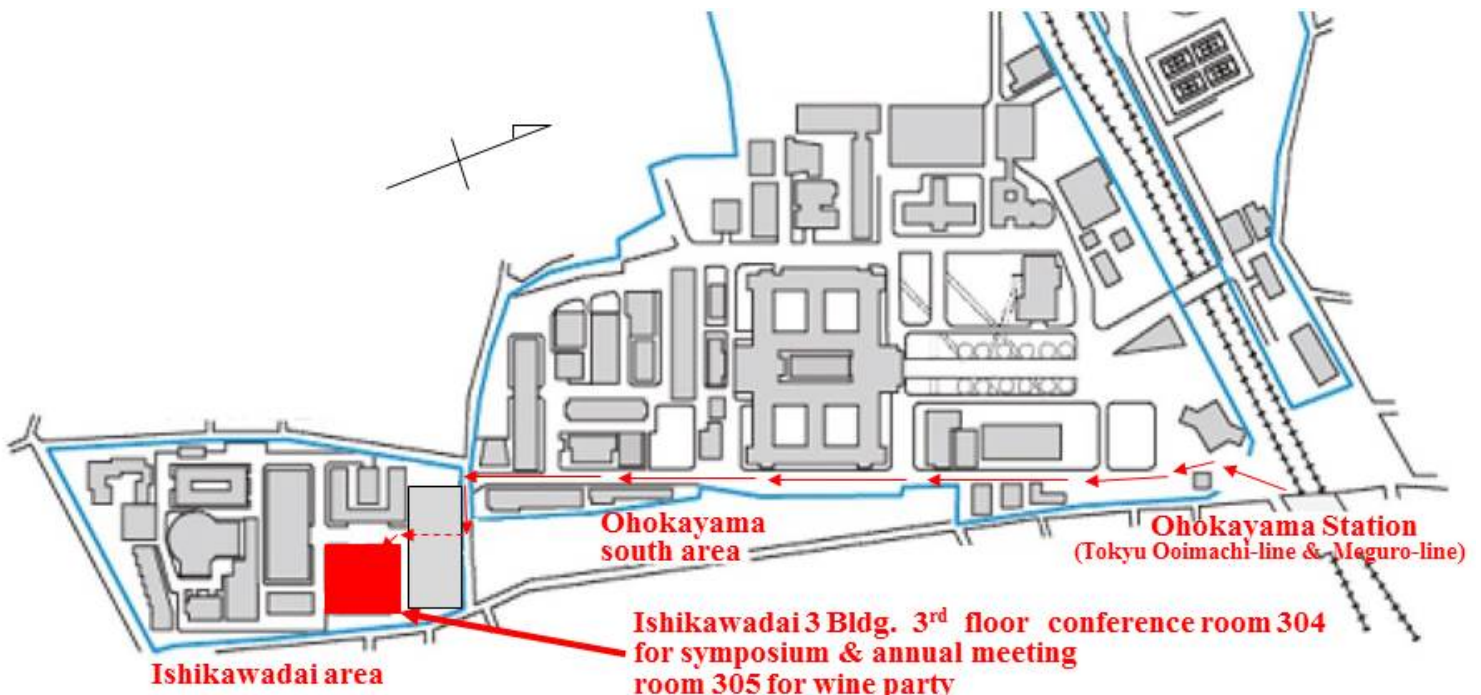
*Keisuke ARITA (Graduate School, Tokyo Tech.), Mokutaro KATAOKA,
Hitoshi KIMURA (Tokyo Tech.) and Norio INOU

14:40 Research of the Group Action Using Airship Robots

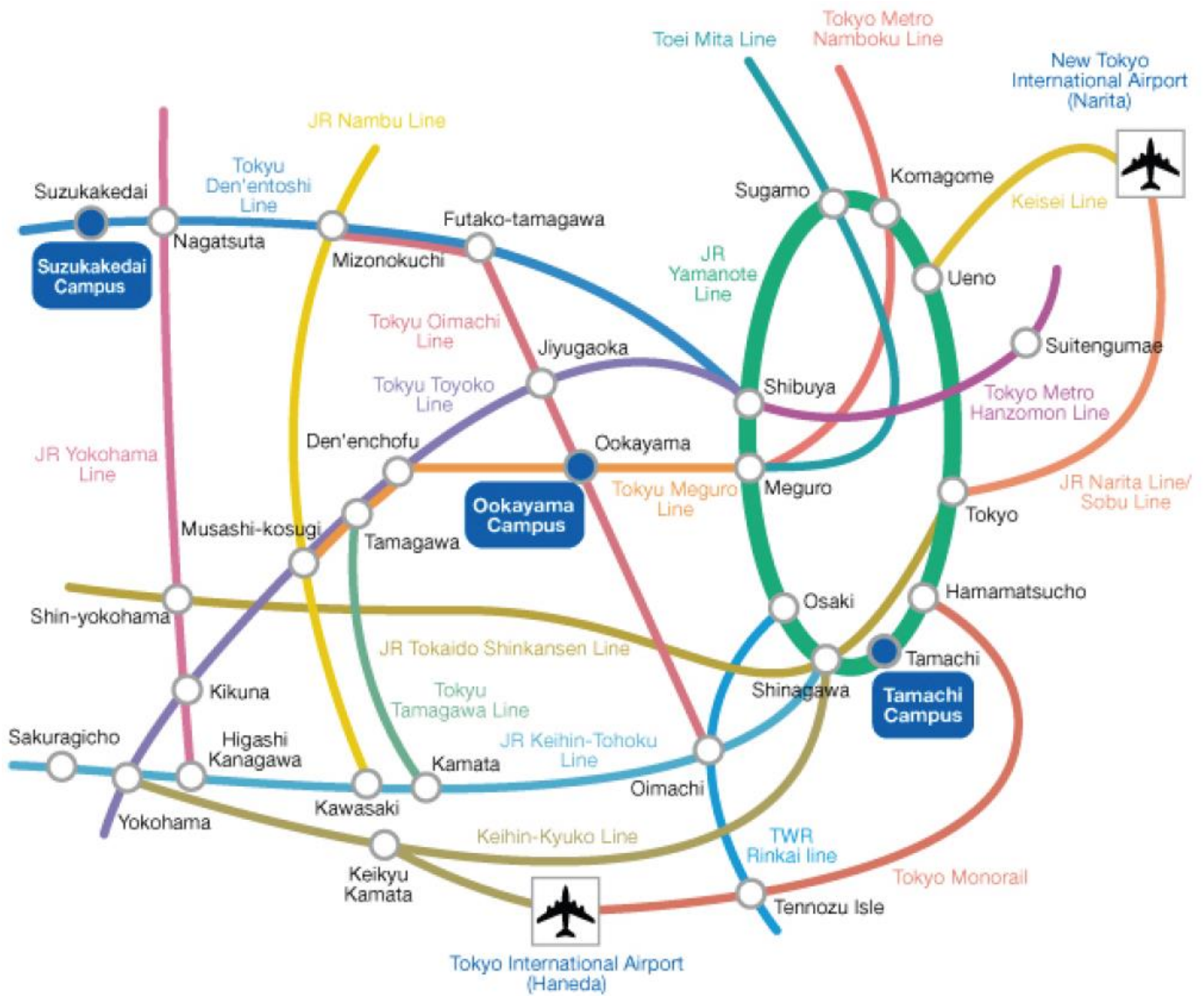
*Satoru HOUKITA (Graduate School, Kogakuin Univ.), Hideaki TAKANOBU (Kogakuin Univ.),
Kenji SUZUKI and Hirofumi MIURA

Session 3 : Robotics I (15:20-16:00)
Chair: Masafumi OKADA (Tokyo Tech.)

- 15:20 Research on Biped Running Robot Utilizing Pelvic Movement
 - 9th Report: Running in Sagittal Plane with One Leg of Lower-body Robot That Mimics Human Joint Stiffness -
 *Takuya OTANI (Graduate School, Waseda Univ.), Masaaki YAHARA,
 Kenji HASHIMOTO (Waseda Univ.), Shunsuke MIYAMAE (Graduate School, Waseda Univ.),
 Takaya ISOMACHI, Masanori SAKAGUCHI (Univ. of Calgary),
 Yasuo KAWAKAMI (Waseda Univ.), Hun-Ok LIM (Kanagawa Univ.) and
 Atsuo TAKANISHI (Waseda Univ.)
- 15:40 Study of Dental Patient Robot - Motion of Multi-Joint Mechanism -
 *Yuta SHIMOMAKI (Graduate School, Kogakuin Univ.), Hideaki TAKANOBU (Kogakuin Univ.),
 Kenji SUZUKI, Hirofumi MIURA, Kotaro MAKI (Showa Univ. of Dentistry),
 Yoshikazu MIYAZAKI, Takeshi TANZAWA, Kenichi MIYAMOTO (Tmsuk Co. Ltd.),
 Yoichi TAKAMOTO, Atsuo TAKANISHI (Waseda Univ.)
- Session 4 : Robotics II (16:20-17:20)
 Chair: Kenjiro TAKEMURA (Keio Univ.)
- 16:20 Vital Signs of Dental Patient Robot
 *Yuta SHIMOMAKI (Graduate School, Kogakuin Univ.), Hideaki TAKANOBU (Kogakuin Univ.),
 Kenji SUZUKI, Hirofumi MIURA, Kotaro MAKI (Showa Univ. of Dentistry),
 Yoshikazu MIYAZAKI, Takeshi TANZAWA, Kenichi MIYAMOTO (Tmsuk Co. Ltd.),
 Yoichi TAKAMOTO, Atsuo TAKANISHI (Waseda Univ.)
- 16:40 Study on Robot That Can Grow Like Humans
 *Takayuki MASTUZAWA (Graduate School, Kogakuin Univ.),
 Hideaki TAKANOBU (Kogakuin Univ.), Kenji SUZUKI and Hirofumi MIURA
- 17:00 Development of Mobile Robot with Specially Designed Wheels
 *Hiroyuki ISHII(Waseda Univ.), Katsuaki TANAKA, Daiki ENDO, Yuya OKAMOTO,
 Daisuke KUROIWA, Yusuke SUGAHARA (Kokushikan Univ.) and
 Atsuo TAKANISHI (Waseda Univ.)
- 17:20 Closing Address by Atsuo TAKANISHI
 Vice President, Jc-IFTtoMM (Waseda Univ.)
- 17:30 Annual Meeting 2015 (17:30-18:20)
 Address from president:
 Haruo HOUJOH (Tokyo Tech.)
 Chair : Yukio TAKEDA (Tokyo Tech.)
- 18:30 Wine party (18:30-19:30)
 at Room 305, 3rd Floor, Ishikawadai 3 Bldg.
 The fee is 5,000 Jpn yen and free for students.



Campus map of Tokyo Tech



Access Map to Ookayama Campus of Tokyo Tech