The 2nd International Jc-IFToMM Symposium
in conjunction with The 25th Symposium on Theory of Machines and Mechanisms

Date: October 25(Friday)- 26(Saturday) 2019
October 25 : Technical Tour
October 26 : Symposium and Technical Networking Event

Technical Tour on October 25

Place: AIST Tokyo Water Front Collaboration Center, National Institute of Advanced Industrial Science and Technology
2-3-6 Aomi, Koto-ku, Tokyo 135-0064
(3 minutes on foot from Yurikamome Line, Telecom Center Station)
Hongo Campus, The University of Tokyo
7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033
(8 minutes on foo from Tokyo Metro Marunouchi Line, Hongo 3 chome Station)
Schedule: 9:55   Meet at entrance of AIST Tokyo Water Front Collaboration Center
Visit AIST Tokyo Water Front Collaboration Center
Afternoon Visit Yoshihiko NAKAMURA and Ko YAMAMOTO lab Akio YAMAMOTO lab,
The University of Tokyo
Evening   Wine party
Registration: Anyone who will attend the Technical Tour have to register by October 18 via the following WEB site
https://forms.gle/Ny2RETwPzn6BvMJn6

Symposium and Technical Networking Event on October 26

Place: Room A416 and A417, Area 2 Building-A, Ikuta Campus, Meiji University
1-1-1 Higashi-Mita, Tama-ku, Kawasaki-shi, Kanagawa 214-8571
(10 minutes on foot from Odakyu Line (both semi-express, and local trains), Ikuta Station)
Program:

8:10   Registration at reception desk

8:45   **Opening Address** by Atsuo TAKANISHI
President, Jc-IFToMM (Waseda Univ., Japan)

Session 1 : Robot Control   (8:50-10:30)
Chair: Yoshihiko NAKAMURA (Univ. of Tokyo, Japan)
8:50   Low-cost Localization for Mobile Robot with Fiducial Markers
*Andrea BOTTA (Politecnico di Torino, Italy) and Giuseppe QUAGLIA

9:10   3D Swarm Intelligence by Concentric Sphere Model #
*Keita GOTO (Kogakuin Univ., Japan), Hideaki TAKANOBU, Yo OAKU, Kenji SUZUKI,
Shohei KANEDA and Hirofumi MIURA

9:30   Adaptive Optimal Predictive Control System for Cognitive Manipulator Robots based on Human
Engagement/Intention and Deep Dynamic Perception
*Liz RINCON (Tokyo Univ. of Agriculture and Technology, Japan), Florian FILLOL, Enrique CORONADO and
Gentiane VENTURE

9:50   Development of Expressive Intelligence Controller during Collaborative Tasks between Human & Robot #
*Seiji YAMAGUCHI(Tokyo Univ. of Agriculture and Technology, Japan), Liz RINCON-ARDILA and
Gentiane VENTURE

10:10   Development of Disaster Response Robot for Extreme Environments
- 33rd Report: Crawling Motion Generation for All Direction Moving Based on Stability and Foot Movable
Range of a Four-limbed Robot - #
*Takashi MATSUZAWA (Waseda Univ., Japan), Xiao SUN, Hiroshi NAITO, Keisuke NAMURA, Takehiro
SATO, Kota TERAE, Masatsugu MURAKAMI, Shunya YOSHIDA, Akira ITO, Takahisa KONDO, Astuo
TAKANISHI and Kenji HASHIMOTO (Meiji Univ., Japan)

10:30   Coffee break

Special Lecture: (10:50-12:10)
           Chair: Yukio TAKEDA (Tokyo Tech, Japan)

10:50   Introduction of Activities of IFToMM Italy
           Prof. Giuseppe QUAGLIA, Politecnico di Torino, Italy

11:30   Whole-body Control of Humanoid Robots in Multi-contact Scenarios
           Prof. Milutin NIKOLIC, Univ. of Novi Sad, Serbia / Univ. of Tokyo, Japan

12:10   Luncheon   (12:10-13:40)

           During Luncheon
           Jc-IFToMM Annual Meeting 2019 for Jc-IFToMM members   (12:20-13:30)
              Address from president:
                 Atsuo TAKANISHI (Waseda Univ., Japan)
              Chair : Gentiane VENTURE (Tokyo Univ. of Agriculture and Technology, Japan)

Session 2 : Dynamic Analysis of Mechanisms   (13:40-14:40)
           Chair: Atsuo TAKANISHI (Waseda Univ., Japan)

13:40   Energetic Analysis of Industrial Robots for Pick-and-place Operations
           *Fabrizio VIDUSSI (Univ. of Udine, Italy), Paolo BOSCARIOL (Univ. of Padua-Padova, Italy),
             Lorenzo SCALERA (Free Univ. of Bozen-Bolzano, Italy) and Alessandro GASPARETTO (Univ. of Udine, Italy)

14:00   Design of a Testbench for Validating Multibody Flexible Models Aimed at Reducing Oscillations in Parallel
           Kinematic Machines with Flexible Links
           *Stefano BRILLARELLI (Polytechnic University of Marche, Italy) and Matteo PALPACELLI

14:20   Dynamic Analysis of Walking with Cane for Elderly People Using Model with Dynamic Pair #
           *Soichiro MATSUDA (Tokyo Tech, Japan) and Yukio TAKEDA

14:40   Coffee break

Session 3 : Welfare Devices   (15:00-16:00)
           Chair: Gentiane VENTURE (Tokyo Univ. of Agriculture and Technology, Japan)

15:00   Development of a Knee Joint Assist Suit with a Velocity-based Mechanical Safety Device
           (Study of Control Method) #
              *Keisuke IKEDA (Tokai Univ., Japan), Tsubasa KANEDA, Atsushi KANETA, Yoshihiro KAI,
              Kenichi SUGAWARA (Kanagawa Univ. of Human Service, Japan), Masayoshi TOMIZUKA
              (Univ. of California, USA), Tetsuya TANIOKA (Tokushima Univ., Japan) and Kensaku TAKASE
              (Tokushima Prefectural Central Hospital, Japan)

15:20   Design of an Elbow Joint Assist Suit with a Compact Velocity-based Mechanical Safety Device #
              *Tsubasa KANEDA (Tokai Univ., Japan), Keisuke IKEDA, Atsushi KANETA, Yoshihiro KAI,
              Kenichi SUGAWARA (Kanagawa Univ. of Human Service, Japan), Masayoshi TOMIZUKA
              (Univ. of California, USA) , Tetsuya TANIOKA (Tokushima Univ., Japan) and Kensaku TAKASE
              (Tokushima Prefectural Central Hospital, Japan)

15:40   Kineto-static Analysis of a Wrist Rehabilitation Robot with Compliant Elements and Supplementary Passive Joints
           to Compensate the Joint Misalignment
              *Ying-Chi LIU (Tokyo Tech, Japan) and Yukio TAKEDA

16:00   Coffee break

Session 4 : Mechanism Design   (16:20-17:40)
           Chair: Yoshihiro KAI (Tokai Univ., Japan)

16:20   Automated Kinematic Analysis of Planar Link Mechanisms
           *Tatsuya YAMAMOTO (Tokyo Tech, Japan), Nobuyuki IWATSUKI and Ikuma IKEDA

16:40   Linkage and Cam Design with Mechanism Developer (MECHDEV)
           Mario MUELLER (RWTH Aachen Univ., Germany), *Mathias HUESING, Agnes BECKERMANN

and Burkhard CORVES

17:00 Improvement of an Origami Based Extendable Mechanism with a Modification of Folding Diagram so as to Have a Tapered Shape
*Hiroshi MATSUO (Tokyo Tech, Japan) and Yukio Takeda
17:20 DMG-LIB: The Digital Mechanism and Gear Library as a Basis for an IFToMM Archive
Torsten BRIX (TU Ilmenau, Germany), Ulf DOERING and *Burkhard CORVES
(RWTH Aachen Univ., Germany)

17:40 Closing Address by Nobuyuki IWATSUKI
Vice President, Jc-IFToMM (Tokyo Tech, Japan)

18:00 Technical Networking Event
including Awarding Ceremony for Young Investigator Fund Best Paper Award   (18:00-19:30)
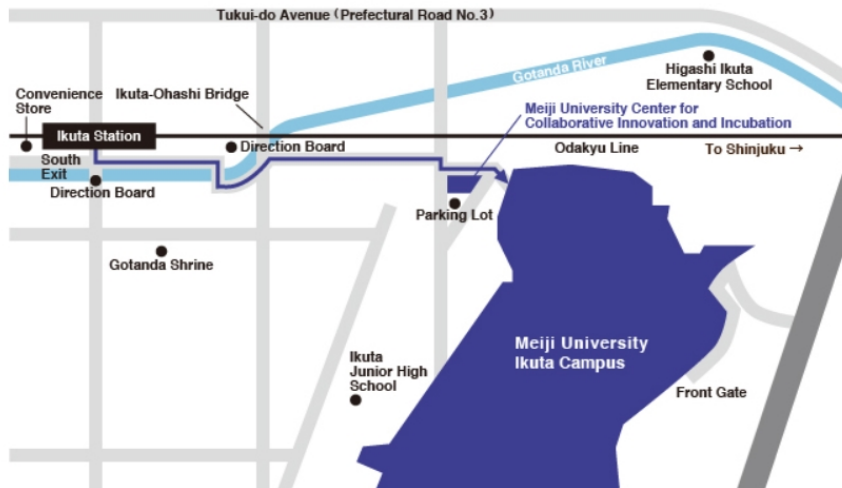Venue: 3rd Floor, Restaurant Building SQUARE

*: Speaker

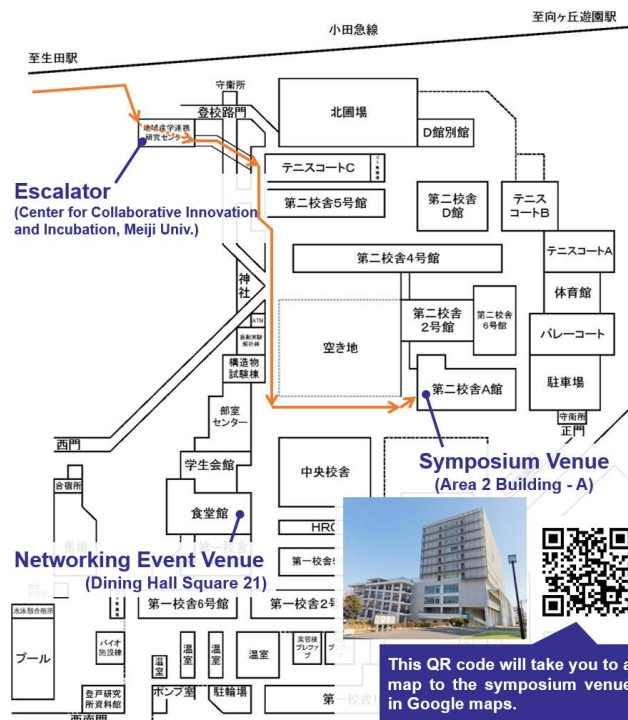#: Oral presentation in Japanese

Fee: (Registration fee including the printed proceedings, technical networking event, technical tour)
Jc-IFToMM member   5,000 JPY
Student   2,000 JPY
Other IFToMM MO's Member 10,000 JPY
Non member   15,000 JPY

MAPS:

Access map of Ikuta Campus, Meiji University

Campus map of Ikuta Campus, Meiji University