



**Jc-IFTOMM Annual Meeting 2020**  
**&**  
**The 3<sup>rd</sup> International Jc-IFTOMM Symposium**  
**(The 26<sup>th</sup> Symposium on Theory of Machines and Mechanisms)**

**Date:** March 19(Friday), 2021

**Venue:** Online symposium with ZOOM software

Zoom URL will be announced to attendees who will register to attend via WEB site:

<http://www.jc-iftomm.org/english/index.html>

Download URL for the preprints of the symposium will also be announced.

**Jc-IFTOMM Annual Meeting 2020**

(13:00-14:30)

13:00 Address from president:

Atsuo TAKANISHI (Waseda Univ., Japan)

Chair : Gentiane VENTURE (Tokyo Univ. of Agriculture and Technology, Japan)

(Official Language: Japanese)

**International Jc-IFTOMM Symposium 2020**

(14:30-20:15)

**Program:**

14:30 Opening Address by Atsuo TAKANISHI

President, Jc-IFTOMM (Waseda Univ., Japan)

**Session 1 : Human and Robot Interaction**

(14:35-15:50)

Chair: Nobuyuki IWATSUKI (Tokyo Tech, Japan)

14:35 High-speed Interactive Musculoskeletal analysis visualization and VR implementation for Sport Training#

\*Akimitsu SAKURAI (The Univ. of Tokyo, Japan), Yosuke Ikegami, Ko Yamamoto, Milutin NIKOLIĆ (Univ. of Novi Sad, Serbia) and Yoshihiko NAKAMURA (The Univ. of Tokyo, Japan)

15:00 Improving HRI by Force Sensing#

\*Akiyoshi HAYASHI (Tokyo Univ. of Agriculture and Technology, Japan), Liz Rincon-Ardila and Gentiane VENTURE

15:25 Stochastic Parameter Identification with the Specified Error Covariance#

\*Masafumi OKADA (Tokyo Tech, Japan) and Kazuki WATANABE

15:50 Break

**Session 2 : Motion Planning**

(16:00-17:15)

Chair: Yoshihiko NAKAMURA (The Univ. of Tokyo, Japan)

16:00 Active Physical Human-robot Interaction: an Experiment towards Quantifying Human Interactions

\*Yue HU (Tokyo Univ. of Agriculture and Technology, Japan), Gentiane VENTURE, Naoko ABE (The Univ. of Sydney, Australia), Mehdi BENALLEGUE (AIST, Japan), Natsuki YAMANOBE and Eiichi YOSHIDA

16:25 On-line Obstacle Avoidance with Smooth Path Planning for Redundant Manipulators

\*Cecilia SCOCCIA (Polytechnic University of Marche, Italy) and Giacomo PALMIERI

16:50 Motion Planning Strategies for Omnidirectional Mobile Robots

\*Luige TAGLIAVINI (Politecnico di Torino, Italy) , Andrea BOTTA, Paride CAVALLONE, Giovanni COLUCCI, Luca CARBONARI and Giuseppe QUAGLIA

17:15 Break

Special Lectures: (17:25-18:25)

Chair: Yukio TAKEDA (Tokyo Tech, Japan)

17:25 IFToMM Collaboration between Italy and Japan  
Prof. Giuseppe QUAGLIA, Politecnico di Torino, Italy

17:55 Some Memories of the RoManSy Symposia in the 1980s: Part of the Activities of the Jc-IFTToMM  
Prof. Atsuo TAKANISHI, President, Jc-IFTToMM, Waseda Univ., Japan

18:25 Break

Session 3 : Analysis and Control of Mechanisms (18:35-19:50)

Chair: Kenjiro TAKEMURA (Keio Univ., Japan)

18:35 Analysis of a 3-DOF Parallel Robot for Wrist Rehabilitation with Consideration of Effect of Human Limb  
\*Ying-Chi LIU (Tokyo Tech, Japan) and YUKIO TAKEDA

19:00 Actuation Strategy of Origami-inspired Extendable Mechanism to Achieve Rapid Extension and High Load Capacity  
\*Hiroshi MATSUO (Tokyo Tech, Japan), Daisuke YAMAGUCHI, Yukio TAKEDA, Masahiko OTAKE (The KAITEKI Institute Inc., Japan) and Haruhiko KUSAKA

19:25 A Model Based Dynamic Performance Analysis of a Robotic Manipulator Considering Flexibility Sources  
\*C. E. CAPALBO. (Univ. of Calabria, Italy), F. COSCO, D. MUNDO and G. CARBONE

19:50 Closing Address by Ken SASAKI  
Vice President, Jc-IFTToMM ((The Univ. of Tokyo, Japan)

20:00 Awarding Ceremony for Young Investigator Fund Best Paper Award (20:00-20:15)  
Address from president:  
Atsuo TAKANISHI (Waseda Univ., Japan)  
Chair : Gentiane VENTURE (Tokyo Univ. of Agriculture and Technology, Japan)

20:15 ZOOM Lounge with free talking (20:15-21:30)  
Any attendees can join with foods and drinks prepared by themselves.

Japanese Time

\*: Speaker

#: Oral presentation in Japanese

**Registration Fees:**

Member of Jc-IFTToMM	Free
Students	Free
Member of MO of IFTToMM	5,000JPY
Others	5,000JPY