

## Mechanisms, Actuators and Control for Robotics

July 23-27, 2018

Tokyo / Yamanashi, Japan

### Program

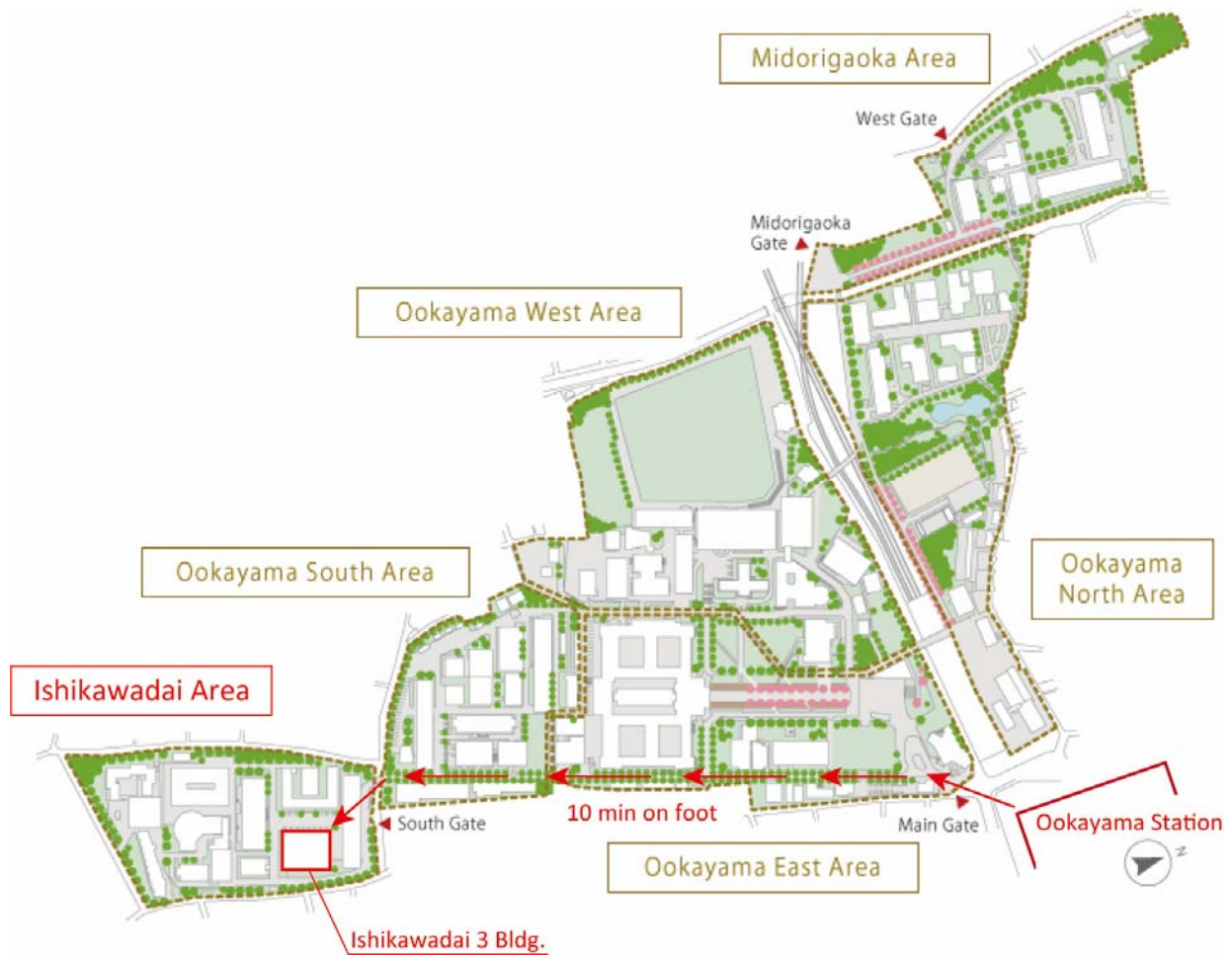
**Day 1: Monday, July 23<sup>rd</sup>, Tokyo Institute of Technology** (Mechanisms and applications)

Room 304, Ishikawadai 3rd building, Tokyo Institute of Technology

<https://www.titech.ac.jp/english/maps/>

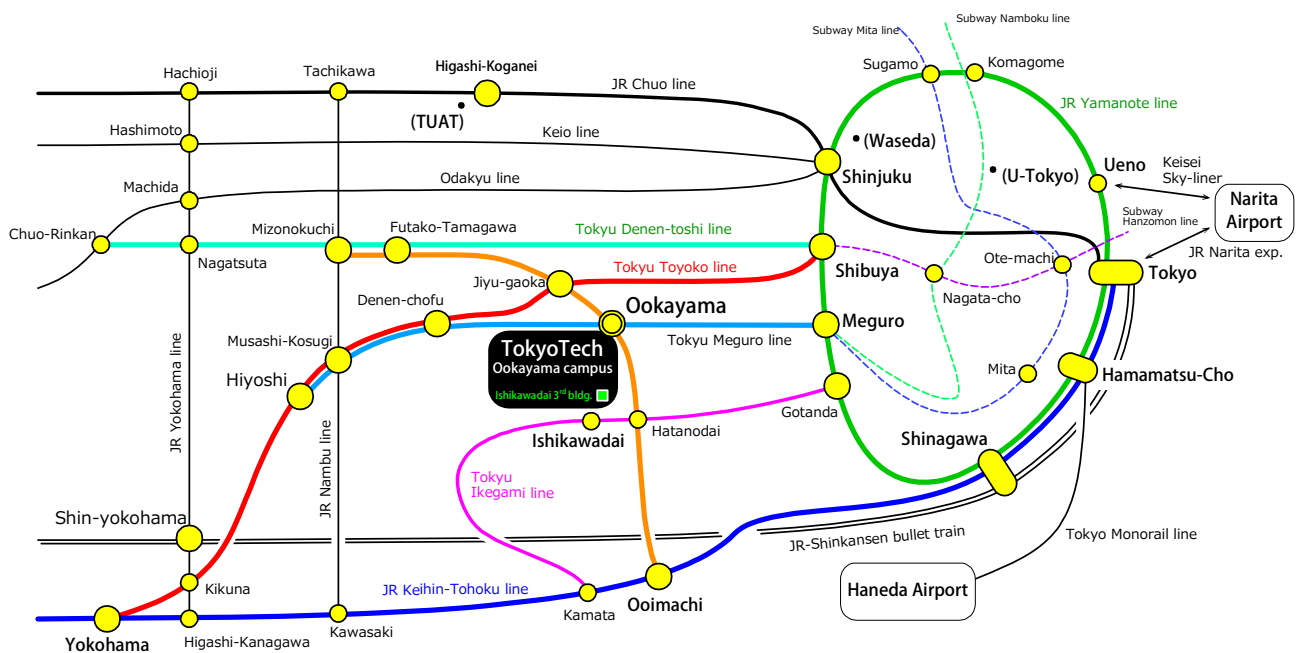
- |             |   |
|-------------|---|
| 8:30        | Registration  |
| 9:00 - 9:15 | Opening Ceremony  |
| 9:15 -10:45 | Tips of Creative Mechanical Design for Practical Robots<br>Dr. Shigeo Hirose, Representative Director CEO, CTO, HiBot Corporation,<br>Japan<br>Professor Emeritus Tokyo Institute of Technology |
| 10:45-11:00 | (break)   |
| 11:00-12:30 | Tolerance Management for Linkages<br>Prof. Mathias Huesing, RWTH Aachen University, Germany   |
| 12:30-14:00 | (Lunch)   |
| 14:00-15:00 | Gravity Compensation for Robotics<br>Prof. Chin-Hsing Kuo, National Taiwan University of Science and<br>Technology, Taiwan  |
| 15:00-15:15 | (break)   |
| 15:15-16:15 | Kinematic Design of Parallel Robots<br>Prof. Yukio Takeda, Tokyo Institute of Technology, Japan   |
| 16:15-17:30 | Lab Tour  |
| 18:00-20:00 | Welcome Party   |

## <Map and Directions: Tokyo Tech>



### Venue:

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



Access to Tokyo Tech Ookayama campus

**Day 2: Tuesday July 24<sup>th</sup>, Waseda University** (Humanoids and applications)

Room 121, Bldg. No. 120-5, Waseda Campus, Waseda University

9:30-10:30 Introduction to Humanoid Robotics

Prof. Atsuo Takanishi, Waseda University, Japan

10:30-10:45 (break)

10:45-11:45 Medical Humanoid Robotics -Patient Simulators for Medical  
Education/Training-

Prof. Hiroyuki Ishii, Waseda University, Japan

11:45-13:00 (lunch)

13:00-14:00 Biologically-Inspired Design of Musical Humanoid Robots and Its  
Applications to Human-Robot Interaction

Prof. Jorge Solis, Karlstad University, Sweden

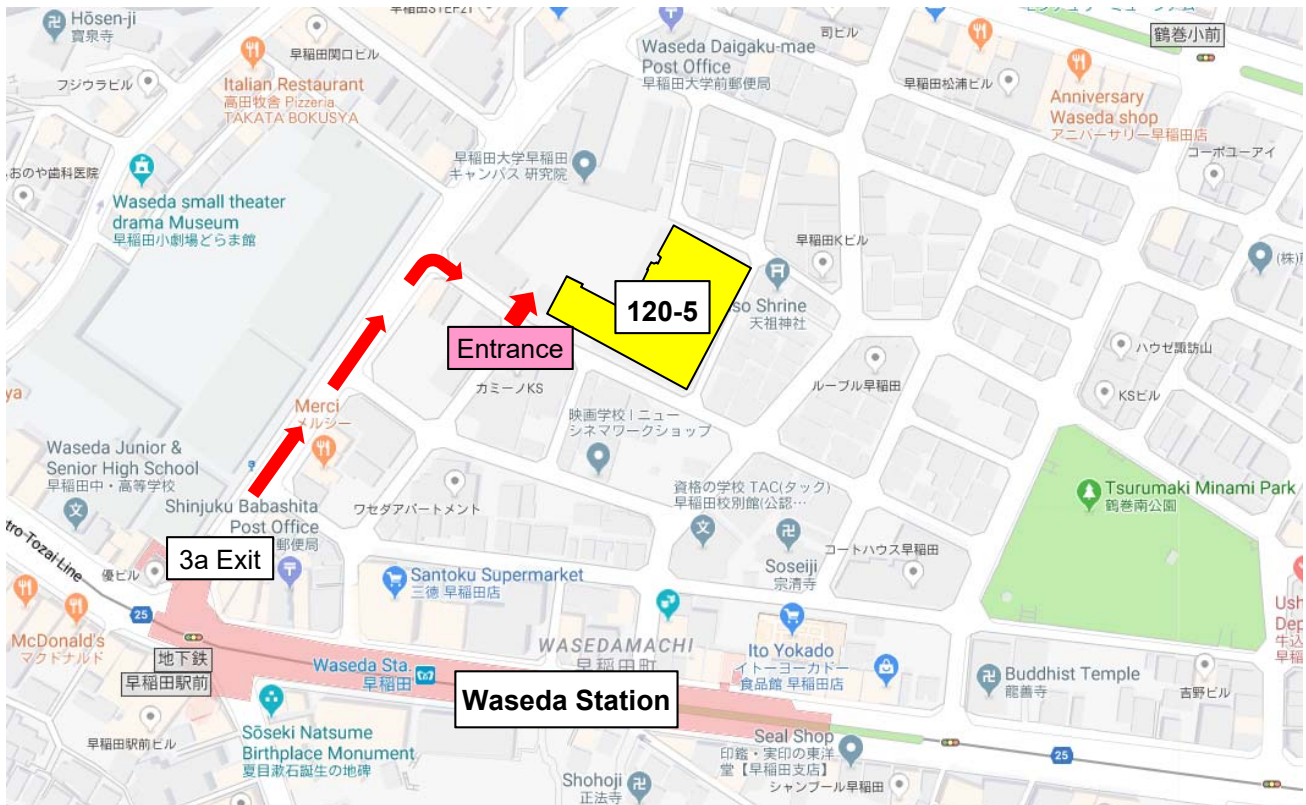
14:00-14:15 (break)

14:15-15:15 Application of Humanoid Robotics to Disaster Response

Prof. Kenji Hashimoto, Meiji University, Japan

15:30-18:00 Lab Tour

## <Map and Directions: Waseda University>



Attention: The entrance becomes very hard to find because No. 120 Building is under construction. Please be careful.

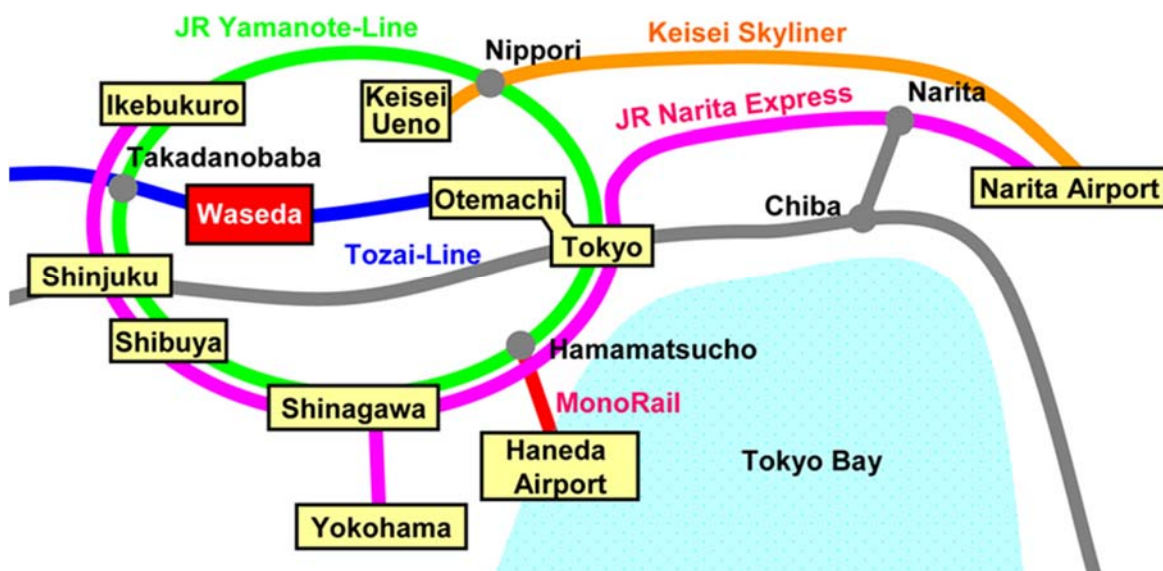
Venue:

Room 121, Bldg. No. 120-5,

Waseda University (Waseda Campus)

530 Wasedatsurumaki-cho, Shinjuku-ku, Tokyo 162-0041

(6 min. by walk from Waseda Station, Tokyo Metro Tozai-line)



Access to Waseda Station (Tokyo Metro Tozai-Line)

**Day 3: Wednesday July 25<sup>th</sup>, Tokyo University of Agriculture and Technology** (Actuators and Applications)

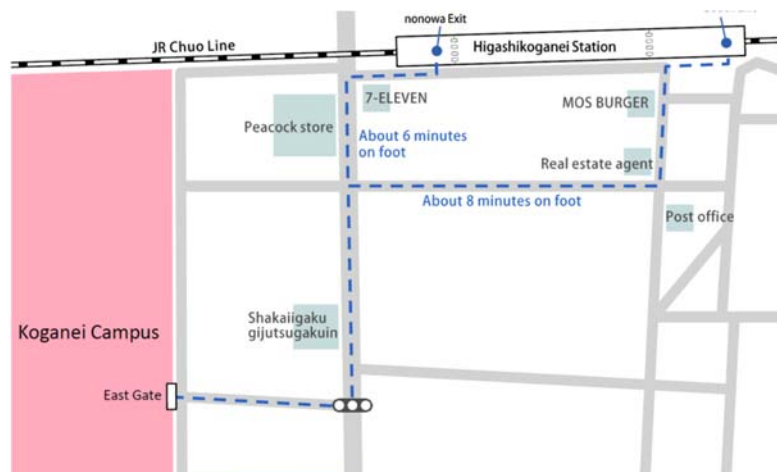
Koganei Campus  
Building 6 room 501

- 10:00-11:30 Electro-conjugate Fluid Actuators for Soft Robot Applications  
Prof. Kenjiro Takemura, Keio University, Japan
- 11:30-13:00 (Lunch)
- 13:00-14:30 Film-based Large Electrostatic Actuators for New Mechatronic Applications  
Prof. Akio Yamamoto, University of Tokyo, Japan
- 14:45-16:15 Mechatronics for controlling mobile robots and automobiles  
Prof. Masayoshi Wada, TUAT, Japan
- 16:30-18:00 Lab Tour (Wada – Venture - Toyama)

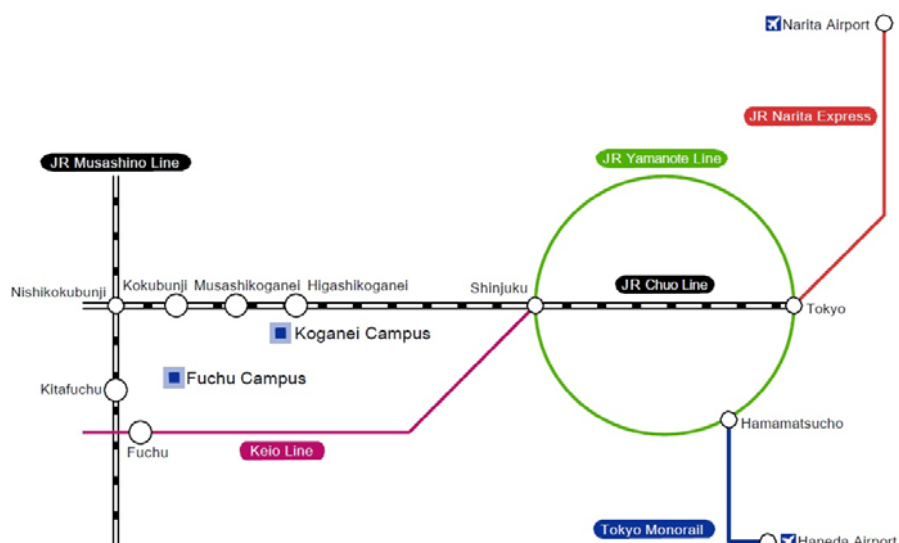
## <Map and Directions: TUAT>



TUAT Koganei campus map



Access to Koganei Campus East gate from the JR station Higashi Koganei



Train access to TUAT Koganei Campus

## **Day 4: Thursday, July 26<sup>th</sup>, University of Tokyo** (Control and applications)

Nakajima Hall

- 9:00-10:00 Kinematics and Dynamics (theory and algorithm)  
Prof. Yoshihiko Nakamura, University of Tokyo, and  
Dr. Ko Ayusawa, AIST, Japan
- 10:00-10:15 (break)
- 10:15-11:15 Modelling (interpretations of block diagrams)  
Prof. Ken Sasaki, University of Tokyo, Japan
- 11:15-11:30 (break)
- 11:30-13:00 Model and Identification (identification theory and practice)  
Prof. Gentiane Venture, TUAT, Japan
- 13:00-14:00 (lunch)
- 14:00-15:30 Feedback Control (nonlinear control and locomotion)  
Dr. Christian Ott, DLR, Germany
- 15:30-15:45 (break)
- 15:45-17:15 Computation (software, simulation and realtime)  
Prof. Tomomichi Sugihara, Osaka University, Japan
- 17:15-18:30 Lab Tour

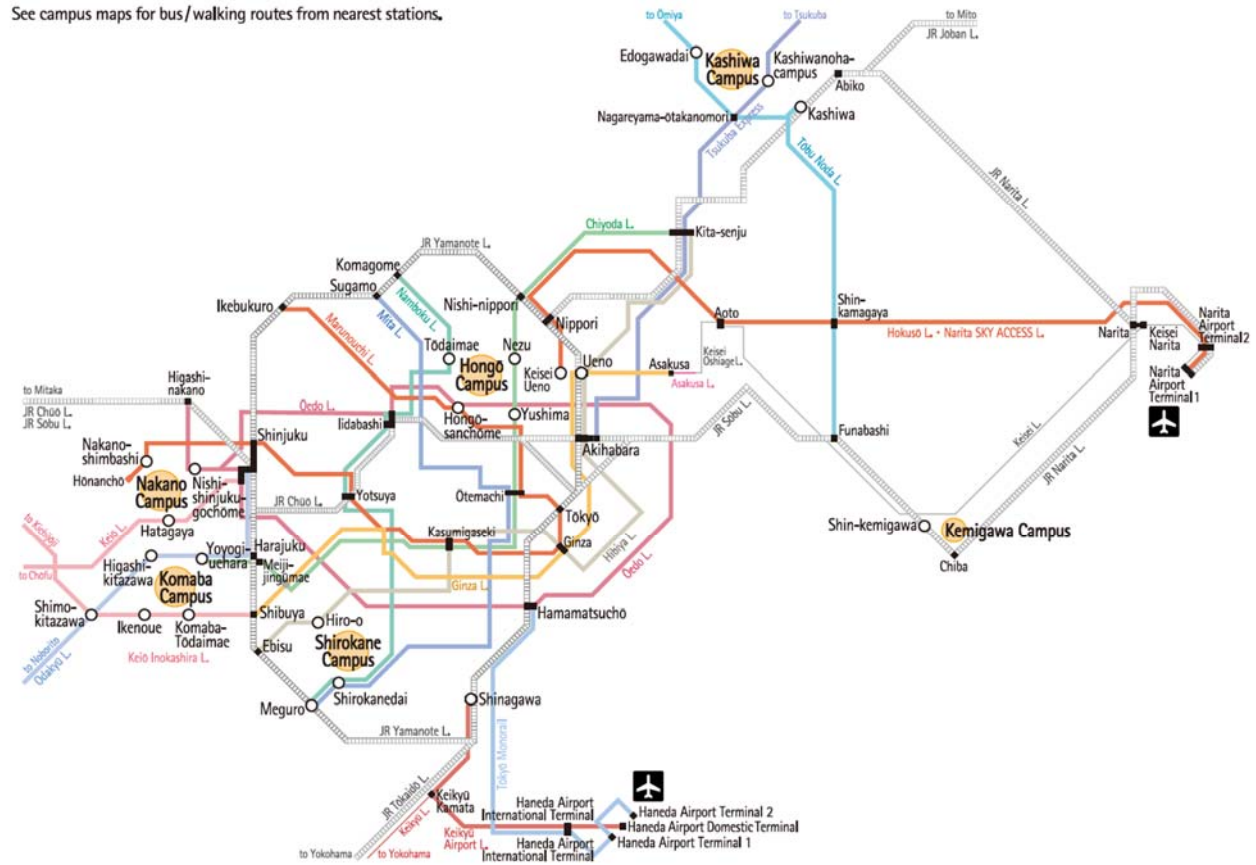


# Access Map

○ Nearest Station (Walk or bus)

■ Junctions

See campus maps for bus/walking routes from nearest stations.



## Hongo Campus

Nakajima Hall





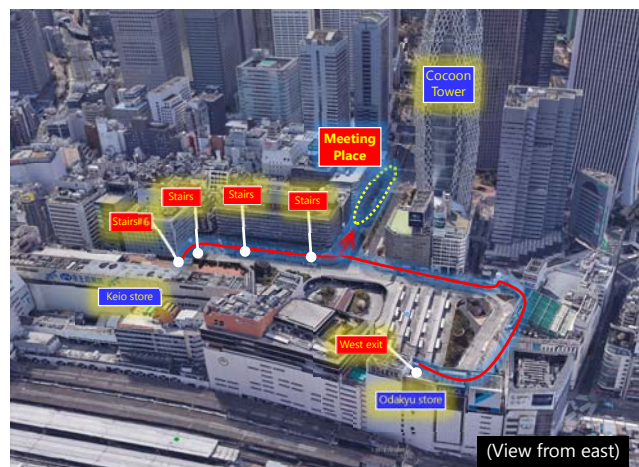
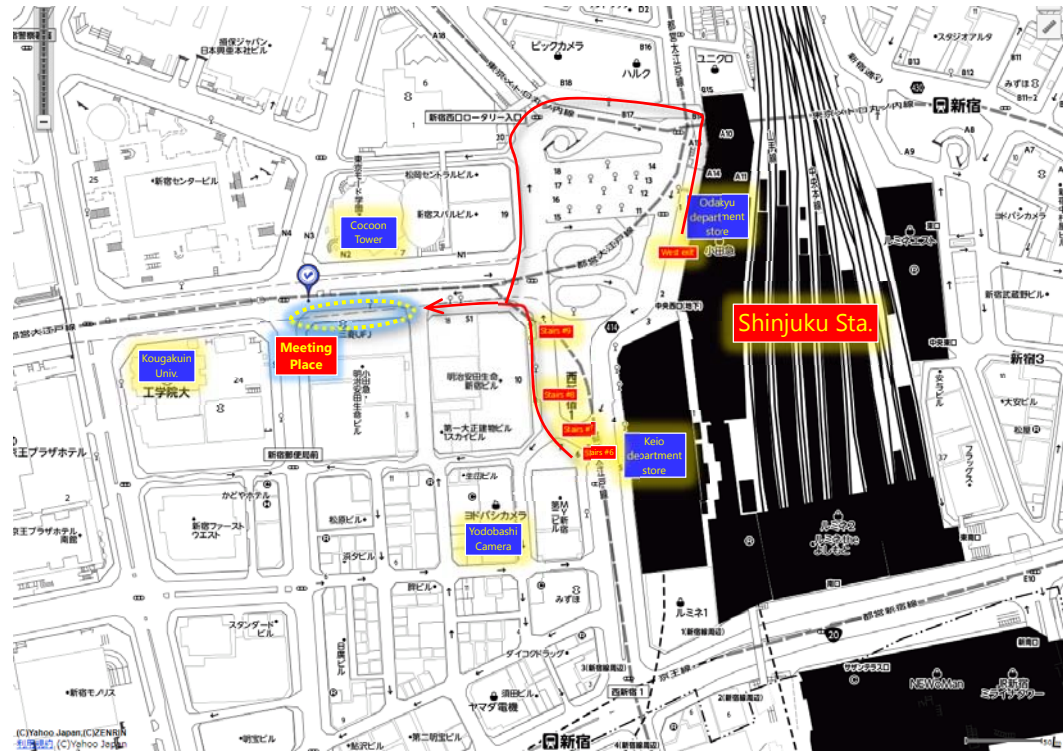
## **Day 5: Friday, July 27<sup>th</sup>, FANUC CORPORATION** (Factory tour and lectures)

7:20	Departure from the meeting place in west side of Shinjuku Station, Tokyo <b>*Meeting place is shown in the map below</b>
7:20 – 9:50	Trip with a charter bus
(8:45 – 9:00)	Intermediate break at Dango-Zaka rest area
10:00 – 10:25	Welcome Talk and Introduction of FANUC
10:30 – 12:00	Academic Lecture Recent Robotic Research Activities at IGMR, RWTH Aachen University Prof. Burkhard Corves, RWTH Aachen University, Germany
12:00 – 12:45	(lunch)
12:45 – 13:30	Industrial Lecture from FANUC
13:30 – 16:15	Factory Tour in FANUC
16:15 – 16:45	Closing Ceremony
16:45	Departure from FANUC to Shinjuku
(17:35 – 17:50)	Intermediate break at Dango-Zaka rest area
19:20 (approx.)	Arrival at Shinjuku Station

### **【Remarks on the factory tour】**

1. It is strictly prohibited to take photos, movies and recordings in the buildings of FANUC.
2. Do not enter any place other than the permitted places.
3. For your safety, be sure to act in accordance with the instructions of FANUC employees.

Meeting place : 1-8-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo  
(located at west side of Shinjuku Station.)



Birds' eye view of the meeting point



Close-point view of the meeting place