The University of Manchester × The University of Tokyo

2nd Joint Research Symposium

January 23rd–25th, 2025

Tokyo, Japan

Contents

Preface

Active collaboration between the University of Manchester and the University of Tokyo began in 2022, and in April 2023, an Agreement on Academic Exchange was signed between the Faculty of Science and Engineering at the University of Manchester and School of Science at the University of Tokyo. Concurrently, a Joint Supervision Ph.D. Double-Degree Agreement was concluded, leading to the enrolment of the first double-degree student in October 2023, a second student in October 2024, and a third student scheduled for April 2025.

Furthermore, the academic partnership between the University of Tokyo and the University of Manchester expanded to a university-wide agreement in February 2024, involving a broad range of fields, including School of Engineering and School of Frontier Sciences. Indeed, following the call for new double-degree projects in January 2024, many faculty members outside the Graduate School of Science also expressed a desire to participate, indicating the potential for the Double-Degree Agreement to spread throughout the university.

To further spread and deepen the collaboration, we established a joint research symposium to promote interactions at the school and faculty levels and to build a wide-reaching network between the University of Manchester and the University of Tokyo. The first symposium was held from October 28 to 30, 2024, bringing together numerous researchers and students from both institutions for vibrant discussions. Thirteen faculty members from School of Science at the University of Tokyo participated.

This second joint symposium brings together researchers from School of Science and School of Engineering at the University of Tokyo and from the Faculty of Science and Engineering at the University of Manchester. Through research presentations and individual discussions, we aim to further develop and deepen collaborative research endeavours.

List of Participants

The University of Manchester (UoM)

Chris Hardacre	(Vice Dean and Head of School, Department of Chemical Engineering)
David Polya	(Associate Dean for Internationalisation, Department of Earth & Environmental Sciences)
Clara Cheung	(Head of Internationalisation for ASEAN, Japan, and Korea, Department of Civil Engineering and Management)
Amanda Lea-Langton	(Senior Lecturer in Bioenergy Engineering, Department of Civil Engineering and Management)
Meini Su	(Senior Lecturer in Structural Engineering, Department of Civil Engineering and Management)
Iain Crowe	(Senior Lecturer, Department of Electrical and Electronic Engineering)
Murilo Marinho	(Lecturer in Robotics Engineering Systems, Department of Electrical and Electronic Engineering)
Akilu Yanusa-Kaltungo	(Reader in Reliability and Maintenance Engineering, Department of Mechanical and Aerospace Engineering)
Aaron Trowbridge	(Lecturer in Synthetic Organic Chemistry, Department of Chemistry)
Oliver Jensen	(Professor of Applied Mathematics, Department of Mathematics)
Rebecca Bowler	(Research Fellow, Department of Physics and Astronomy)
Eriko Takano	(Professor of Engineering Biology, Department of Chemistry)
Joseph Prentice	(Lecturer, Department of Materials)
Alexander Gaskill	(Faculty Office, International Research and Partnerships Development Manager)

The University of Tokyo (UTokyo)

School of Science

Shin-ichi Ohkoshi	(Dean of School of Science, Department of Chemistry)
Shinji Tsuneyuki	(Vice Dean of School of Science, Department of Physics)
Kazuo Emoto	(Vice Dean of School of Science, Department of Biological Sciences)
Kaoru Sato	(Vice Dean of School of Science, Department of Earth and Planetary Science)
Takeaki Ozawa	(Assistant Dean of School of Science, Department of Chemistry)
Jun Ohashi	(Assistant Dean of School of Science, Department of Biological Sciences)
Robert Campbell	(Professor, School of Science, Department of Chemistry)
Yuichiro Cho	(Assistant Professor, School of Science, Department of Earth and Planetary Science)
Michiko Fujii	(Associate Professor, School of Science, Department of Astronomy)
Haruro Ishitani	(Professor, School of Science, Department of Chemistry)
Kenta Imoto	(Assistant Professor, School of Science, Department of Chemistry)
Kotaro Kohno	(Professor, School of Science, Director for Institute of Astronomy)
Atsushi Kawakita	(Professor, School of Science, Director of Botanical Garden, Department of Biological Sciences)
Kuniaki Konishi	(Associate Professor, School of Science, Institute for Photon Science and Technology)
Akito Kusaka	(Associate Professor, School of Science, Department of Physics)
Jessica MacDougall	(Assistant Professor, School of Science, Department of Chemistry)

Koji Nakabayashi   (Assistant Professor, School of Science, Department of Chemistry)

Asuka Namai   (Associate Professor, School of Science, Department of Chemistry)

Naomichi Ogihara   (Professor, School of Science, Department of Biological Sciences)

Hiroki Oguri   (Professor, School of Science, Department of Chemistry)

Ryu Sawada   (Associate Professor, School of Science, International Center for Elementary Particle Physics)

Seiji Sugita   (Professor, School of Science, Department of Earth and Planetary Science)

Munetaka Sugiyama   (Professor, School of Science, Department of Biological Sciences)

Olaf Stefanczyk   (Assistant Professor, School of Science, Department of Chemistry)

Yoshio Takahashi   (Professor, School of Science, Department of Earth and Planetary Science)

Ryo Tanifuji   (Assistant Professor, School of Science, Department of Chemistry)

Takaaki Yonekura   (Assistant Professor, School of Science, Department of Biological Sciences)

Marie Yoshikiyo   (Assistant Professor, School of Science, Department of Chemistry)

Simon Wallis   (Professor, School of Science, Department of Earth and Planetary Science)

School of Engineering

Tetsuya Ishida	(Vice Dean of School of Engineering, Department of Civil Engineering)
Kohei Tsumoto	(Vice Dean of School of Engineering, Department of Bioengineering)
Akiko Kumada	(Vice Dean of School of Engineering, Department of Electrical Engineering and Information Systems)
Junichiro Shiomi	(Special Assistant of Dean of School of Engineering, Department of Mechanical Engineering)
Eiji Saito	(Special Assistant of Dean of School of Engineering, Department of Applied Physics)
Hideaki Miyamoto	(Special Assistant of Dean of School of Engineering, Department of Systems Innovation)
Shinji Abe	(Professor, School of Engineering, Department of Materials Engineering)
Hiroshi Fujimoto	(Professor, School of Engineering, Department of Electrical Engineering and Information Systems)
Kanako Harada	(Associate Professor, School of Engineering, Department of Mechanical Engineering)
Timothée Mouterde	(Lecturer, School of Engineering, Department of Mechanical Engineering)
Kentaro Nakamura	(Professor, School of Engineering, Department of Systems Innovation)
Takuo Tanemura	(Professor, School of Engineering, Department of Electrical Engineering and Information Systems)
Mitsuru Takenaka	(Professor, School of Engineering, Department of Electrical Engineering and Information Systems)
Rui Tang	(Assistant Professor, School of Engineering, Department of Electrical Engineering and Information Systems)
Masahiro Sato	(Associate Professor, School of Engineering, Department of Electrical Engineering and Information Systems)
Kazutaka Yasukawa	(Associate Professor, School of Engineering, Department of Electrical Engineering and Information Systems)
Toru Wakihara	(Professor, School of Engineering, Department of Chemical System Engineering)

Students (Poster Presenters)

Hiroyoshi Iwata   (Graduate School of Engineering)
Deciphering Climate-Tech Innovations: Analysis of Japan's Startup Financial Landscape
This research focuses on sustainability transitions and innovation finance, examining the challenges and factors affecting the social implementation of energy technologies. It explores decision-making processes of startups and investors, aiming to provide insights applicable to both startups and large corporations. Key challenges include the significant capital and long investment horizons required, the coexistence of technical and market risks, and competition with established players. By analyzing investor and operator behavior, this study seeks to inform policies and strategies that accelerate the deployment of innovative energy technologies and support Japan's Green Transformation (GX) initiatives.

Hu Xingzhuo   (Graduate School of Engineering)
Multimodal Cardiomyocytes Physiological Characterization on Thin Film Transistor Microelectrode Array
Microelectrode arrays (MEAs) are widely used for cellular monitoring due to their label-free, noninvasive, and near real-time measurement capabilities. However, traditional passive MEAs suffer from low electrode density due to the need to avoid short circuits. The development of complementary metal-oxide-semiconductor (CMOS) MEAs has addressed this issue by improving electrode density and response rates. Nevertheless, the opaque silicon substrate used in CMOS MEAs limits their integration with optical instruments, such as microscopes. To overcome this limitation, thin-film transistor (TFT) technology, which employs transparent electrode materials like indium tin oxide (ITO), has been integrated into MEAs, offering both large active areas and optical transparency. Our study presents the successful implementation of 2D impedance mapping on cardiomyocytes cultured on a TFT array device. In addition to impedance measurement, we developed software capable of tracking and measuring cell vibration frequency. Both electrical and optical methods confirmed the adhesion of cardiomyocytes to the electrodes, enabling further monitoring and analysis from a multi-modal point of view. This research allows real-time observation of cells culture and multi-modal analysis of it, indicating the potential as bio-TFT platforms for advanced cellular experiments and drug development, highlighting their applicability in customized healthcare services and medical research.

Nanako Kawate   (Graduate School of Agricultural and Life Sciences)
Title TBD
DHNA is the major whey fermentation product of Propionibacterium freudenreichii, a Gram-positive bacillus found in milk, cheese, and other dairy products, and is known to accumulate outside the bacillus during vitamin K synthesis. Recently, DHNA has been proposed to be an aryl hydrocarbon receptor (AhR) ligand, and its detailed functional analysis has attracted much

attention. We have previously reported that DHNA is a non-toxic AhR ligand that does not affect cell viability, and that toxic and non-toxic ligands such as DHNA have different nuclear transfer times due to different components of the complex when AhR forms a complex with the molecular chaperone HSP90 and others. In addition, DHNA has been reported to have anti-inflammatory effects in a mouse model of ulcerative colitis5 and to inhibit the production of inflammatory cytokines such as IL-10 and TNF-α. However, the exact process and mechanism of action by which DHNA modulates the mucosal immune system remains unclear. Therefore, in this study, we decided to investigate a novel immunostimulatory function of DHNA. Addition of DHNA to human colon cancer Caco2 cells induced the expression of IL-12 and IFN-γ and suppressed the expression of inflammatory cytokines IL-6 and TNF-α. In contrast, no increase or decrease in these cytokines was observed in siRNA-induced AhR knockdown cells. In addition, the addition of 5, 10, 20, 40 and 80 μM DHNA to macrophages differentiated from THP-1 cells, a human acute monocytic leukemia cell line, resulted in activation of phagocytosis compared to the DMSO-treated control group as observed by fluorescence microscopy and other techniques. Detailed data on the mechanism of immune activation by DHNA will be presented at the meeting.

Mari Gon   (Graduate School of Humanities and Sociology)
Analysis of The Governance of " Deportation Evaders" in Japanese Immigration Policy and the Resistance Through Hunger Strikes
This study aims to clarify how the Japanese immigration administration governs the undocumented foreigners whom it calls 'deportation evaders". Through visits and interviews in the detention centres, the author investigated how detainees are governed and how they resist. The results showed that, despite the obvious intention of immigration to deport them, physically forced deportation is seldom carried out. Instead, through cleverly orchestrated treatment that is stressful but meets minimum safety and health standards, they are gradually exhausted and forced to 'voluntarily return home'. In such circumstances, resistance through hunger strikes frequently occur. As there is no capacity in the facilities to accommodate all those deportation orders issued, some of them are granted a measure called 'provisional release,' which allows them to leave detention facilities temporarily (but without permission to work). However, due to the unclear criteria for approval, many detainees engage in hunger strikes to negotiate for the granting of 'provisional release'. In previous studies, hunger strikes have been seen as a political demonstration aiming appeal to the public. However, the results of this study show that detainees aim more at debilitating their own bodies than at political appeals and use this as a stakes in their negotiations.

Wenyuan Shi   (Graduate School of Agricultural and Life Sciences)
Title TBD
Lysine biosynthetic pathway is unique among all other amino acid biosynthetic pathways in that it has two distinct routes, the diaminopimelate (DAP) route and the α-aminoadipate (AAA) route, to lysine. It has long been thought that all bacteria synthesize lysine through the DAP

pathway. We found that a bacterium, Thermus thermophilus, synthesizes lysine through AAA. However, this AAA pathway in T. thermophilus differs from the previously known AAA pathway and contains enzymes similar to those in the arginine biosynthetic pathway. An additional unique feature of the AAA biosynthesis in T. thermophilus is that it uses an amino-group carrier protein LysW. To clarify this unique biosynthetic system using LysW, we have been working on structural analysis for the complexes of lysine biosynthetic enzymes and LysW. Our previous studies have elucidated the recognition mechanism of LysW by LysX, LysZ, LysY, and LysK by the structural analysis with mutational analysis; however, until present, how LysJ recognizes LysW remains unknown. Therefore, in this study, we determined the crystal structure of LysJ from T. thermophilus, an aminotransferase that catalyzes the second last step, in a complex with LysW. We prepared the product of the LysJ reaction, LysW-γ-lysine, using E. coli co-producing lysine biosynthetic enzymes (LysW, LysX, LysZ, LysY, and LysJ) for the co-crystallization with LysJ, and determined the crystal structure of LysJ•LysW complex at 2.4 Å resolution. In the LysJ•LysW complex structure, an asymmetric unit contains two LysJ dimers, each interacting with only a single LysW. The negatively charged residues on the globular domain of LysW were recognized by positively charged residues of LysJ. The result further confirmed structural evidence for LysW acting as a carrier protein to interact with lysine biosynthetic enzymes by electrostatic forces to facilitate efficient lysine biosynthesis. However, the C-terminal arm region containing 8 amino acid residues of LysW, Glu47-Glu54, and the attached lysine residue of the derivative were not visible in the structure. Based on the crystal structure, we modeled the structure showing how the C-terminal arm region with the attached lysine molecule was bound to LysJ. Mutational analysis of LysJ to verify the the mechanism to recognize LysW, especially the C-terminal arm region, is undergoing and the result will be reported in this presentation.

Teppei Deguchi   (Graduate School of Frontier Sciences)
Title TBD
Machine learning-based protein variant effect prediction is a powerful tool for improving functional proteins such as enzymes and flourescent proteins. However, a large amount of experimental data is required to train machine learning models, which makes predictions difficult when experimental data is limited. To solve it, we augment the training data by incorporating computational values obtained through molecular simulation and protein language model with experimental data aiming to improve prediction accuracy of ML model.

Jeongmin Lee   (Graduate School of Engineering)
Establishment of an antenna response measurement method synchronized with silkmoth source finding behavior
In this study, with the aim of constructing a model for introducing insects' odor source localization ability into robots, we built and evaluated a new experimental system for synchronously measuring the silkmoth's odor source-seeking behavior and antennae response. As a result, we confirmed that the constructed system mimics the odor source in the natural

environment and that the two induce the same level of antennal response. Using this odor stimulator, we recorded silkmoths' behavioral data and their antennal responses to odor stimuli and clarified the relationship between them. These results suggest the possibility of elucidating and applying the odor-seeking algorithm of the silkworm moth, Bombyx mori. In future studies, we will develop a new odor source search algorithm based on EAG signals and behavioral data.

Chuyang Lyu   (Graduate School of Frontier Sciences)
Detection of carbon-related defects in near-surface region of SiC induced by low-oxygen-partial-pressure annealing
4H-SiC is a promising material for next-generation power MOSFETs due to its high breakdown electric field and ability to form SiO_2 through thermal oxidation. However, its performance is limited by a high density of interface traps at the SiC/SiO_2 interface. It is widely recognized that thermal oxidation at high oxygen partial pressures (P_{O_2}) introduces carbon-related defects at the SiC/SiO_2 interface, significantly degrading MOSFET performance. One the other hand, previous studies report that high-temperature annealing in low P_{O_2} environments can also generate defects, reducing carrier lifetime in SiC. However, the mechanism of carbon defect formation under these conditions remains unclear. Therefore, this study systematically investigates the conditions for carbon-related defect formation by varying temperature and P_{O_2} using attenuated total reflectance Fourier-transform infrared spectroscopy (ATR-FTIR).

Shi Kong   (Graduate School of Humanities and Sociology)
A study on Daoist perceptions of the burning of Daoist scriptures during the Yuan Dynasty
Following the three Buddhist-Daoist debates held in 1255, 1256 and 1258 under Möngke Khan's rule, another Buddhist-Daoist debate was held in 1281 by Khubilai Khan. A Large number of Tibetan monks, Zen monks, and other figures from the Buddhist world attended, as well as the supreme leaders of various schools from the Daoist world. The debate revolved around the authenticity of Daoist scriptures, as a result, a portion of Daoist scriptures in the Daoism canon judged to be forged, were burned nationwide. It is said that the only existing detailed document that could be relied upon in researching the details of this Buddhist-Daoist debate is the Dayuan zhiyuan bianweiluwritten by the Zen monk Ruyi Xiangmai. Nevertheless, the literature is clearly characterized by the protection of Buddhist doctrine, which is considered to lack documentary credibility, but it also, in some sense, reflects the Buddhist perception and attitude towards this incident. In contrast, in order to hide this dishonorable history, Daoism has written relatively little about the burning of Daoist scriptures in its literature. Accordingly, most studies on the burning of Daoist scriptures are from the perspective of Buddhism. Based on the above, this study seeks to elucidate the Daoist understanding of the burning of Daoist scriptures by examining the remarks in a limited number of surviving Daoist texts.

Weicheng Li   (Graduate School of Frontier Sciences)
Spatial Analysis of Current Agricultural-Residential Mixed Land Use in Tokyo and Relating Factors about Food System and Sustainability

The current situation of Tokyo's urban agriculture and mixed land use, and study multi-factors that may affect the density of agricultural lands, a series of statistical methods are applied.

Werala Vidanalage Tharindu (Graduate School of Frontier Sciences)
Assessing Long-Term Carbon Neutrality Dynamics: Linking Forests and Urban Environments by Promoting Domestic Timber Utilization
Global net anthropogenic greenhouse gas (GHG) emissions during the last decade (2010–2019) were higher than ever in human history, and global temperature has been increasing continuously. Regulating anthropogenic GHG emissions, (i.e. CO_2 emissions), is crucial. The Paris Agreement set a target limiting global warming to 1.5º C by 2050, however, predicted population growth by 2050 and new infrastructure development could claim 35–60% of the remaining carbon budget. Hence, all building construction in the future must be carbon-neutral or carbon-negative emissions-free or replaced with zero- or negative-emissions substances. Timber is a perfectly matched material with the above parameters because the forest carbon stock transfers to the buildings for a longer period and biomass can be used to reduce fossil fuel consumption for energy production. Theoretically, the emission from timber harvesting to building construction/ demolition and biomass burning could be absorbed by newly planted juvenile trees of the harvested sites. However, the reality of this wood-based carbon-neutral cycle is not fully understood yet, because the carbon neutrality of this cycle highly depends on local forest management and domestic timber utilization. Japanese forests are still underutilized while the country's timber self-sufficiency is only 41%. Consequently, we need a systematic scenario analysis to investigate the variables and forest management strategies linked with domestic timber supply for achieving realistic carbon neutrality in the wood-based carbon cycle.

Satomi Matsumoto (Graduate School of Science)
Title TBD
I will present the ribosomal synthesis of peptide libraries containing nonproteinogenic amino acids and screening of drug candidates. In particular, I focus on an amino acid analogue called α-hydrazino acid. By forming a rigid secondary structure, α-hydrazino acid-containing peptides are expected to exhibit excellent drug properties such as high binding affinity to target proteins, high in serum stability, and high membrane permeability.

Kosei Kawai (Graduate School of Engineering)
Measuring the rotational relaxation time of water molecules at sub-zero temperatures using shortwave infrared microspectroscopy for cryopreservation
In cryopreservation of living organisms, it is important to prevent the formation of ice crystals. The rotational relaxation time of water molecules can be used to calculate parameters for ice crystal growth and coarsening. Our research has shown that the relaxation time can be measured by shortwave infrared micro spectroscopy, which has high spatial resolution. However, this method is not able to measure the relaxation time at sub-zero temperatures because the relaxation time is calculated from the ratio of pure water. In this study, the relaxation time was

evaluated by using the measured sample as a reference.

Chihiro Sato   (Graduate School of Interdisciplinary Information Studies)
AI-Enabled Educational Technologies and Privacy Challenges

Miu Hoshino   (Graduate School of Frontier Sciences)
The usage of water-in-oil droplets to cultivate microorganisms

Kamata Shuichi   (Graduate School of Science)
TBD

Kouki Obata   (Graduate School of Humanities and Sociology)
TBD

Naoto Nishida   (Graduate School of Interdisciplinary Information Studies)
TBD

Chloe Lipinski   (Graduate School of Science)
TBD

Students (On site attendance)

Yijia Gong   (Graduate School of Frontier Sciences)
Qingqing Ye   (Graduate School of Engineering)
Kota Fujimoto   (Graduate School of Engineering)
Masaki Asano   (Graduate School of Information Science and Technology)
Tsaijung Liu   (Graduate School of Engineering)
Tanawat Papaeng   (Graduate School of Public Policy)
Jiaxi Lu   (Graduate School of Engineering)
Sayaka Sugiyama   (Graduate School of Engineering)
Suin Matsui   (Graduate School of Science)
Kouki Yamamoto   (Graduate School of Science)
Tomohiro Oniduka   (Graduate School of Frontier Sciences)
Yuhang Liu   (Graduate School of Medicine)
Merhaba Memtimin   (Graduate School of Engineering)
Wakchaure Manas   (Graduate School of Information Science and Technology)
Haruka Komada   (Graduate School of Engineering)
Giwangkara Ricky Perdana (Graduate School of Engineering)

Refaldi Putra	(Graduate School of Information Science and Technology)
Yuying Wang	(Graduate School of Medicine)
Ruimeng Wen	(Graduate School of Frontier Sciences)
Nadia Oktiarsy	(Graduate School of Engineering)
Riko Iizuka	(Graduate School of Information Science and Technology)
Sangil Park	(Graduate School of Agricultural and Life Sciences)
Inggita Utami	(Graduate School of Agricultural and Life Sciences)
Chia-An Fan	(Graduate School of Engineering)
Shen Zhan	(Graduate School of Information Science and Technology)
Shota Noda	(Graduate School of Information Science and Technology)
Zhibo Yu	(Graduate School of Science)
Luming Bao	(Graduate School of Engineering)
Huize Zhang	(Graduate School of Engineering)
Tomoyuki Fukuda	(Graduate School of Pharmaceutical Sciences)
Ryoichi Yabuki	(Graduate School of Pharmaceutical Sciences)
Taro Kido	(Graduate School of Science)
Chihiro Naito	(Graduate School of Engineering)
Jingfei Yang	(Graduate School of Medicine)
Yusuke Wakayama	(Graduate School of Science)

Venue and Access

Venue

Koshiba Hall, Hongo Campus, The University of Tokyo

Address: 7-3-1, Hongo, Bunkyo-ku, 113-0033, Tokyo
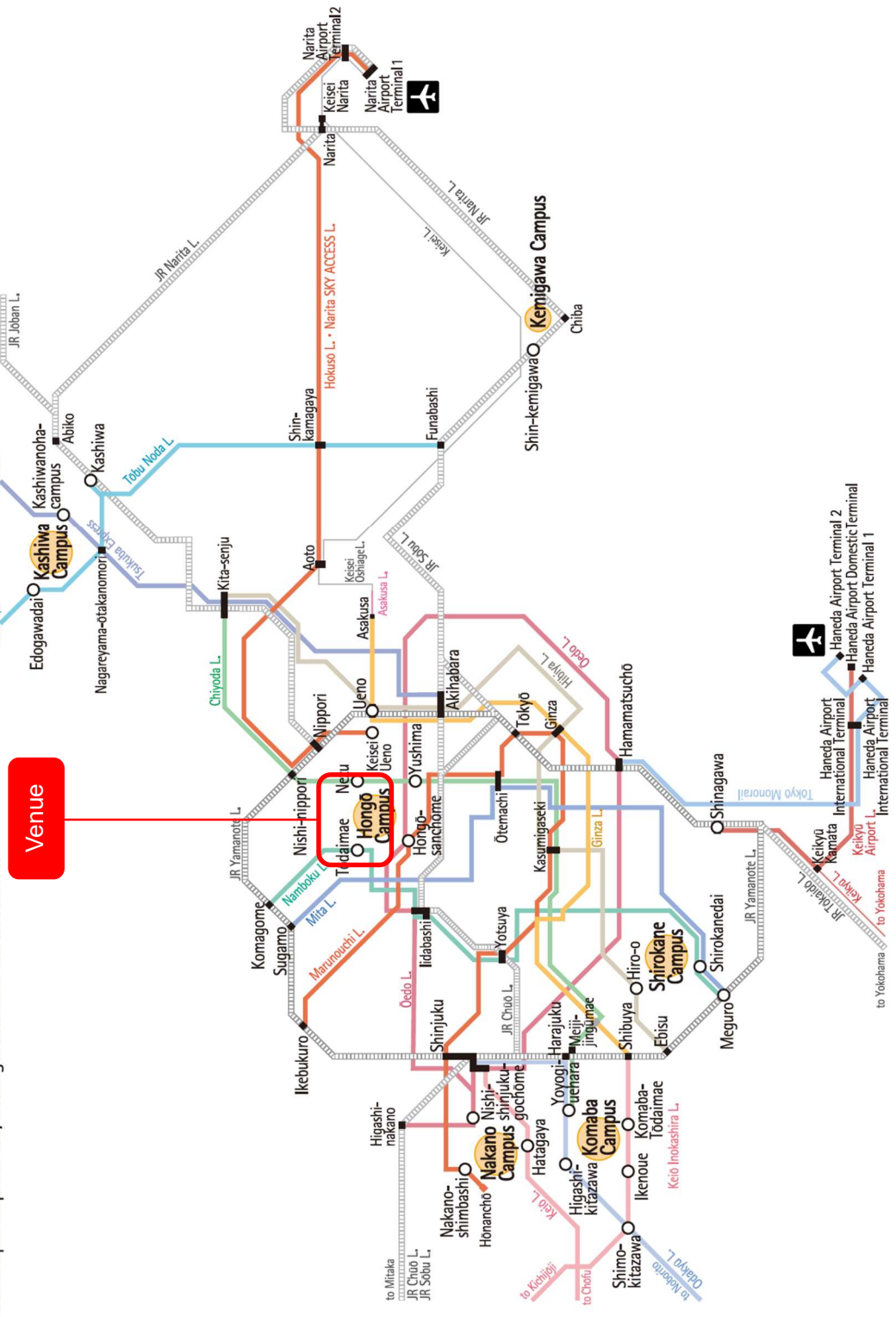
The outside appearance

The conference room

Access

Route map from Airport to University

Koshiba Hall

Hongō Campus

Getting to the Hongo Campus

- Hongo-sanchome Station (Subway Marunouchi Line) 8 minutes' walk.
- Hongo-sanchome Station (Subway Oedo Line) 6 minutes' walk.
- Yushima Station or Nezu Station (Subway Chiyoda Line) 8 minutes' walk.
- Todaimae Station (Subway Namboku Line) 1 minute's walk.
- Kasuga Station (Subway Mita Line) 10 minutes' walk.
- Ochanomizu Station (JR Chūō Line, JR Sōbu Line)
  <Subway>Subway Marunouchi Line (for Ikebukuro)
  → get off at Hongo-sanchome Station.
  <Subway>Subway Chiyoda Line (for Toride)
  → get off at Yushima Station or Nezu Station, Todai-Kōnai.
  <Toei Bus>茶07 for Todai-Kōnai
  → get off at Tatsuokamon, Todai-Byōin-mae, Todai-Kōnai stops.
  <Toei Bus>茶51 for Komagome Station South Exit or 東43 for Arakawa-dote-soshajō
  → get off at Todai-Akamon-mae, Todai-Seimon-mae, Todai-Nogakubu-mae stops.
- Ueno Station (JR Yamanote Line, other lines)
  <Toei Bus>上01 for Todai-Kōnai,
  Ueno–Kōen–Yamashita (Ueno Park) stop
  上69 for Otakibashi-shako-mae,
  → get off at Tatsuokamon, Todai-Byōin-mae, Todai-Kōnai stops.
- Okachimachi Station (JR Yamanote Line, other lines)
  <Toei Bus>都02 for Otsuka Station or
  上69 for Otakibashi-shako-mae,
  Ueno-Hirokoji stop
  → get off at Yushima-yonchome,
  Hongo-sanchome Eki-mae stops.

2024.9

1 Yasuda Auditorium
2 Sanjo Conference Hall
3 Ikutokuen (Sanshiro Pond)
4 Chūo Refectory (Underground)
5 Second Refectory
6 Administration Bureau
7 Office for Gender Equity, IncluDE
7 General Library (Main Bldg.)
8 General Library (Annex)
9 Shichitokudō (Japanese Sports Gymnasium)
10 Administration Bureau Bldg.2
Center for Global Education
Center for Research and Development of Higher Education
Hongo Health Service Center
Institute for Future Initiatives
11 Tokyo College
11 Kaitokukan
12 Ikutokudō (Japanese Archery Range)
Executive Management Program Office
Institute for Future Initiatives
13 Prefabricated Research Bldg.,A
Center for Research on Counseling and Support Services
14 Yayoi Auditorium
15 Yayoi Auditorium Annex
16 Information Center

17 Sanjo Conference Hall Tatsuokamon Annex
18 UCR Plaza
19 Gotenshita Athletic Field
20 Baseball ground
21 Athletic Field
22 Gotenshita Memorial Arena
Student Support Center
Office for Disability Equity, IncluDE (Hongo Branch Office)
Career Support Office
23 Communication Center
24 Overhead Bridge
25 Tennis Courts
26 Tennis Courts
27 Entrepreneur Plaza
27 Mukougaoka Faculty House
29 Ito International Research Center
Ito Hall
Harassment Counseling Center
Center for Research and Development on Transition from Secondary to Higher Education
International Research (IRCN)
NeuroIntelligence (IRCN)
30 Faculty of Law & Letters Bldg.1
31 Faculty of Law & Letters Bldg.2
32 Faculty of Law Bldg.3
33 Faculty of Law Bldg.4

35 General Research Bldg.
52 School of Law Bldg.
36 Faculty of Letters Bldg.3
37 Akamon General Research Bldg.
38 Economics Research Bldg.
39 International Academic Research Bldg.
Graduate School of Public Policy
40 Economics Research Annex (Kojima Hall)
41 Faculty of Education
42 The University of Tokyo Archives
43 Administration Bldg.
44 Medical Library
45 Faculty of Medicine Bldg.3
46 Faculty of Medicine Annex of Bldg.3
47 Bioscience Research Bldg.
48 Faculty of Medicine Bldg.4
49 Faculty of Medicine Bldg.5
50 Faculty of Medicine Experimental Research Bldg.
51 Faculty of Medicine International Research Center

53 Outpatient Clinic Bldg.
54 Inpatient Bldg., A
55 Inpatient Bldg., B
56 Central Bldg. (North)
57 Central Bldg. (East)
58 Central Bldg. (South)
59 Central Clinical Service Bldg.1
60 Central Clinical Service Bldg.2
61 Clinical Research Bldg. (West)
62 Molecular & Life Innovation Build.
63 Clinical Research Bldg.A
64 Clinical Research Bldg.A
65 South Clinical Research Bldg.
66 Clinical Research Ward
67 Clinical Research Bldg.14
68 Power Station
69 Faculty of Pharmaceutical Sciences Bldg.
70 Pharmaceutical Sciences Research Bldg.
71 Pharmaceutical Sciences Library
72 Frontier Sciences for Drug Discovery Bldg.
73 Head Administration Office of Engineering
73 Faculty of Engineering Bldg.1

75 Wind Engineering Lab.
76 Faculty of Engineering Bldg.2
77 Faculty of Engineering Bldg.3
77 Faculty of Engineering Bldg.4
78 Faculty of Engineering Bldg.5
79 Faculty of Engineering Bldg.6
80 Faculty of Engineering Bldg.7
81 Faculty of Engineering Bldg.8
82 Faculty of Engineering Bldg.9
Institute of Engineering Innovation
83 Faculty of Engineering Bldg.10
84 Faculty of Engineering Bldg.11
HASEKO-KUMA HALL
85 Faculty of Engineering Bldg.12
86 Faculty of Engineering Bldg.12 Annex
87 Faculty of Engineering Bldg.13
88 Faculty of Engineering Bldg.14
Takeda Bldg.
89 Faculty of Engineering Bldg.3
90 Scalekeeping Tank; Ship Model Basin
91 Experimental Tank
92 Cavitation Tunnel
93 Monozukuri Lab.
94 Power Dynamics Experiment Laboratory

95 Life Sciences Research Bldg.A
96 Veterinary Medical Center
97 Faculty of Agriculture Bldg.9
Food Science Bldg.
98 Life Sciences Research Bldg.B
99 High Voltage Electron Microscope
97 FIRE Bldg.
Protein Research Laboratory
88 Center for Global Education
99 Faculty of Science Bldg.1 (Center)
Koshiba Hall
100 Faculty of Science Bldg.1 (West)
101 Faculty of Science Bldg.1 (East)
International Center for Elementary Particle Physics
101 Faculty of Science Bldg.2
102 Interfaculty Initiative in Information Studies & Graduate School of Interdisciplinary Information Studies
103 Faculty of Science Bldg.3
Hi-Fukutake Hall
Hi-Daiwa Ubiquitous Computing Research Bldg.
104 Faculty of Science Bldg.4
125 Earthquake Research Institute Bldg.1
126 Earthquake Research Institute Bldg.2
127 Earthquake Research Institute Bldg.3
128 Institute for Quantitative Biosciences
125 Faculty of Science Chemistry Bldg.
129 Institute for Advanced Studies on Asia
130 Faculty of Agriculture Bldg.1
131 Institute of Social Science
130 Faculty of Agriculture Bldg.2 Annex
131 Historiographical Institute
130 Faculty of Agriculture Bldg.3
132 University Museum
110 Faculty of Agriculture Bldg.5
133 Micro Analysis Laboratory, Tandem Accelerator (MALT)
110 Faculty of Agriculture Bldg.6
134 Environmental Science Center
116 Faculty of Agriculture Bldg.7A
135 Environmental Science Center Annex
117 Faculty of Agriculture Bldg.7B
136 Isotope Science Center
University Library for Agricultural and Life Sciences
137 Information Technology Center
118 Agricultural and Life Sciences Museum
138 Information Technology Center Annex
139 Cryogenic Research Center

(Map of the Hongō Campus showing Koshiba Hall, Main Gate, Forest Hongo Hotel, Kadoya, various stations and gates, Shinobazu-no-ike Pond, Asano Section, Yayoi Section, Hongo Section)

Time	23rd Jan (Thurs)	Time	24th Jan (Fri)	Time	25th Jan (Sat)
09:00 - 09:40	Registration & Coffee				
		09:20 - 09:40	Chemisry Talk 1 (Prof. Chris Hardacre)		
09:40 - 09:50	Opening	09:40 - 10:00	Chemistry Talk 2 (Dr. Aaron Trowbridge)		
09:50 - 10:05	Introduction of School of Science, UTokyo (Prof. Shin-ichi Ohkoshi)				
10:05 - 10:20	Introduction of School of Engineering, UTokyo (TBD)	10:00 - 10:20	Chemistry Talk 3 (Prof. Eriko Takano)	09:30 -11:40	Poster Session
10:20 - 10:35	Introduction of the University of Manchester (Prof. Stephen Flint)	10:20 - 10:40	Coffee Break		
10:35 - 10:50	Introduction of Faculty of Science & Engineering (Prof. Chris Hardacre)	10:40 - 11:00	Civil Engineering Talk 1 (Dr. Clara Cheung)		
10:50 - 11:10	Astrophysics Talk 1 (Dr. Rebecca Bowler)	11:00 - 11:20	Civil Engineering Talk 2 (Dr. Meini Su)		
11:10 - 11:30	Materials Science Talk 2 (Dr. Joe Prentice)	11:20 - 11:40	Engineering for sustainable energy (Dr. Amanda Lea-Langton)		
11:30 - 11:50	Mathmatics Talk 3 (Prof. Oliver Jensen)	11:40 - 12:00	Aerospace & Mechanical Engineering Talk 3 (Dr. Akilu Yanusa-Kaltungo)	11:40 - 12:00	Closing Remarks
11:50 - 12:00	Group Photo				
12:00 - 13:30	Lunch	12:00 - 13:30	Lunch	12:00 - 13:30	Lunch
13:30 - 13:50	JST, ASPIRE talk	13:30 - 13:50	British Council Talk		
13:50 - 14:10	Earth Science Talk 1 (Prof. Stephen Flint)	13:50 - 14:10	Electrical Engineering Talk 1 (Dr. Iain Crowe)	13:30 - 16:00	Excursion The University of Tokyo Museum "Intermediatheque" in Marunouchi JR Tower 東京大学総合研究博物館施設 「インターメディアテク」 in 丸の内JRタワー https://www.intermediatheque.jp/
14:10 - 14:30	Earth Science Talk 2 (Prof. David Polya)	14:10 - 14:30	Electrical Engineering Talk 2 (Dr. Murilo Marinho)		
14:30 - 18:00	Individual Discussions / Free Time	14:30 - 18:00	Individual Discussions / Free Time		
18:00 - 20:00	Dinner @Kadoya (Japanese Restaurant)	18:00 - 20:00	Dinner @Cerfeuil		