

2 - 1 Tsukuba Digital-Bio International Center ~The Future of Healthcare through Digital, AI, and Data Science~

Date & Time: Wednesday, October 2, 2024, 14:00-17:00
Room: International Conference Room, University Hall, University of Tsukuba

Outline of the session

The Tsukuba Digital-Bio International Center aims to achieve a society that supports the wellbeing of all generations of people through bioresources accumulated in Tsukuba, life science research (consisting of medicine, food, and the environment), and interdisciplinary research using digital and AI technologies, all in collaboration with the Cybermedicine Research Center established at the University of Tsukuba in 2024, where medicine, informatics, and engineering will work together. In this session, we will focus on data science and introduce medical research utilizing digital and AI technologies in Japan and abroad.

Speakers



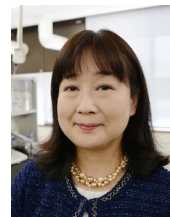
Nishiyama Hiroyuki
University of Tsukuba
(JAPAN)
Medicine



Tetsuya Sakurai
University of Tsukuba
(JAPAN)
AI Research, Computer Science



Toshinori Moriga
University of Tsukuba
(JAPAN)
Medicine



Hiroko Isoda
University of Tsukuba
(JAPAN)
Life Sciences, Cell Biology, Food Sciences



Yasunori Futamura
University of Tsukuba
(JAPAN)
AI Research, Computer Science



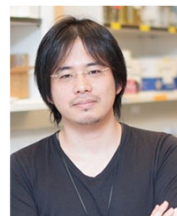
Mai Takagi
National Institute for Environmental Studies
(JAPAN)
Chemistry, Medicine, Agriculture



Satomi Yoshida
University of Tsukuba
(JAPAN)
Medicine



Hidenori Takahashi
University of Tsukuba
(JAPAN)
Medicine



Takafumi Miyamoto
University of Tsukuba
(JAPAN)
Medicine



Li-Chen Fu
National Taiwan University
(Taiwan)
Electrical Engineering



Christoffer Nelläker
University of Oxford
(UK)
Computational Biology



Bartek Papiez
University of Oxford
(UK)
Medical Imaging and Machine Learning

Time	Title/Contents	Speaker
14:00~14:05	Opening Remarks	Dr. Toshinori MORIGA (Univ. of Tsukuba)
14:05~14:30	Data Science of the Tsukuba Digital-Bio International Center <ul style="list-style-type: none"> Introduction of the Tsukuba Digital-Bio International Center Spectral methods for dimensionality reduction, clustering, and network embedding in biomedical data analysis 	Chairman : Dr. Mai TAKAGI (NIES : National Institute for Environmental Studies) Dr. Mai TAKAGI (NIES) Dr. Yasunori FUTAMURA (Univ. of Tsukuba)
14:30~15:00	Cooperation with the Cybermedicine Research Center <ul style="list-style-type: none"> Introduction of the Cybermedicine Research Center OphthalmicAI Research and Cybermedicine Research Center's Future Aims Epidemiological studies using routinely collected health and medical databases 	Chairman : Dr. Hiroyuki NISHIYAMA (Univ. of Tsukuba) Dr. Hiroyuki NISHIYAMA (Univ. of Tsukuba) Dr. Hidenori TAKAHASHI (Univ. of Tsukuba) Dr. Satomi YOSHIDA (Univ. of Tsukuba)
15:00~15:10	Break Time	
15:10~15:30	International Joint Research: National Taiwan University <ul style="list-style-type: none"> Deep Social Robots for Elderly Care 	Chairman : Dr. Tetsuya SAKURAI (Univ. of Tsukuba) Dr. Li-Chen Fu (National Taiwan Univ.)
15:30~16:30	International Joint Research: Oxford University <ul style="list-style-type: none"> Label-free imaging of cellular organization in living mammalian cells via external apodization phase-contrast microscopy Mapping cell-to-tissue graphs across human placenta histology whole slide images using deep learning with HAPPY Privacy-Preserving Machine Learning through Data Collaboration Technology AI/ML and biomedical imaging for longitudinal disease monitoring 	Chairman : Dr. Hiroko ISODA (Univ. of Tsukuba) Dr. Takafumi MIYAMOTO (Univ. of Tsukuba) Dr. Christoffer Nelläker (Univ. of Oxford) Dr. Tetsuya SAKURAI (Univ. of Tsukuba) Dr. Bartek Papiez (Univ. of Oxford)
16:30~16:50	Panel Discussions With All Presenters	
16:50~16:55	Closing Remarks	Dr. Hiroko ISODA (Univ. of Tsukuba)

