GITW 2022

Global Information and Telecommunication Workshop

December 17, 9:00 (JST) (Online Workshop)

Final Program

Organizer:

GITI
Global Information and Telecommunication Institute
WASEDA UNIVERSITY

Co-Organizers:

HANYANG UNIVERSITY

National Taiwan University

Universiti Kebangsaan Malaysia

Tsinghua University

Participant Universities:

- *Beijing University of Technology*
- *Institut Teknologi Sepuluh Nopember*
- *Institut Teknologi Bandung*
- *Peking University*
- *Shanghai Jiao Tong University*
- *Thammasat University*
- *The Arctic University of Norway*
- *University Malaysia Sabah*
- *Zhejiang University*

https://www.waseda.jp/assoc-gitw2022/

PLATFORM INFORMATION

The workshop will be held over Zoom. You can either use Zoom from the website, or from the desktop application on your computer, or from your device. If you choose to use the Zoom client application, make sure to download and install it before the workshop starts to avoid delays. No account or sign up is necessary.

The workshop sessions are managed using the following two Zoom meetings. You can feely join in the sessions either by clicking the provided Zoom links or by entering the ID/Passcode.

【GITW 2022 Room 1】

Available sessions: Opening session, Session 1A, Session 2A, Session 3A, Session 4A

Zoom link: https://list-waseda-jp.zoom.us/j/96000978088?pwd=alA3Q3NUQkdSRGpuQzlMNlYyanRrUT09

Meeting ID: 960 0097 8088

Passcode: 209738

【GITW 2022 Room 2】

Available sessions: Session 1B, Session 2B, Session 3B, Session 4B

Zoom link: https://list-waseda-jp.zoom.us/j/94482586542?pwd=VHF4Q2Zib1YxcExZbHUvbkJSUU9rUT09

Meeting ID: 944 8258 6542

Passcode: 959283

For general information on joining a Zoom meeting, please refer to the link below:
https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Zoom-video-call

Note:

- The workshop is held in Japan Standard Time (JST): GMT/UTC +9 time zone. The presenters should **show up 10 minutes before** the start of their session.
- The presenters are required to list their presentation number (e.g. Session 1A-1) on the cover page of the presentation slides.
- Make sure that your microphone is muted unless you are presenting or asking a question. For presenters, please remember to share your screen and turn on the camera during your presentation.

If you have any questions, please don't hesitate to contact us by email:
GITW2022@list.waseda.jp

PROGRAM

<Dec.17, 2022>

9:00 – 10:00 **Opening** **(Room 1)**	Welcome Speech	
	9:00 – 9:05	Prof. Shigeru Shimamoto (Waseda University, Japan)
	9:05 – 9:10	Prof. Taesoo Kwon (Hanyang University, Korea)
	9:10 – 9:15	Associate Prof. Rosilah Hassan (Universiti Kebangsaan Malaysia, Malaysia)
	9:15 – 9:20	Prof. Zhisheng Niu (Tsinghua University, China)
	9:20 – 9:25	Prof. Daniel Shih (National Taiwan University, Taiwan)
	Introductions of Participant University (3 minutes each)	
	• University Malaysia Sabah (Malaysia) • Institut Teknologi Bandung (Indonesia) • Shanghai Jiao Tong University (China) • Thammasat University (Thiland) • Zhejiang University (China) • Peking University (China) • Beijing University of Technology (China) • The Arctic University of Norway (Norway) • Institut Teknologi Sepuluh Nopember (Indonesia)	

PRESENTATION SESSIONS

Each talk will have **10 minutes for presentation and 3 minutes for discussion**.

Time	**Event**	
	Room 1	**Room 2**
10:00 – 11:35	**Session 1A** AI, Computer Vision, Quantum Computing	**Session 1B** Communication and Network
11:35 – 11:45	Rest 10 min	
11:45 – 13:15	**Session 2A** AI, Computer Vision	**Session 2B** Communication and Network
13:15 – 14:30	Lunch Time	
14:30 – 16:00	**Session 3A** AI, Computer Vision	**Session 3B** Information Processing, Quantum Computing, Security
16:00 – 16:10	Rest 10 min	
16:10 – 17:40	**Session 4A** Healthcare, Human Activities, IoT	**Session 4B** Communication and Network

10:00-11:35	**Session 1A AI, Computer Vision, Quantum Computing (Room 1)** Session Chair: Dr. Wasinee Noonpakdee (Thammasat Univ., Thiland)			**Session 1B Communication and Network (Room 2)** Session Chair: Associate Prof. Rosilah Hassan (Universiti Kebangsaan Malaysia, Malaysia)		
1	Sangheon Yang, Jongwoo Lim	Hanyang University, (Korea)	Online Extrinsic Correction of Multi-Camera Systems by Low-Dimensional Parameterization of Physical Deformation	Yuji Ishiguro, Kazutoshi Yoshii, Shigeru Shimamoto	Waseda University (Japan)	Studies of Application of NOMA for ADS-B to Improve Spectral Efficiency for Future Air Traffic Scenarios
2	Jati Hiliamsyah Husen	Waseda University (Japan), Telkom University (Indonesia)	Metamodel-Based Multi-View Modeling Framework for Safety-Critical Machine Learning Systems	Daye Hong, Somin Kim, Kwanguk Kim	Hanyang University (Korea)	Brain responses during take over request in level 3 autonomous driving vehicle
3	Jintaek Oh, Jihwan Kim, Kwanguk Kim	Hanyang University (Korea)	Effect of virtual-avatar synchrony on visuomotor and visuotactile full-body ownership illusion in virtual reality	Fitri Amillia, Eko Setijadi, Gamantyo Hendrantoro	Institut Teknologi Sepuluh Nopember (Indonesia)	The Effect of Parasitic Patches Addition on Bandwidth Enhancement and Mutual Coupling in 2 × 2 Sub-Arrays
4	Yihang Tao, Jun Wu, Xi Lin	Shanghai Jiao Tong University (China)	AI-Driven Digital Twin Function Virtualization for Adaptive Edge Service Response in 6G	Mika Kokuryo, Gen Konishi, Megumi Saito, Shigeru Shimamoto	Waseda University (Japan)	Wireless communication inside robotic structures using internal waveguides
5	Iwan Wirawan	Institut Teknologi Sepuluh Nopember (Indonesia)	Early Initiatives for Quantum Computing & Quantum Information Competences	Zhihui Cao, Chunyi Song, Zhiwei Xu	Zhejiang Univeristy (China)	High-Performance Multi-Target CFAR Detection Algorithm and Its Application
6	Tan Chen	Tsinghua University (China)	Can mobility enhance the performance of Hierarchical Federated Learning?	Wataru Tachikawa, Kazutoshi Yoshii, Shigeru Shimamoto	Waseda University (Japan)	Performance Analysis of PDMA System for Ground-HAPS Network with Hybrid FSO/RF Links
7	Henning Titi Ciptaningtyas, Ary Mazharuddin Shiddiqi, Diana Purwitasari	Institut Teknologi Sepuluh Nopember (Indonesia)	Multi-objective Task Scheduling using Opposition-Based Learning and Nature-Inspired Algorithms with Deadline Constraints in Cloud RPS Systems	Yukuan Jia, Ruiqing Mao, Yuxuan Sun, Sheng Zhou, Zhisheng Niu	Tsinghua University (China)	Online V2X Scheduling for Raw-Level Cooperative Perception

Rest 10 min

11:45-13:15	**Session 2A AI, Computer Vision (Room 1)** Session Chair: Prof. Dong-Kyu Chae (Hanyang Univ., Korea)			**Session 2B Communication and Network (Room 2)** Session Chair: Prof. Chunyi Song (Zhejiang Univ., China)		
1	Kosuke Kurosawa, Mutsumi Suganuma, Wataru Kameyama	Waseda Univeristy (Japan)	On Efficient Detection Methods of Anormal Responses in High-dimensional Questionnaire Data	Ryouma Sasage, Tomoyuki Miyashita	Waseda Univeristy (Japan)	Radio communication of nano satellite WASEDA-SAT-ZERO
2	Lehan Wang	Tsinghua University (China)	A Grouping-based Scheduler for Efficient Channel Utilization under Age of Information Constraints	Arbaiah Inn	Universiti Kebangsaan Malaysia (Malaysia)	ENHANCEMENT OF MOBILITY PROCESS FOR RECEIVER IN VISIBLE LIGHT COMMUNICATION
3	Fathur Zaini Rachman	Institut Teknologi Sepuluh Nopember (Indonesia)	2-D Flame Image with An UV Sensor on Wireless Sensor Network	Megumi Saito, Zhenni Pan, Jiang Liu, and Shigeru Shimamoto	Waseda University (Japan)	Salvage Transmission Scheme Using D2D Communication for Communication Failure in Cellular Networks
4	Yaodan Xu	Tsinghua University (China)	SMDP-Based Dynamic Batching for Efficient Inference on GPU-Based Platforms	Arda Surya Editya, Tohari Ahmad, Hudan Studiawan	Institut Teknologi Sepuluh Nopember (Indonesia)	Direction Estimation of Drone Collision Using Optical Flow for Forensic Investigation
5	Agus Purwadi	Institut Teknologi Sepuluh Nopember (Indonesia)	RATE DISTORTION PERFORMANCE ON VIDEO TRANSMISSION WITH MULTI-SCALABLE ENCODING	Chaoyi Yang, Junlong Wang, Zhenni Pan, Shigeru Shimamoto	Waseda Univeristy (Japan)	Delay-Doppler Frequency Domain-Aided Superimposing Pilot OTFS Channel Estimation Based on Deep Learning
6	Jingzhong Qi, Na Qi, Qing Zhu	Beijing University of Technology (China)	SUnet++:Joint Demosaicing and Denoising of Extreme Low-Light Raw Image	Syed Hussain Ali Kazmi	Universiti Kebangsaan Malaysia (Malaysia)	INTRUSION DETECTION SYSTEM (IDS) IN DISTRIBUTED SOFTWARE DEFINED NETWORKING (SDN)
7	Jaenal Arifin, Tri Arief Sardjono	Institut Teknologi Sepuluh Nopember (Indonesia)	Study Electrocardiography Signals and Images	Rizal Priyambudi, Iskandar	Institut Teknologi Bandung (Indonesia)	Capacity Evaluation of Hybrid TDMA-NOMA for High Altitude Platform Systems

Lunch time

14:30-16:00	**Session 3A AI, Computer Vision (Room 1)** Session Chair: Associate Prof. Na Qi (Beijing University of Technology, China)			**Session 3B Information Processing, Quantum Computing, Security (Room 2)** Session Chair: Dr. Baskoro Adi Pratomo (Institut Teknologi Sepuluh Nopember, Indonesia)		
1	Brian Rizqi Paradisiaca Darnoto, Daniel Siahaan, Diana Purwitasari	Institut Teknologi Sepuluh Nopember (Indonesia)	Ensemble Deep Learning for Native Advertisement Detection in Electronic News	Mukhlish Fuadi, Adhi Dharma Wibawa, Surya Sumpeno	Institut Teknologi Sepuluh Nopember (Indonesia)	idT5: Indonesian Version of Multilingual Transformer Model mT5
2	Jiwoong Jeon, Taesoo Kwon	Hanyang University (Korea)	Reinforcement Learning of Two-legged Walking with Musculoskeletal Model and Reference Motions	Gaolei Li	Shanghai Jiao Tong University (China)	Auditing Backdoor Propagation in Blockchain-based Federated Learning via Eclipse-Empowered Poisoning
3	Yulian Findawati, Diana Purwitasari, Dini Adni Navastar, Agus Budi Raharjo, Kresna Adhi Pramana	Institut Teknologi Sepuluh Nopember (Indonesia)	Multi-Label Text Classification of Hate Speech Level on Twitter	RAVI Vendra Rishika, BASKORO Adi Pratomo, SHINTAMI Chusnul Hidayati	Institut Teknologi Sepuluh Nopember (Indonesia)	Rust-based Intrusion Detection System using Gated Recurrent Unit
4	Hyeongil Nam, Chanhee Kim, Kangsoo Kim, Ji-Young Yeo, and Jong-Il Park	Hanyang University (Korea)	An Emotionally Responsive Virtual Parent for Pediatric Nursing Education: A Framework for Multimodal Momentary and Accumulated Interventions	Chen-Kuo Sun, Ching-Yi Tsai, Bing-Yu Chen	National Taiwan University (Taiwan)	UltrAir: Hybrid ultrasonic and air jet to output contactless haptic feedback technique
5	Ntivuguruzwa Jean De La Croix, Chaidir Chalaf Islamy, Prof. Tohari Ahmad	Institut Teknologi Sepuluh Nopember (Indonesia)	Protecting Secret Messages using Fuzzy Logic and Difference Expansion in Spatial Domain Images	I Gusti Agung Premananda	Institut Teknologi Sepuluh Nopember (Indonesia)	DEVELOPING HYPER-HEURISTIC ALGORITHM FOR SOLVING CROSS DOMAIN TIMETABLING OPTIMIZATION PROBLEM
6	Hendro (1 & 2), Ary Mazharuddin Shiddiqi (2)	1. Universitas Widya Dharma Pontianak 2. Institut Teknologi Sepuluh Nopember (Indonesia)	Feature Selection Using Gravitational Search Algorithm in Customer Churn Prediction (Ongoing Research)	Qicheng Zeng	Tsinghua University (China)	Adaptive Private Coded Computing with Hierarchical Task Division
7	Moch Fachri, Supeno Mardi Susiki Nugroho, Mochamad Hariadi	Institut Teknologi Sepuluh Nopember (Indonesia)	Steering Behavior in Velocity Space: Velocity Obstacles Based Approach to Steering Behavior in Multi-agent Navigation	Chaerin Min	Hanyang University (Korea)	Meta-Learning for Adaptation of Deep Optical Flow Networks

Rest 10 min

16:10-17:40	**Session 4A Healthcare, Human Activities, IoT (Room 1)** Session Chair: Prof. Jun Wu (Waseda Univ., Japan)			**Session 4B Communication and Network (Room 2)** Session Chair: Associate Prof. Sheng Zhou (Tsinghua Univ., China)		
1	Wasinee Noonpakdee and Punnasa Kodchasila	Thammasat University (Thiland)	Developing digital skills of government officers, a Case study of a government agency	Devy Kuswidiastuti, Prasetiyono H. Mukti, Fannush S. Akbar, Gamantyo Hendrantoro, Titiek Suryani	Institut Teknologi Sepuluh Nopember (Indonesia)	Long-Range Multi-Beam MIMO Radar with Golay- and Circulating-Coded OFDM Waveforms
2	Ubaidillah Umar, Tri Arief Sardjono, Mochamad Hariadi	Institut Teknologi Sepuluh Nopember (Indonesia)	Ontology Model for Quality Identification of Melon Selection in hidden Semantic Data to represent the relationships that occur in the domain knowledge Melon.	Nayu LI	DONGHAI Lab; Zhejiang University (China)	Multibeam Phased-Array T/R Front Ends for Low-Earth-Orbit Satellite Communication
3	Muntaqo Alfin Amanaf, Eko Setijadi	Institut Teknologi Sepuluh Nopember (Indonesia)	Analysis of Substrate Integrated Waveguide (SIW) method on Bandwidth and Radiation Enhancement in Antipodal Vivaldi Antenna for Microwave Breast imaging	JingCheng Shi, JianJun Wu	Peking University (China)	Research on the Key Link of OFDR Sensor
4	Kurimoto Fuma, Sakai Shigekazu	Waseda University (Japan)	Finger Tracking with IMU sensor considering finger roll rotation	Takuto Shimokawa, Zhenni Pan, Shigeru Shimamoto	Waseda University (Japan)	V2V communication using FAWAC, diversity, and SIC on highways in the presence of platoon
5	Inasdiah Farras Fauziyyah, Totok Mujiono, Darminto	Institut Teknologi Sepuluh Nopember (Indonesia)	Development of RGO based thin film for glucose sweat wearable sensor	Hossien B. Eldeeb, Tu Dac Ho	Ozyegin University, UiT The Arctic University of Norway (Norway)	On the Performance of Streetlight-to-Vehicle Visible Light Communication: Impact of Transceiver and System Parameters
6	Alfado Rafly Hermawan, Renny Pradina Kusumawardani, Radityo Prasetianto Wibowo	Institut Teknologi Sepuluh Nopember (Indonesia)	Aspect Extraction and Polarity Classification in Tourism Reviews for Identification of Region Uniqueness: A Case Study of the Aceh Province	Yiding Li, Zhenni Pan, and Shigeru Shimamoto	Waseda Univeristy (Japan)	Joint Active and Passive Beamforming Optimization in Self-sustainable RIS aided NOMA networks
7	---			Sahil Nazir Pottoo, Tu Dac Ho, Pål Gunnar Ellingsen	UiT The Arctic University of Norway (Norway)	Laser Beam Propagation Evaluation in the Arctic Weather

GITW BEST PRESENTATION AWARD

The GITW Award will be given to the most outstanding presentations of the entire workshop based on the rating from all the participants. The evaluation criteria for the selection process is denoted below.

Criteria for the Best Presentation Award

We invite all the participants to give your valuable estimation to each presentation. Every presentation is evaluated by a weighted average that fairly takes into account both the importance and the number of evaluators. Each evaluator can give up to 5 points to one presentation. The final point is calculated from the marks of all evaluators in terms of the following weights:

Faculty participant:	2	Faculty from the same affiliation:	1
Student participant:	1	Student from the same affiliation:	0.5

Rating and Submission Method

Please download the rating sheet from the following website and return your evaluation to the same website by the end of the workshop day (**Dec. 17th**).
https://www.waseda.jp/assoc-gitw2022/rating-sheet/

Note:

- Participants are encouraged to actively feedback their rating evaluations. However, please avoid rating a presentation that you have not observed.
- One winner will be selected in each session.

Award Presentation

The winners will be announced on GITW website. All the winners will receive an electronic certificate via email contacted by the GITW committee.