

## 5 Program at a Glance

< Day 1 > Thursday, September 15, 2022

02:00 - 02:10 UTC 09:00 - 09:10 THA 11:00 - 11:10 JST (10 min.)	Opening Ceremony
02:10 - 03:10 UTC 09:10 - 10:10 THA 11:10 - 12:10 JST (60 min.)	Keynote Speech 1 (KEY-1) Title: Recent Advances in Learned Image/Video Compression Invited Speaker: Prof. Jiro Katto (Waseda University) Chair: Hiroyuki Tsuji (Kanagawa Institute of Technology)
03:10 - 03:20 UTC 10:10 - 10:20 THA 12:10 - 12:20 JST (10 min.)	Break
03:20 - 05:20 UTC 10:20 - 12:20 THA 12:20 - 14:20 JST (120 min.)	Special Session: Students' Selected Papers Session(SS1) Organizer: SISA2022 Technical Program Committee Chair: Takanori Koga (Kindai University) Papers: SS1-1, SS1-2, SS1-3, SS1-4, SS1-5, SS1-6
05:20 - 06:20 UTC 12:20 - 13:20 THA 14:20 - 15:20 JST (60 min.)	Lunch Break
06:20 - 07:50 UTC 13:20 - 14:50 THA 15:20 - 16:50 JST (90 min.)	Regular Session 1 (RS1) Chair: Shingo Yoshizawa (Kitami Institute of Technology) Papers: RS1-1, RS1-2, RS1-3, RS1-4, RS1-5, RS1-6
07:50 - 08:00 UTC 14:50 - 15:00 THA 16:50 - 17:00 JST (10 min.)	Break
08:00 - 10:00 UTC 15:00 - 17:00 THA 17:00 - 19:00 JST (120 min.)	Special Session: Intelligent Robotics and Embedded Systems (SS2) Organizer: Hakaru Tamukoh (Kyushu Institute of Technology) Co-Chairs: Dinda Pramanta (Kyushu Institute of Information Sciences) Yuma Yoshimoto (Kyushu Institute of Technology) Papers: SS2-1, SS2-2, SS2-3, SS2-4, SS2-5, SS2-6

## &lt; Day 2 &gt; Friday, September 16, 2022

02:00 - 03:00 UTC 09:00 - 10:00 THA 11:00 - 12:00 JST (60 min.)	Keynote Speech 2 (KEY-2) Title: Artificial Life for Segmentation of Cancer in Ultrasound Images of Breast Invited Speaker: Prof. Stanislav S. Makhanov (Thammasat University) Chair: Natsuda Kaothanthong (SIIT, Thammasat University)
03:00 - 03:10 UTC 10:00 - 10:10 THA 12:00 - 12:10 JST (10 min.)	Break
03:10 - 04:55 UTC 10:10 - 11:55 THA 12:10 - 13:55 JST (105 min.)	Regular Session 2 (RS2) Chair: Hideaki Misawa (National Institute of Technology, Ube College) Papers: RS2-1, RS2-2, RS2-3, RS2-4, RS2-5, RS2-6, RS2-7
04:55 - 06:00 UTC 11:55 - 13:00 THA 13:55 - 15:00 JST (65 min.)	Lunch Break
06:00 - 07:15 UTC 13:00 - 14:15 THA 15:00 - 16:15 JST (75 min.)	IPSJ-AVM Special Session (AVM) AVM Special Session General Chair: Hiroyuki Kasai (Waseda University) AVM Special Session Technical Program Chair: Kenji Kanai (Waseda University) AVM Special Session Technical Committee: Masaaki Matsumura (NTT) Jianfeng Xu (KDDI Research) Chair: Kenji Kanai (Waseda University) Papers: AVM-1, AVM-2, AVM-3 AVM-4, AVM-5  Note: This is an abstract-only presentation session. The presentation time for each study is 15 minutes, including a 5-minute discussion.
07:15 - 07:30 UTC 14:15 - 14:30 THA 16:15 - 16:30 JST (15 min.)	Break
07:30 - 08:45 UTC 14:30 - 15:45 THA 16:30 - 17:45 JST (75 min.)	Student Special Session (ST) Organizer: Piyarat Silapasuphakornwong (Bangkok University) Chair: Duangrat Gansawat (NECTEC) Papers: ST-1, ST-2, ST-3, ST-4, ST-5  Note: This is an abstract-only presentation session. The presentation time for each study is 15 minutes, including a 5-minute discussion.

08:45 - 08:50 UTC 15:45 - 15:50 THA 17:45 - 17:50 JST (5 min.)	Break
08:50 - 09:00 UTC 15:50 - 16:00 THA 17:50 - 18:00 JST (10 min.)	SISA2022 Student Paper Award Ceremony
09:00 - 09:20 UTC 16:00 - 16:20 THA 18:00 - 18:20 JST (20 min.)	Introduction of SISA2023 and Closing

## 6 Technical Program

Note: "(pp. xx-xx)" represents the page numbers in the electronic proceeding.

### Special Session: Students' Selected Papers Session (SS1)

Thursday, September 15, 2022, 03:20 - 05:20 UTC (10:20 - 12:20 THA, 12:20 - 14:20 JST)

Organizer: SISA2022 Technical Program Committee

Chair: Takanori Koga (Kindai University)

- |       |  |                    |
|-------|--|--------------------|
| SS1-1 | <p><b>Underwater Acoustic Communication Using a Bidirectional Retrodirective System</b></p> <p>Takahiro Ishikawa, Kitami Institute of Technology, Japan<br/>Shingo Yoshizawa, Kitami Institute of Technology, Japan</p>  | <i>(pp. 1-4)</i>   |
| SS1-2 | <p><b>Automatic Thrombus Localization on Patient with Ischemic Stroke on Non-contrast CT Using MCA Location Filter</b></p> <p>Donlawit Beesomboon, Sirindhorn International Institute of Technology, Thailand<br/>Natsuda Kaothanthong, Sirindhorn International Institute of Technology, Thailand<br/>Tanapon Chansumpao, Thammasat University, Pathum Thani, Thailand<br/>Dittapong Songsaeng Thammasat University, Pathum Thani, Thailand</p> | <i>(pp. 5-10)</i>  |
| SS1-3 | <p><b>The 3D Sound Localization Platform with Reflected Sounds</b></p> <p>Yoshinori Kamizono, Osaka University, Japan<br/>Wataru Kobayashi, Osaka University, Japan<br/>Ittetsu Taniguchi, Osaka University, Japan<br/>Hiroki Nishikawa, Osaka University, Japan<br/>Takao Onoye, Osaka University, Japan</p>  | <i>(pp. 11-14)</i> |
| SS1-4 | <p><b>Biceps and Triceps Electrical Activity Analysis based on using Low-Cost Sensor: Case Study</b></p> <p>Hassan Qassim, Universiti Putra Malaysia &amp; Northern Technical University, Iraq<br/>Wan Zuha Wan Hasan, Universiti Putra Malaysia, Malaysia<br/>H. R. Ramli, Universiti Putra Malaysia, Malaysia<br/>Hazreen Harith, Universiti Putra Malaysia, Malaysia<br/>Liyana Najwa Inche Mat, Universiti Putra Malaysia, Malaysia</p>      | <i>(pp. 15-20)</i> |
| SS1-5 | <p><b>A Low Complexity Carrier Frequency Offset Compensation for Full-Duplex with Cooperative MIMO in IEEE 802.11 WLAN</b></p> <p>Muhammad Harry Bintang Pratama, Kyushu Institute of Technology, Japan<br/>Leonardo Lanante Jr, Ofinno LLC, United States<br/>Hiroshi Ochi, Kyushu Institute of Technology, Japan</p>   | <i>(pp. 21-26)</i> |
| SS1-6 | <p><b>ns3-ai: Rate Control for Wireless LAN by Deep Q-Network</b></p> <p>Tomoki Nakashima, Kyushu Institute of Technology, Japan<br/>Leonardo Lanante Jr, Ofinno LLC, United States<br/>Muhammad Harry Bintang Pratama, Kyushu Institute of Technology, Japan<br/>Masayuki Kurosaki, Kyushu Institute of Technology, Japan<br/>Hiroshi Ochi, Kyushu Institute of Technology, Japan</p>   | <i>(pp. 27-32)</i> |

### Regular Session 1 (RS1)

Thursday, September 15, 2022, 06:20 - 07:50 UTC (13:20 - 14:50 THA, 15:20 - 16:50 JST)

Chair: Shingo Yoshizawa (Kitami Institute of Technology)

- |       |  |                    |
|-------|--|--------------------|
| RS1-1 | <p><b>Underwater Acoustic Localization for Multiple Sound Sources by Time Division and Code Division Multiplexing</b></p> <p>Atsushi Wada, Kitami Institute of Technology, Japan<br/>Shingo Yoshizawa, Kitami Institute of Technology, Japan</p> | <i>(pp. 33-36)</i> |
|-------|--|--------------------|

- Satoshi Yuasa, Mitsubishi Electric TOKKI Systems Corporation, Japan  
Hideki Sugimoto, Penta-Ocean Construction Corporation, Japan
- RS1-2 Development of In-Vehicle Auditory Signals Evaluation Platform in A Driving Simulator** (pp. 37-40)
- Fuma Sawa, Osaka University, Japan  
Yoshinori Kamizono, Osaka University, Japan  
Wataru Kobayashi, Osaka University, Japan  
Ittetsu Taniguchi, Osaka University, Japan  
Hiroki Nishikawa, Osaka University, Japan  
Takao Onoye, Osaka University, Japan
- RS1-3 Development of 3D Sound Localization Platform for Online Communications** (pp. 41-44)
- Mitsuhiro Watanabe, Osaka University, Japan  
Yoshinori Kamizono, Osaka University, Japan  
Fuma Sawa, Osaka University, Japan  
Wataru Kobayashi, Osaka University, Japan  
Ittetsu Taniguchi, Osaka University, Japan  
Takao Onoye, Osaka University, Japan
- RS1-4 Experimental Evaluation and Field Tests of LoRa Energy Consumption Optimization Approach Using Software-Defined Radio** (pp. 45-50)
- Kyotaro Kunii, Hokkaido University, Japan  
Takuya Yasugi, Hokkaido University, Japan  
Hiroshi Tsutsui, Hokkaido University, Japan  
Takeo Ohgane, Hokkaido University, Japan
- RS1-5 Self-Similarity Analysis of the Environmental Sound Wave** (pp. 51-56)
- Yoshiaki Makabe, Kanagawa Institute of Technology, Japan  
Tomoaki Kimura, Kanagawa Institute of Technology, Japan  
Kenji Muto, Shibaura Institute of Technology, Japan  
Hideo Shibayama, Shibaura Institute of Technology, Japan
- RS1-6 Addressing a Problem in Constructing a Transcoder using Neural Programmer-Interpreters** (pp. 57-62)
- Masahiko Tsuyama, Meiji University, Japan  
Ryusuke Miyamoto, Meiji University, Japan

## Special Session: Intelligent Robotics and Embedded Systems (SS2)

Thursday, September 15, 2022, 08:00 - 10:00 UTC (15:00 - 17:00 THA, 17:00 - 19:00 JST)

Organizer: Hakaru Tamukoh (Kyushu Institute of Technology)

Co-Chairs:

**Dinda Pramanta (Kyushu Institute of Information Sciences)**

**Yuma Yoshimoto (Kyushu Institute of Technology)**

- SS2-1 Development of Tomato Classifier Using Multidimensional Features** (pp. 63-68)
- Moeko Tominaga, Nishinippon Institute of Technology, Japan  
Yukako Tsuji, Nishinippon Institute of Technology, Japan  
Yasunori Takemura, Nishinippon Institute of Technology, Japan
- SS2-2 Study of Oil Palm Stalk Detection based on YOLOv4** (pp. 69-72)
- Jin Wern Lai, Universiti Putra Malaysia, Malaysia  
Hafiz Rashidi Ramli, Universiti Putra Malaysia, Malaysia  
Luthffi Idzhar Ismail, Universiti Putra Malaysia, Malaysia  
Wan Zuha Wan Hasan, Universiti Putra Malaysia, Malaysia
- SS2-3 Pseudo-Realistic Food Datasets Generation for Robotic Tasks** (pp. 73-78)
- Obada Al aama, Kyushu Institute of Technology, Japan  
Yuma Yoshimoto, Kyushu Institute of Technology, Japan  
Hakaru Tamukoh, Kyushu Institute of Technology, Japan
- SS2-4 Development of a COG Detection Method for Tomato Harvesting Using Point Cloud Data** (pp. 79-84)

Riku Fukuda, Nishinippon Institute of Technology, Japan  
Yasunori Takemura, Nishinippon Institute of Technology, Japan

- SS2-5      Development of ROS2-based Multi-Robot Simulation for AGVs in Factory-Like Environment**      (pp. 85-90)

Sheng-Wei Sim, Universiti Tunku Abdul Rahman, Malaysia  
Ban-Hoe Kwan, Universiti Tunku Abdul Rahman, Malaysia  
Wun-She Yap, Universiti Tunku Abdul Rahman, Malaysia  
Danny Wee-Kiat Ng, Universiti Tunku Abdul Rahman, Malaysia

- SS2-6      Controlled Synchronization-Desynchronization PCPO in Nengo Implementation via feedback connections**      (pp. 91-95)

Dinda Pramanta, Kyushu Institute of Information Sciences, Japan  
Hakaru Tamukoh, Kyushu Institute of Technology, Japan

## Regular Session 2 (RS2)

Friday, September 16, 2022, 03:10 - 04:55 UTC (10:10 - 11:55 THA, 12:10 - 13:55 JST)

Chair: Hideaki Misawa (National Institute of Technology, Ube College)

- RS2-1      An Iterative Method of LAD Regression using Gradient Boosting and Its Application to Image Coding** (pp. 96-100)
- Tomoki Okuno, University of Fukui, Japan  
Shinji Fukuma, University of Fukui, Japan  
Shin-ichiro Mori, University of Fukui, Japan
- RS2-2      Low-Level Gaussian Noise Estimation by Using the Intercept of the Regression Line Derived from Standard Deviation of Multiple Blocks of Divided Images** (pp. 101-106)
- Takashi Suzuki, MicroTechnica Co., Ltd., Japan  
Hiroyuki Tsuji, Kanagawa Institute of Technology, Japan  
Tomoaki Kimura, Kanagawa Institute of Technology, Japan
- RS2-3      A Review on Computer-assisted Image-based Bird Species Identification** (pp. 107-112)
- Jing Yi Tou, Universiti Tunku Abdul Rahman, Malaysia
- RS2-4      An Imaging of Fine Structure for Surface and Its Inside of Solid Material with Micro Slurry-jet Erosion Test** (pp. 113-118)
- Shinji Fukuma, University of Fukui, Japan  
Yoshiro Iwai, University of Fukui, Japan  
Shin-ichiro Mori, University of Fukui, Japan
- RS2-5      A Note on Expression Changes of Face Images in the Extended StyleGAN Latent Space** (pp. 119-123)
- Yudai Iimori, Kanagawa Institute of Technology, Japan  
Taiki Tsutsumi, Kanagawa Institute of Technology, Japan  
Tomoaki Kimura, Kanagawa Institute of Technology, Japan  
Hiroyuki Tsuji, Kanagawa Institute of Technology, Japan
- RS2-6      An Image Conversion Method for Color Discriminability Compensation of Colorblindness Using CycleGAN** (pp. 124-127)
- Hideaki Orii, Fukuoka University, Japan  
Koyuki Hatano, Kyushu Institute of Technology, Japan  
Hiromu Tanaka, Kyushu Institute of Technology, Japan  
Hideaki Kawano, Kyushu Institute of Technology, Japan
- RS2-7      A Usability Study of a Retrofit Contactless Push-button Interface Using Aerial Image** (pp. 128-132)
- Tatsunobu Tanaka, Kindai University, Japan  
Takanori Koga, Kindai University, Japan

## IPSJ-AVM Special Session (AVM)

Friday, September 16, 2022, 06:00 - 07:15 (UTC), 13:00 - 14:15 (THA), 15:00 - 16:15 (JST)

AVM Special Session General Chair: Hiroyuki Kasai (Waseda University)

AVM Special Session Technical Program Chair: Kenji Kanai (Waseda University)

AVM Special Session Technical Committee:

Masaaki Matsumura (NTT)

Jianfeng Xu (KDDI Research)

Chair: Kenji Kanai (Waseda University)

- AVM-1      A New Image Watermarking Method Using Adversarial Perturbations**  
Sei Takano, Kansai University, Japan  
Mitsuji Muneyasu, Kansai University, Japan  
Soh Yoshida, Kansai University, Japan
- AVM-2      Examination of Improvement of Lightness Component in HSL Color Space**  
Hiyori Mineyama, Nagoya City University, Japan  
Go Tanaka, Nagoya City University, Japan
- AVM-3      Accuracy Evaluations of Non-Contact Heart Rate Estimation Using Remote Videos**  
Mayu Arai, Waseda University, Japan  
Kenji Kanai, Waseda University, Japan  
Jiro Katto, Waseda University, Japan
- AVM-4      Performance Evaluations of 3D Point Cloud Streaming System based on MPEG-DASH**  
Yumeka Chujo, Waseda University, Japan  
Kenji Kanai, Waseda University, Japan  
Jiro Katto, Waseda University, Japan
- AVM-5      A Prototype Implementation of LiDAR-based Indoor Localization System and Its Performance Evaluations**  
Misa Nimura, Waseda University, Japan  
Kenji Kanai, Waseda University, Japan  
Jiro Katto, Waseda University, Japan

## Student Special Session (ST)

Friday, September 16, 2022, 07:30 - 08:45 UTC (14:30 - 15:45 THA, 16:30 - 17:45 JST)

Organizer: Piyarat Silapasuphakornwong (Bangkok University)

Chair: Duangrat Gansawat (NECTEC)

- ST-1      Prediction of Pneumonia Progression in COVID-19 by Chest X-ray Image Analysis**  
Yusuke Yoshida, Kanagawa Institute of Technology, Japan  
Hideya Takeo, Kanagawa Institute of Technology, Japan
- ST-2      Word-Level Sign Language Recognition Using Angle-Based Features and Dynamic Time Warping**  
Hlaing Myat Nwe, Thammasat University, Thailand  
Thanaruk Theeramunkong, Thammasat University, Thailand  
Kiyooki Shirai, Japan Advance Institute of Science and Technology, Japan  
Thepchai Supnithi, National Electronics and Computer Technology Center, Thailand  
Sasiporn Usanavasin, Thammasat University, Thailand  
Nguyen Duy Hung, Thammasat University, Thailand  
Ye Kyaw Thu, Thammasat University, Thailand

- Natsuda Kaothanthong, Thammasat University, Thailand
- ST-3 Distance Prediction by Various Sources to Improve the Accuracy of the Predictor**
- Kittikhun Sirinaksomboon, Thammasat University, Thailand  
Ak-karath Paisalvichitnuth, Thammasat University, Thailand  
Poraneeapan Tantawanich, Thammasat University, Thailand
- ST-4 Extracting and Synthesizing Facial Expression Changes for Each Facial Part Using StyleGAN Latent Space**
- Taiki Tsutsumi, Kanagawa Institute of Technology, Japan  
Yudai Iimori, Kanagawa Institute of Technology, Japan  
Tomoaki Kimura, Kanagawa Institute of Technology, Japan  
Hiroyuki Tsuji, Kanagawa Institute of Technology, Japan
- ST-5 A Multidisciplinary Approach for Cross-Domain Detection in Electronic News**
- Chotanansub Sophaken, King Mongkut's University of Technology Thonburi, Thailand  
Kantapong Vongpanich, King Mongkut's University of Technology Thonburi, Thailand  
Akkharawoot Takhom, National Electronics and Computer Technology Center, Thailand  
Prachya Boonkwan, National Electronics and Computer Technology Center, Thailand  
Tepchai Supnithi, National Electronics and Computer Technology Center, Thailand