Advance Program
IEEE ISM/IRC/AIxDKE 2024

All times are in Japan Standard Time (JST)

Proceedings: link
Breakfast: **Kyoso-to building, Cafe library, Hitachi Central Research Laboratory**
Lunch: Restaurant Keyaki, Kyoso-to building, Hitachi Central Research Laboratory
Reception: Restaurant Keyaki, Kyoso-to building, Hitachi Central Research Laboratory
Banquet: Torijyube (Kokubunji-shi Minamicho2-16-14 KS Building3F)東京都国分寺市南町2-16-14 KSビル 3F
https://tabelog.com/tokyo/A1325/A132502/13207513/?msockid=3a0efd0fbfdc68cc0cc5e96abea669d5
Zoom Links: Row 2 (table below)

Wednesday, December 11			
Time (JST)	Baba Memorial Hall Zoom Link	NEXPERIENCE Zoom Link	Cafe Library Zoom Link
08:10 - 09:30	**Check In (in person only)**		
09:10 - 09:30	**Opening Ceremony Nobuo Nukaga (Deputy GM of CDS-Advanced Artificial Intelligence Center, Hitachi Research and Development Group)** (Chair: Takashi Oshima, Hitachi R&D)		
09:30 - 10:30	**Keynote 1: Tatsuhiko Kagehiro, Distinguished Researcher, AI Research Laboratory, Hitachi Research and Development Group: "How Hitachi is Using AI in its Social Innovation Business"** (Chair: Fabio Persia)		
10:30 - 10:50	**Coffee Break**		
10:50 - 12:05	**Session: (ISM-1)** (3 regular papers, 1 position paper) (Chair: Takashi Oshima)	**Session: (IRC-1)** (3 regular papers, 1 position paper) (Chair: Donato Di Paola)	**Session: (AIxDKE-1)** (2 regular papers, 2 short papers) (Chair: Ajay Bansal)

12:05 - 13:30	Session: **(ISM-2)** (3 regular papers) (Chair: Giovanni Pilato)	Session: **(IRC-2)** (2 regular paper, 1 short paper) (Chair: TBD)	Session: **(AIxDKE-2)** (3 regular papers, 1 short paper) (Chair: Srividya Bansal)
13:30 - 14:30	**Lunch**		
14:30 - 15:30	**Hitachi Central Research Laboratory Tour**		
15:30 - 16:40	Session: **(ISM-3)** (2 regular papers) (Chair: Fabio Persia)	Session: **(IRC-3)** (3 regular papers) (Chair: TBD)	Session: **(AIxDKE-3)** (3 regular papers) (Chair: Ömer Erduran)
16:40 - 17:00	**Coffee Break**		
17:00 - 18:00	**Keynote 2: Heiner Stuckenschmidt, Professor, University of Mannheim, Germany** (Chair: Ajay Bansal)		
18:00 - 18:55	Session: **(ISM-4)** (2 regular papers) (Chair: Fabio Persia)	Session: **(IRC-4)** (2 regular papers, 1 short paper) (Chair: TBD)	Session: **(AIxDKE-4)** (2 short papers, 2 poster papers) (Chair: Paul Wang)
19:00 - 21:00	**Reception**		

Wednesday, December 11	
Time (JST)	**Kyoso-to 2F K2A** **Zoom Link**
15:30 - 18:30	**IRC Workshop:Robotic Computing for Industrial Inspection [RC4II]** (Chair: Donato Di Paola, Hitachi R&D Europe)

<table>
<tr><th colspan="4">Thursday, December 12</th></tr>
<tr><th>Time\ Place</th><th>Baba Memorial Hall</th><th>NEXPERIENCE</th><th>Cafe Library</th></tr>
<tr><td>09:00 - 09:30</td><td colspan="3">Check In (in person only)</td></tr>
<tr><td>09:30 - 10:30</td><td>Keynote 3: Minoru Asada, Professor, Osaka University Graduate School of Engineering, Department of Adaptive Machine Systems
(Chair: Takashi Oshima, Hitachi R&D)</td><td></td><td></td></tr>
<tr><td>10:30 – 10:50</td><td colspan="3">Coffee Break</td></tr>
<tr><td>10:50 - 11:40</td><td rowspan="3">Session: (ISM-5)
(1 regular papers, 2 short papers, 3 position papers)
(Chair: Takashi Oshima)</td><td>Session: (IRC-5)
(1 regular paper, 1 short paper)
(Chair: Paul Kilsby)</td><td rowspan="2">Session: (AIxDKE-5)
(2 regular papers, 2 short papers)
(Chair: Satoru Watanabe)</td></tr>
<tr><td>11:40 - 12:05</td><td>Session: (IRC-6)
(1 short paper, 1 position paper)
(Chair:Viviana Crescitelli)</td></tr>
<tr><td>12:05 - 12:15</td><td rowspan="2">Session: (IRC-7)
(2 regular papers, 2 position papers)
(Chair: Donato Di Paola)</td><td rowspan="3">Session: (AIxDKE-6)
(2 regular papers, 2 poster papers)
(Chair: Kaoru Shimada)</td></tr>
<tr><td>12:15 - 12:50</td><td rowspan="2">Session: (ISM-6)
(2 short papers, 1 position paper)
(Chair: Giovanni Pilato)</td></tr>
<tr><td>12:50 - 13:10</td><td>Session: (IRC-8)
(1 regular paper)
(Chair: Leonard Ah Kun)</td></tr>
<tr><td>13:30 - 14:30</td><td colspan="3">Lunch</td></tr>
</table>

14:30 - 16:05	**Session: (ISM-7)** (1 regular papers, 2 short papers, 3 position papers) (Chair: Pedro Baptista de Castro)	**Session: (IRC-9)** (3 regular papers) (Chair: Alexis Holgado)	**Session: (AIxDKE-7)** (3 short papers, 1 poster paper) (Chair: Churn-Jung Liau)
16:05 - 16:25	**Coffee Break**		
16:25 - 17:25	**Session: (ISM-8)** (3 short papers, 1 position paper) (Chair: Viviana Crescitelli)	**Session: (IRC-10)** (2 regular papers) (Chair: Paul Kilsby)	
17:25 - 18:20	**Session: (ISM-9)** (1 regular paper, 1 short paper, 1 position paper) (Chair: TBD)	**Session: (IRC-11)** (1 regular paper, 2 short papers) (Chair: Maeda Koji)	
19:00 – 21:00	**Banquet**		

<table>
<tr><th colspan="4">Friday, December 13</th></tr>
<tr><th>Time\ Place</th><th>Baba Memorial Hall</th><th>NEXPERIENCE</th><th>Cafe Library</th></tr>
<tr><td>09:00 - 09:30</td><td colspan="3">Check In (in person only)</td></tr>
<tr><td>09:30 - 10:30</td><td>Session: (ISM-10)
(2 regular papers, 1 short paper)
(Chair: Atsuo Yoshitaka)</td><td>Session: (IRC-12)
(1 regular paper, 2 short papers)
(Chair: Alexis Holgado)</td><td></td></tr>
<tr><td>10:30 - 10:50</td><td colspan="3">Coffee Break</td></tr>
<tr><td>10:50 - 11:45</td><td>Session: (ISM-11)
(1 regular paper, 1 short paper, 1 position paper)
(Chair: Atsuo Yoshitaka)</td><td>Session: (IRC-13)
(2 regular papers, 1 short paper)
(Chair: Leonard Ah Kun)</td><td>IRC: CHARMS workshop
(Chair: Eric Matson)</td></tr>
<tr><td>11:45 - 12:35</td><td>Session: (ISM-12)
(1 regular paper, 1 short paper, 1 position paper)
(Chair: Giovanni Pilato)</td><td rowspan="2">Session: (IRC-14)
(1 regular paper, 1 short paper)
(Chair: Maeda Koji)</td><td rowspan="2"></td></tr>
<tr><td>12:35 - 13:00</td><td>Session: (ISM-13)
(1 short paper, 1 position paper)
(Chair: Viviana Crescitelli)</td></tr>
<tr><td>13:00 - 14:00</td><td colspan="3">Lunch</td></tr>
<tr><td>14:00 - 14:40</td><td>Session: (ISM-14)
(1 short paper, 1 position paper)
(Chair: Viviana Crescitelli)</td><td rowspan="2">Session: (IRC-15)
(1 regular paper, 2 short papers)
(Chair: Donato Di Paola)</td><td>AIxDKE: HCAI workshop
3 papers
(Chair: Giovanni Pilato)</td></tr>
<tr><td>14:40 - 15:10</td><td>Session: (ISM-15)
(1 regular paper, 1 position paper)
(Chair: TBD)</td><td></td></tr>
<tr><td>15:10 - 16:10</td><td>Session: (ISM-16)
(4 short papers)</td><td>Session: (IRC-16)</td><td></td></tr>
</table>

	(Chair: TBD)	(2 short papers, 2 position papers) (Chair: TBD)	
16:10 - 16:30	**Award Ceremony** (Co-Chairs: TBD)		
16:30 - 16:50	**Coffee Break**		
16:50 - 19:00	**ISM: MTEL + SMC workshop** (Chair: Florian Schimanke)		**AIxDKE: GKERD workshop** 3 papers (Chair: TBA)

Detailed Sessions (IEEE ISM 2024)

Session	Title
Session: **ISM-1 - Image Processing (I)** **(**Chair: Takashi Oshima**)**	S2MGen: A synthetic skin mask generator for improving segmentation (Regular Paper) *Subhadra Gopalakrishnan, Trisha Mittal, Jaclyn Pytlarz and Yuheng Zhao*
	Generating and Evaluating Cursive Chinese Calligraphy by Semi-Classifying Style: A Case Study Using a Diffusion Model (Regular Paper) *Yi-Chieh Wu and Yu-Jung Hsu*
	StegoFusion-Net: Fusion of Convolutional Neural Networks for Spatial Image Steganalysis (Regular Paper) *Yassine Belkhouche and Alaaldin Dwaik*
	Disparity Correction Method of the Monocular Omnidirectional Stereo Camera (Position Paper) *Hisayoshi Kaneda, Ryota Kawamata, Kazuyoshi Yamazaki and Kazuya Shimizu*
Session: **ISM-2 - Audio Analysis** **(**Chair: Giovanni Pilato**)**	Unveiling the Potential of SSL-Generated Audio Embeddings for Cross-Lingual Speaker Recognition (Regular Paper) *Wen-Hung Liao, Po-Han Chen and Yi-Chieh Wu*
	Two-stage instrument timbre transfer method using RAVE (Regular Paper) *Di Hu and Katsunobu Ito*
	Speaker Pseudonymization for Japanese Speech Using Duration Embeddings (Regular Paper) *Aoi Ito and Katsunobu Itou*
Session: **ISM-3 - Best Paper Session (I)** **(**Chair: Fabio Persia**)**	Modeling User Quality of Experience in Adaptive Point Cloud Video Streaming (Regular Paper) *Duc V. Nguyen, Nguyen Long Quang, Tran Thuy Hien, Nguyen Ngoc Huyen, Truong Thu Huong and Pham Ngoc Nam* ***Opponent: John Li***
	Appeal prediction for AI up-scaled Images (Regular Paper) *Steve Göring, Rasmus Merten and Alexander Raake* ***Opponent: Yu-Jung Hsu***
Session: **ISM-4 - Best Paper Session (II)** **(**Chair: Fabio Persia**)**	Modelling Concurrent RTP Flows for End-to-end Predictions of QoS in Real Time Communications (Regular Paper) *Tailai Song, Paolo Garza, Michela Meo and Maurizio Matteo Munafò* ***Opponent: Aoi Ito***
	SoccerNet-Echoes: A Soccer Game Audio Commentary Dataset (Regular Paper) *Sushant Gautam, Mehdi Houshmand Sarkhoosh, Jan Held, Cise Midoglu, Anthony*

	Cioppa, Silvio Giancola, Vajira Thambawita, Michael A. Riegler, Pål Halvorsen and Mubarak Shah ***Opponent: Carla Lapa Nogueira***
Session: **ISM-5 - Text and Data Analysis** **(**Chair: Takashi Oshima**)**	Flexible And Faithful Data Insights Generation (Regular Paper) *Wei Zhang and Victor Soares Bursztyn*
	Holistic Visualization of Contextual Knowledge in Hotel Customer Reviews Using Self-Attention (Short Paper) *Shuntaro Masuda and Toshihiko Yamasaki*
	Investigation of Feature Distribution and Network Weight Adjustments in the Machine Unlearning Process (Short Paper) *Wen-Hung Liao and Yang-Jin Lin*
	Platform for Endangered Language Education (Position Paper) *Greeshma Sree Parimi, Gurkirat Singh Guliani and Min Chen*
	Human-in-the-loop knowledge base upkeep for retrieval augmented generation applications (Position Paper) *Pedro Baptista de Castro, Hiroko Sukeda and Soichi Takashige*
Session: ISM-6 **Music Generation** **(**Chair: Giovanni Pilato**)**	Homophonic Music Composition Using a GAN and LSTM Pipeline for Melody and Harmony Generation (Short Paper) *Clément Saint-Marc and Katunobu Itou*
	Instrumentality Classification Evaluation System for Natural Sounds (Short Paper) *Wang Yuhuan and Katunobu Itou*
	Generating Bass Phrases from Guitar Chord Backing with NMF (Position Paper) *Kouzai Tomoo, Junya Koguchi and Tetsuro Kithara*
Session: ISM-7 **Video Analysis (I)** **(**Chair: Pedro Baptista de Castro**)**	Watch your back! Dynamic thumbnails for a 360-degree video player to enhance viewing experience on 2D displays (Regular Paper) *Jakub Kovac and Wolfgang Hürst*
	Influence of Display Devices and Field of View on Subjective Quality of Experience Evaluation of 8K 360° Videos (Short Paper) *Daichi Arai, Yuichi Kondo, Yasuko Sugito and Yuichi Kusakabe*
	VEMOCLAP: A video emotion classification web application (Short Paper) *Serkan Sulun, Paula Viana and Matthew E. P. Davies*
	A Power-Law Transformation Approach for Template-Based Cross-Component Prediction (Position Paper) *Zhikai Liu, Kun Zhang, Xin-Yi Cui, Wei Sun and Fan Liang*
	Investigating the Impact of High Frame Rate on Video Quality: A SAMVIQ Approach (Position Paper) *Dominik Keller, Paul Rudi Frank, Steve Göring and Alexander Ra*

Session: **ISM-8 - Video Streaming** **(**Chair: Viviana Crescitelli**)**	A Server-driven View-aware Point Cloud Video Streaming Framework (Short Paper) *Duc V. Nguyen, Tran Gia Minh and Thu Huong Truong*
	Evaluation of strategies for efficient rate-distortion NeRF streaming (Short Paper) *Pedro Martin, António Rodrigues, João Ascenso and Maria Paula Queluz*
	Perceptual Quality Driven Point Cloud Compression for 6DoF 3D Point Cloud Streaming (Short Paper) *Yumeka Chujo, Yusuke Tagashira, Yukiko Harada, Kenji Kanai and Jiro Katto*
	On Multi-CDN Delivery Costs Optimization Problem (Position Paper) *Yuriy Reznik and Guillem Cabrera*
Session: **ISM-9 - Object and Event Detection (I)** **(**Chair: TBD**)**	Sliding Window Check: Repairing Object Identities (Regular Paper) *Geerthan Srikantharajah and Naimul Khan*
	Data Augmentation with Diffusion Model for Hand Detection (Short Paper) *Genta Matsukawa and Atsuo Yoshitaka*
	AI Maintenance Techniques by Detecting Performance Degradation in Domain Shift Using Model Ensembles (Position Paper, 36) *Keita Yamane, Akira Kitayama, Keigo Hasegawa, Yusuke Obonai and Hiroto Sasao*
Session: **ISM-10 - Object and Event Detection (II)** **(**Chair: Atsuo Yoshitaka**)**	Ensuring Color Consistency in RGB-D Multi-Camera Setup (Regular Paper) *Peter Fasogbon*
	Low Complexity Learning-based Lossless Event-based Compression (Regular Paper) *Ahmadreza Sezavar, Catarina Brites and Joao Ascenso*
	PlayerTV: Advanced Player Tracking and Identification for Automatic Soccer Highlight Clips (Short Paper) *Håkon Maric Solberg, Mehdi Houshmand Sarkhoosh, Sushant Gautam, Saeed S. Sabet, Pål Halvorsen and Cise Midoglu*
Session: **ISM-11 - Video Transmission** **(**Chair: Atsuo Yoshitaka**)**	A Simulation for the Evaluation of the Mean Opinion Score (MOS) for EVS-WB and AMR-WB Audio Codecs for 5G Mobile Networks (Short Paper) *Jussif Abularach Arnez, Cássio Antonio Tavares Alves, Wederson Medeiros Silva, Isaac Barros Gomes, Carla Lapa Nogueira and Maria Gabriela Lima Damasceno*
	FrameCorr: Adaptive, Autoencoder-based Neural Compression for Video Reconstruction in Resource and Timing Constrained Network Settings (Short Paper) *John Li, Shehab Sarar Ahmed, Deepak Nair, Indranil Gupta and Klara Nahrstedt*
	Ultra-low-latency 8K120p-video-transmission System Parallelizing SMPTE ST 2110 (Position Paper)

	Yasuhiro Mochida, Takuro Yamaguchi, Hirokazu Takahashi and Koichi Takasugi
	Low-latency Software-based Uncompressed Video Transmission (Position Paper) *Takuro Yamaguchi, Yasuhiro Mochida and Hirokazu Takahashi*
Session: **ISM-12 - Video Analysis (II)** **(**Chair: Giovanni Pilato**)**	Visual Speech Recognition with Surrounding and Emotional Information (Regular Paper) *Pengcheng Zeng and Atsuo Yoshitaka*
	Synchronized Object Sharing for Augmented Reality Virtual Conferencing (Short Paper) *John Murray and Michael Zink*
	Fusion-Based Human Pose Estimation Using RGB and Infrared Images with Transformer-Based Decoding (Position Paper) *Viviana Crescitelli and Takashi Oshima*
Session: **ISM-13 - Augmented Reality (I)** **(**Chair: Pedro Baptista de Castro**)**	Occlusion-Aware Real-Time Tiny Facial Alignment Model for Makeup Virtual Try-On (Short Paper) *Kin Ching Lydia Chau, Zhi Yu and Ruowei Jiang*
	A Study on Mental Stress Test using Cybersickness caused by Virtual Reality Contents (Position Paper) *Nan Bu and Kakeru Nakano*
Session: **ISM-14 - Augmented Reality (II)** **(**Chair: Viviana Crescitelli**)**	Exploring Augmented Table Setup and Lighting Customization in a Simulated Restaurant to Improve the User Experience (Short Paper) *Jana Motowilowa, Maurizio Vergari, Tanja Kojic, Maximilian Warsinke, Sebastian Möller and Jan-Niklas Voigt-Antons*
	LiveSkeleton: High-Quality Real-Time Human Tracking and Pose Estimation (Position Paper) *Hannes Fassold*
Session: **ISM-15 - Video Conferencing** **(**Chair: TBD**)**	SpotiView: Partial face display method for smooth communication while protecting privacy (Regular Paper) *Ryota Kishimoto, Shuhei Tsuchida, Tsutomu Terada and Tsukamoto Masahiko*
	Multi-View Gesture Recognition in Conflict Situations (Position Paper) *Karam Tomotaki-Dawoud, Birgit Nierula, Farelle Toumaleu Siewe, Thomas Koch, Daniel Johannes Meyer, Andreas Bock, Marianne Heinze, Daniela Knuth, Denis Martin, Julia Schander, Anna Hilsmann, Peter Eisert and Sebastian Bosse*
Session: **ISM-16 - Image Processing (II)** **(**Chair: TBD**)**	Cross-Modal 3D Model Retrieval (Short Paper) *Raphael Waltenspuel, Florian Spiess and Heiko Schuldt*
	Prevention of Unexpected Object Generation in Diffusion Model-Based Inpainting (Short Paper) *Takumi Komori and Takahiro Hayashi*
	LMM-Regularized CLIP Embeddings for Image Classification (Short Paper) *Maria Tzelepi and Vasileios Mezaris*

	Evaluation Framework for Novel View Synthesis (Short Paper) *Kolja Kieslich, Louay Bassbouss, Stephan Steglich and Stefan Arbanowski*
Session: **ISM: MTEL + SMC workshop** **(**Chair: Florian Schimanke**)**	Characterizing students behavior in multi-user multi-computer testing environments *Chittimalla, Choi, Vineel Reka, Belkhouche*
	A technical Concept for enhancing the Student Experience in Hybrid Lecture Scenarios *Prankel, Schimanke, Mertens*
	Gender Stereotypes in the Creation of Educational Cases with ChatGPT *Valerio-Ureña, Sevilla-Campoverde, Lazcano, Ortúzar*
	Evaluating Interactive Concept Maps Produced from E-Portfolios *Isking, Gantikow, Libbrecht, Müller, Rebholz*
	Slide Analysis Method for Editing Lecture Materials based on Hierarchical Structures of Subject Terminologies *Sano, Wang, Kawai, Sumiya*
	The “Huh?” Button: Improving Understanding in Educational Videos with Large Language Models *Ruf, Detyniecki*
	PanoramaViewer – A Framework for Educational Collaborative Virtual Field Trips *Wolf*
	Real-time Highlight Prediction for Simultaneous Viewing of Multiple Live Streams *Yusuke Maeda and Takahiro Hayashi*

Detailed Sessions (IEEE IRC 2024)

Session	Title
Session: **IRC-1 - Motion Planning (I)** (Chair: TBD)	ECRAP: Exophora Resolution and Classifying User Commands for Robot Action Planning by Large Language Models (Regular Paper) *Akira Oyama, Shoichi Hasegawa, Yoshinobu Hagiwara, Akira Taniguchi and Tadahiro Taniguchi*
	Time-Aware Probabilistic Roadmaps for Multi-Query Path Planning in Dynamic Environments (Regular Paper) *Julius Schlapbach and Simon Schopferer*
	Object Re-Orientation via Two-Edge-Contact Pushing along a Circular Path Based on Friction Estimation (Regular Paper) *Ziyan Gao, Chenghao Li, Dianbo Ma and Nak Young Chong*
	Autonomous Wheelchair – Object Measurement (Position Paper) *Doron Nussbaum and Robin Redhu*
Session: **IRC-2 - Aerial Systems** (Chair: TBD)	Cost-Efficient and Effective Counter Unmanned Aerial System via Visual-Acoustic Sensing (Regular Paper) *Changyeon Lee, Dongju Yu, Soyeon Cho, Dane Hindsley, Halaevalu Patterson, Megan Clecak and Eric Matson*
	Drone Sound Classification using Chromagram Features: A Novel Approach (Regular Paper) *Kalpana Algotar, Rita Chattopadhyay, Srividya Bansal and Ajay Bansal*
	Improving Drone Classification with Audio-Derived Visual Features: A Vision Model Comparison (Short Paper) *Juann Kim, Eric T Matson, Qian Zhang and Mia Yaqin Wang*
Session: **IRC-3 - Task Scheduling (I)** (Chair: TBD)	Incremental Learning of Affordances using Markov Logic Networks (Regular Paper) *George Potter, Gertjan Burghouts and Joris Sijs*
	Using Neural Networks to Replace Components of a Depth Completion Model (Regular Paper) *Vanel Lazcano, Anthony Cho, Oscar Loyola and Hoosein T. Dinani*
	Robot Tasks with Fuzzy Time Requirements from Natural Language Instructions (Regular Paper) *Sascha Sucker, Michael Neubauer and Dominik Henrich*
Session: **IRC-4 - Task Scheduling (II)**	Task-oriented grasping for dexterous robots using postural synergies and reinforcement learning (Regular Paper)

(Chair: TBD**)**	*Dimitrios Dimou, Jose Santos Victor and Plinio Moreno*
	ROS2 as an Enabler for a Business Ecosystem: Industrial Collaboration Case Study (Regular Paper) *Paulius Daubaris, Antti-Pekka Tuovinen, Simo Linkola, Cristina Vicente-Chicote, Tommi Mikkonen and Niko Mäkitalo*
	Task Decomposition and Multi-Robot Task Allocation in Exploration with Bayesian Networks (Short Paper) *Ching-Wei Chuang and Wei-Yu Lin*
Session: **IRC-5 - Neural Networks and Deep Learning** **(**Chair: TBD**)**	Neural Network Accelerated Force Estimation Rate for RMIS (Regular Paper) *Dylan R. Ochoa, Kevin Huang and Yun-Hsuan Su*
	Next Best View For Point-Cloud Model Acquisition: Bayesian Approximation and Uncertainty Analysis (Short Paper) *Madalena Caldeira and Plinio Moreno*
Session: **IRC-6 - Task Scheduling (III)** **(**Chair: TBD**)**	TEAM: Task-Clustering and Enhanced Adaptability for Meta-Reinforcement Learning on Robotics through Multi-Task Diffusion and Optimization (Short Paper) *Joshua Ho, Chien-Min Wang, Chung-Ta King, Chi-Wei Feng and Shih-Yun Sunkuan*
	Mobile Robot Dispersion in Continuous Space (Position Paper) *Andrew Dudash*
Session: **IRC-7 - Image Processing (I)** **(**Chair: TBD**)**	Towards a modern rendering engine for dynamic robotic simulations (Regular Paper) *Christopher John Allison, Haoying Zhou, Adnan Munawar, Peter Kazanzides and Juan Antonio Barragan*
	CASE: Context Aware Screen-based Estimation of Gaze (Position Paper) *Max Tran and Lisa Milkowski*
	Scene Change Detection for Robotic Patrol System (Position Paper) *Chungjae Choe, Sukjun Lee and Nakmyoung Sung*
Session: **IRC-8 - Contributions from High School Students** **(**Chair: TBD**)**	VertiPaw: Development of a Vertical Climbing Robot with Adaptive Suction and Suspension Foot Design for Infrastructure Monitoring (Regular Paper) *Eric Hou and Ray Zhao*
Session: **IRC-9 - Best Paper Session (I)** **(**Chair: TBD**)**	Hierarchical Pose Estimation and Mapping with Multi-scale Neural Feature Fields (Regular Paper) *Evgenii Kruzhkov, Alena Savinykh and Sven Behnke*

	Robotic Learning in your Backyard: A Neural Simulator from Open Source Components (Regular Paper) *Liyou Zhou, Oleg Sinavski and Athanasios Polydoros* ***Opponent: Max Tran***
	Real-world Instance-specific Image Goal Navigation: Bridging Domain Gaps via Contrastive Learning (Regular Paper) *Taichi Sakaguchi, Akira Taniguchi, Yoshinobu Hagiwara, Lotfi El Hafi, Shoichi Hasegawa and Tadahiro Tagniguchi* ***Opponent: Ammar Abbas***
Session: **IRC-10 - Best Paper Session (II)** **(**Chair: TBD**)**	Advancing Object Detection for Autonomous Vehicles via General Purpose Event-RGB Fusion (Regular Paper) *Hajer Fradi and Panagiotis Papadakis*
	Comparing the Consistency of User Studies Conducted in Simulations and Laboratory Settings (Regular Paper) *Jonathan Hümmer, Dominik Riedelbauch and Dominik Henrich* ***Opponent: Liyou Zhou***
Session: **IRC-11 - Motion Planning (II)** **(**Chair: TBD**)**	Experimental Validation of NDT-AMCL: A Precise and Reliable Localizer for Mobile Robots in Human Crowds Using Normal Distribution Transforms (Regular Paper) *Jan Weber, Moritz Heimbach and Marco Schmidt*
	Task-Difficulty-Aware Efficient Object Arrangement by Taking Advantage of Tossing Motions (Short Paper) *Takuya Kiyokawa, Mahiro Muta, Weiwei Wan and Kensuke Harada*
	Order Reduction Trajectory Tracking Control for Two-Wheeled Mobile Robots via Active Damping and PZC Techniques (Short Paper) *Gyun Ha Kim, Kwan Soo Kim, Seok-Kyoon Kim and Choon Ki Ahn*
Session: **IRC-12 - Image Processing (II)** **(**Chair: TBD**)**	Real-Time Crowd Density Estimation and Stampede Risk Assessment System Using Thermal Camera (Regular Paper) *Gyeongyeon Kim, Eunseo Ko, Dongryeong Kim, Jueun Kim, Dane Hindsley and Eric Matson*
	High-Performance Face Identification Using Hyperspectral Imaging to Counteract Deep Fake Biometrics (Short Paper) *Sota Furusawa and Chinthaka Premachandra*
	Creation of Day-Night Visible-Thermal Paired Image Dataset via Image Registration (Short Paper) *Michiya Kibe, Takeru Inoue, Junya Morioka and Ryusuke Miyamoto*
Session: **IRC-13 - Motion Planning (III)**	Development and Validation of a Digital Twin for a Commercial Mobile Robot (Regular Paper) *Wilson Eduardo Barioni, Igor Pardal Latini, Carina Toledo Scoparo Barioni, Flavio-Jr Neves, Lucia Valeria Ramos de Arruda and Marco Teixeira*

(Chair: TBD**)**

	CataBotSim: A Realistic Aquatic Simulator for Autonomous Surface Vehicle Testing (Regular Paper) *Dinithi Silva-Sassaman, Mingi Jeong, Paul Sassaman, Zitong Wu and Alberto Quattrini Li*
	A Machine learning approach for navigation quality evaluation of frequency guided AGVs (Short Paper) *Wilson Eduardo Barioni, Igor Pardal Latini, Carina Toledo Scoparo Barioni, Flavio-Jr Neves, Lucia Valeria Ramos de Arruda and Marco Teixeira*
Session: IRC-14 - Environmental Monitoring (I) (Chair: TBD)	Efficient and Resilient Multi-Robot Exploration in Complex and Unknown Indoor Environments (Regular Paper) *Huzeyfe Kocabas, Christopher Allred and Mario Harper*
	Coordinating Search with Foundation Models and Multi-Agent Reinforcement Learning in Complex Environments (Short Paper) *Christopher Allred, Jacob Haight, Chandler Justice, Isaac Peterson, Rosario Scalise, Ted Hromadka, Jason Pusey and Mario Harper*
Session: IRC-15 - Environmental Monitoring (II) (Chair: TBD)	Eco-Friendly Laser Deterrent System for Woodpeckers Utilizing YOLOv8 (Regular Paper) *Wonah Kim, Seung-Hun Han, Hyojin Kim, Jaden Soroka, Justin Allange and Anthony Smith*
	Evaluating LPWAN Technologies: Real-World Performance of LoRaWAN and 802.11ah for Monitoring System in Smart Cities (Short Paper) *Hayeon Ju, Hyeji Jang, Jiho Eum, Minji Kang, Sujeong Yim, Xavier Lopez and Anthony Smith*
	Active Vapor-Based Robotic Wiper (Short Paper) *Takuya Kiyokawa, Hiroki Katayama, Jun Takamatsu and Kensuke Harada*
Session: IRC-16 - Human-Robot Interaction (Chair: TBD)	Are You Ready? An Intelligent Robotic Assistant for Instrumental Activities of Daily Living (Short Paper) *Matthew Tognotti and Maria Kyrarini*
	TalkWithMachines: Enhancing Human-Robot Interaction for Interpretable Industrial Robotics Through Large/Vision Language Models (Short Paper) *Ammar N. Abbas and Csaba Beleznai*
	Large Language Models Capability in Handling Users' Frustration: a Case Study (Position Paper) *Alessia Fantini, Angelo Cangelosi, Gianpaolo Vitale and Giovanni Pilato*
	Immersive Virtual Cave Environments for Enhancing Human-Robot Collaboration Studies in Industrial Contexts (Position Paper) *Alexander Arntz*
Session: IRC: RC4II workshop	Towards an Operational Design Domain Framework for Autonomous Navigation in Oil & Gas Facilities *C. Kalsi, N. Songur and M. Magbagbeola*

(Chair: TBD)

	Fast and Intermittent Embedded Software Management based on Dynamic Partial Update Techniques via IR for Intelligent AI-Driven Systems *J. Lee and D. Park*
	On the Future of Robotic Industrial Inspection: Challenges and Opportunities in the Era of Generative AI *A.C. Holgado, L. Ah Kun and D. Di Paola*
	Enabling Intelligent Robotic Visual Inspection in the Railway Industry with Generative AI *P. Kilsby and L. Ah Kun*
Session: **IRC: CHARMS workshop** **(**Chair: TBD**)**	Autonomous Drone Navigation for Warehouse Inventory Using Fiducial Markers *Q. Zhang, C. Wilson, K. Onesy, C. Miranda, M. Wang*
	Mathematical model of the process of combining images of an observed object *S. Beknazarova, D. Kozhamzharova*
	Analyzing Existing Patterns in Transactions for Terrorism Financing Detection *Aigerim Bolshibayeva, Dinara Kozhamzharova, Aliya Kulbayeva, and Sabina Rakhmetulayeva*

Detailed Sessions (IEEE AIxDKE 2024)

Session	Title
Session: AIxDKE-1 Deep Learning and Language Models (Chair: Ajay Bansal)	15. BCCP: An MLOps Framework for Self-cleansing Real-Time Data Noise via Bayesian Cut-off-based Closest Pair Sampling (Regular Paper) *Seungeun Lee, Nuri Jeong, Jeongmin Je and Suk-Yun Lee*
	30. LLM-assisted generation of SWRL rules from natural language (Regular Paper) *Andreas Soularidis, Konstantinos Kotis, Myriam Lamolle, Zakaria Mejdoul, Gaëlle Lortal and George Vouros*
	22. Can GNNs outperform GAT? A study of attention efficiency for document classification in graphs (Short Paper) *Tonni Das Jui, Mary Lauren Benton and Erich Baker*
	31. IntentGuide: Neuro-Symbolic Integration for Clarifying Human Intents by Rewriting Free-Form Sentences (Short Paper) *Nikita Kiran Yeole and Michael S. Hsiao*

Session: AIxDKE-2 **Decision-Making** (Chair: Srividya Bansal)	27. Leaky Dropout - Balancing Performance and Overfitting (Regular Paper) *Ryan Parker and Ramazan Aygun*
	35. Deeper and Deeper: A Lightweight Semi-Supervised Deep Reinforcement Adaptive Learning-Based Ontology Alignment (Regular Paper) *Mehrnoosh Zaeifi, Ahmadreza Mosallanezhad andSrividya Bansal*
	50. A/B Testing-based Decision-making for Recommendation Systems (Regular Paper) *Yogesh Vaidya and Ajay Bansal*
	23. LevelEval: Adaptive Pipeline for Evaluating LLM as a Judge - Analysis on Open LLMs as Judges (Short Paper) *Mallika Boyapati, Lokesh Meesala, Ramazan Aygun, Bill Franks, Hansook Choi, Sereres Riordan and Girish Modgil*
Session: AIxDKE-3 **IoT and Knowledge Graphs (I)** (Chair: Ömer Erduran)	6. NSGA-II in DNN for Interpretable AI Predictions of Melt Pool Geometry in Digital Twin Applications within IoT-Enabled Additive Manufacturing (Regular Paper) *Mohsen Asghari Ilani and Yaser Banad*
	25. Impact of inter-case features on structure-aware next activity prediction (Regular Paper) *Claudia Diamantini, Laura Genga, Alessandro Mele and Domenico Potena*
	36. Robust BDI Agents in Autonomous Mobility on Demand (Regular Paper) *Marcel Mauri, Ömer Ibrahim Erduran and Mirjam Minor*

	7. Interpretable AI Prediction of Melt Pool Geometry in IoT-Enabled Additive Manufacturing in Industry 4.0 Utilizing CatBoost: Decision-Making via NSGA-II (Short Paper) *Mohsen Asghari Ilani and Yaser Banad*
Session: AIxDKE-4 **IoT and Knowledge Graphs (II)** **(**Chair: Paul Wang**)**	40. Cyber-Physical Fuzzing Framework for Extracting Butterfly Effect in UAV Systems (Short Paper) *Se-Han Lee, Sang-Hoon Choi and Ki-Woong Park*
	32. Retrieval-Augmented Generation for Pharmacopoeia: Application and Evaluation (Poster Paper) *Fahmi Rizaldi, Cheon Soojin, Park Yesol and Kwon Joonho*
	48. Toward a Synergistic Vulnerability Analysis Enhanced with a Multi-Level RAG Model (Poster Paper) *Min-Joo Yoon, Sun-Mo Yoo, Jong-Hwa Park and Ki-Woong Park*
	45. Detecting Cyber Attacks in Healthcare IoT Systems (Regular Paper) *Thabet Kacem, Sourou Tossou and Allan Muir*
Session: AIxDKE-5 **Healthcare & Knowledge Management** **(**Chair: Satoru Watanabe**)**	49. A Complex Event Processing Framework for Patients with Diabetes (Regular Paper) *Lorenzo Tucceri Cimini and Fabio Persia*
	10. AI Technologies Enhancement Using Data Catalog on Data Lake (Short Paper) *Satoru Watanabe*
	28. TAACKIT: Track Annotation and Analytics with Continuous Knowledge Integration Tool (Short Paper) *Lily Lee*

Session: AIxDKE-6 **Classification & Prediction** **(**Chair: Kaoru Shimada**)**	16. Instance-Based Discovery of ItemSBs Leveraging Individuality Through Discretization (Regular Paper) *Yasuhiro Suzuki and Kaoru Shimada*
	33. Text-KG Distill: Textual Knowledge Distillation for Enhanced KG Embeddings (Regular Paper) *Tiroshan Madushanka and Ryutaro Ichise*
	12. Using Machine Learning in Analyzing Air Quality Discrepancies of Environmental Impact (Poster Paper) *Paul Wang, Radhouane Chouchane, Jin Guo and Michael Bailey Bailey*
	14. The Power of Ensemble Methods: A Comparative Study of Machine Learning, Deep Learning, and LLMs for Financial Fraud Detection (Poster Paper) *Zahra Rezaei, Sara Safi Samghabad, Mohammad Amin Amini and Yaser Mike Banad*
Session: AIxDKE-7 **Learning methods and AI agents** **(Chair:** Churn-Jung Liau**)**	9. Mitigating Bias in Reinforcement Learning from Human Feedback for Large Language Models (Short Paper) *Chaithanya Ravulu*
	20. Performance Analysis of Time Series Databases: A Comparison in Cloud and Physical Environments (Short Paper) *Haoming Tong, Sunghwan Jeon and Yunmook Nah*
	38. Prompt-based Generation Strategy for Imbalanced Information Security Rating Dataset Augmentation (Short Paper) *Yuna Han, Simon Shim, Deva Gajulamandyam and Hangbae Chang*

	8. Brain Tumor Detection Using Transfer Learning-Based CNN Architectures in IoT Healthcare Industries (Poster Paper) *Mohsen Asghari Ilani and Yaser Banad*
Session: **Workshop AIxDKE - GKERD** **(**Chair: TBA**)**	Extraction of character networks from TV series data *Paolo Fantozzi, Luigi Laura, Maurizio Naldi and Paola Dalla Torre*
	Semantic Segmentation of Gliomas on Brain MRIs by Graph Convolutional Neural Networks *Domenico Amato, Salvatore Calderaro, Giosuè Lo Bosco, Riccardo Rizzo and Filippo Vella*
	A GNN model for the prediction of snoRNA-disease associations based on snoRNA secondary structures and LLM disease embedding *Isabella Mendolia, Andrea Licciardi, Antonino Fiannaca, Laura La Paglia, Massimo La Rosa and Alfonso Urso*
Session: **Workshop AIxDKE - HCAI** **(**Chair: Giovanni Pilato**)**	Towards Alternating-time Temporal Logic with Uncertainty and Fuzziness *Churn-Jung Liau*
	Recent Advances in Human-Machine Collaborative Decision-Making and Statistical Modeling *Baocheng Geng, Chen Quan and Pramod Varshney*
	Query Answering for Tabular Data Using Large Language Models *Minsik Oh and Jonghoon Chun*