

Program at a glance (IEEE ISM/AIKE 2021)
All times are in Central European Time (CET)

Monday, November 29	
Time (CET)	Virtual Room (ISM 2021)
17:40 - 18:00	Opening Ceremony (Chairs: Phillip Sheu and Fabio Persia)
18:00 - 19:00	Keynote 1: Ophir Frieder (Chair: Fabio Persia)
19:00 - 20:35	Session 1 - Image and Video Processing (3 regular papers, 1 poster paper) (Chair: Lorenzo De Lauretis)
20:35 - 21:00	Break
21:00 - 22:25	Session 2 - Anomaly Detection (4 short papers) (Chair: Vasileios Mezaris)
22:25 - 00:30	Session 3 - Extended Reality (4 regular papers, 1 short paper) (Chair: Vishy Swaminathan)

Tuesday, November 30	
Time\ Place (CET)	Virtual Room (ISM 2021)
10:00 - 11:00	Keynote 2: Kiyoharu Aizawa (Chair: Max Mühlhäuser)
11:00 - 12:25	Session 4 - Matching and Recognition (1 regular paper, 2 short papers, 1 poster paper) (Chair: Ling XIAO, The University of Tokyo)
12:25 - 13:35	Session 5 - Classification and Filter (1 regular paper, 2 short papers) (Chair: Toshihiko Yamasaki, The University of Tokyo)
13:35 - 14:00	Break
14:00 - 16:00	Session 6 - Best Paper Session (I) (4 best paper candidates) (Chair: Mouzhi Ge) (Committee: Ophir Frieder, Robert Mertens)
16:00 - 16:15	Break
16:15 - 17:45	Session 7 - Best Paper Session (II) (3 best paper candidates) (Chair: Mouzhi Ge) (Committee: Ophir Frieder, Robert Mertens)
17:45 - 18:00	Break
18:00 - 19:00	Session 8 - Self Introduction and Plenary (Chair: Phillip Sheu)
19:00 - 20:10	Session 9 - Recommendation Systems in Multimedia (1 regular paper, 2 short papers) (Chair: Mustafa Sert)
20:10 - 21:10	Session 10 - Miscellaneous Applications (I) (2 short papers, 1 poster paper) (Chair: Giovanni Pilato)

Wednesday, December 1

Time\ Place (CET)	Time\ Place (PST)	Virtual Room (ISM 2021)	Virtual Room (AIKE 2021)
09:00 - 10:00	00:00 - 01:00	Session 11 - Miscellaneous Applications (II) (2 short papers, 1 poster paper) (Chair: Ling XIAO, The University of Tokyo)	
10:00 - 11:00	01:00 - 02:00	Keynote 3: Pavel Zezula (Chair: Mustafa Sert)	
11:00 - 12:55	02:00 - 03:55	Session 12 - Image and Video Coding (2 regular papers, 3 short papers) (Chair: João Ascenso)	
12:55 - 13:10	03:55 - 04:10	Break	
13:10 - 14:40	04:10 - 05:40	Session 13 - Neural Networks and Multimedia (1 regular paper, 3 short papers) (Chair: Michael Zink)	
14:40 - 15:30	05:40 - 06:30	MTEL Workshop (3 workshop papers) (Chair: Florian Schimanke)	
15:30 - 16:00	06:30 - 07:00	Session 14: Award Announcements (Chair: Fabio Persia)	
16:00 - 17:00	07:00 - 08:00	Keynote 4: Sarah Stamps (Chair: Ajay Bansal)	
17:00 - 18:00	08:00 - 09:00	Keynote 5: Kerstin Bach (Chair: Mirjam Minor)	
18:00 - 18:15	09:00 - 09:15		AIKE Opening Ceremony (Chairs: Phillip Sheu, Ajay Bansal)
18:15 - 19:30	9:15 - 10:30		AIKE Session 1 - Learning I (3 regular and 1 short papers) (Chair: Mirjam Minor)

19:30 - 21:00	10:30 - 12:00		AIKE Session 2 - Knowledge Management (3 regular and 2 short papers) (Chair: Ajay Bansal)
21:00 - 21:30	12:00 - 12:30	Break	
21:30 - 22:00	12:30 - 13:00		Self-Introductions and Plenary (Chair: Phillip Sheu)
22:00 - 23:45	13:00 - 14:45		AIKE Session 3 - Classification (3 regular and 3 short papers) (Chair: Srividya Bansal)
23:45 - 01:25	14:45 - 16:25		AIKE Session 4 - Learning II (3 regular and 4 poster papers) (Chair: Seong-je Cho)

Detailed Sessions (IEEE ISM 2021)

Session	Title
Session 1: Image and Video Processing (Chair: Lorenzo De Lauretis)	360ViewPET: View Based Pose EsTimation for Ultra-Sparse 360-Degree Cameras (Regular Paper). <i>Qian Zhou, Bo Chen, Zhe Yang, Hongpeng Guo and Klara Nahrstedt.</i>
	Improving 360-Degree Video Field-of-View Prediction and Edge Caching poster(Regular Paper). <i>Alihsan Samiei and Ravi Prakash.</i>
	BOhance: Bayesian Optimization for Content Enhancement (Regular Paper). <i>Trisha Mittal, Vishy Swaminathan, Somdeb Sarkhel, Ritwik Sinha, David Arbour, Saayan Mitra and Dinesh Manocha.</i>
	A Web Service for Video Smart-Cropping (Poster Paper). <i>Konstantinos Apostolidis and Vasileios Mezaris.</i>
Session 2: Anomaly Detection (Chair: Vasileios Mezaris)	Anomaly Detection in Smart Home Environments using Convolutional Neural Network (Short Paper). <i>Naci Mert Ercan and Mustafa Sert.</i>
	Weakly Supervised Anomaly Detection for Streaming Data (Short Paper). <i>Wei Zhang and Chris Challis.</i>
	Knowledge-Based Wavelet Filters Prominently Detect Spoofed Speech (Short Paper). <i>Alex Marino Gonçalves de Almeida and Rodrigo Capobianco Guido.</i>
	Damage Detection of the RC Building in TLS Point Clouds Using 3D Deep Neural Network PointNet++ (Short Paper). <i>Wanpeng Shao, Kenichi Kakizaki, Shunsuke Araki and Tomohisa Mukai.</i>
Session 3: Extended Reality (Chair: Vishy Swaminathan)	Head Rotation Model for Virtual Reality System Level Simulations (Regular Paper). <i>Steve Blandino, Tanguy Ropitault, Raied Caromi, Jacob Chakareski, Mahmudur Khan and Nada Golmie.</i>
	Space-Warp with Depth Propagation In XR Applications (Regular Paper). <i>Yingen Xiong and Christopher Peri.</i>
	RealityCheck: A Tool to Evaluate Spatial Inconsistency in Augmented Reality (Regular Paper). <i>Carter Slocum, Xukan Ran and Jiasi Chen.</i>

	<p>SHECS: A Local Smart Hands-free Elderly Care Support System on Smart AR Glasses with AI Technology (Regular Paper). <i>Donghuo Zeng, Jianming Wu, Bo Yang, Tomohiro Obara, Akeri Okawa, Nobuko Iino, Gen Hattori, Ryoichi Kawada and Yasuhiro Takishima.</i></p>
	<p>Your Stuffed Toy as a Controller! A Tangible Marker-based Interface for Play (Short Paper). <i>Zackary P. T. Sin, Peter Ng and Hong Va Leong.</i></p>
<p>Session 4: Matching and Recognition</p> <p>(Chair: Ling XIAO)</p>	<p>Fast Startup Multicast Streaming on Operator IPTV Networks using HESP (Regular Paper). <i>Egon Okerman and Johan Vounckx.</i></p>
	<p>A two-stream heterogeneous network for action recognition based on skeleton and RGB modalities (Short Paper). <i>Kai Liu, Lei Gao, Naimul Mefraz Khan, Lin Qi and Ling Guan.</i></p>
	<p>Open-source RTP Library for End-to-End Encrypted Real-Time Video Streaming Applications (Short Paper). <i>Joni Räsänen, Aaro Altonen, Alexandre Mercat and Jarno Vanne.</i></p>
	<p>The Study of Optimal Layout of Command Recognition Area in Implicit Eye-controlled Interfaces (Poster Paper). <i>Jibin Yin, Chaoxi Lu and Haonan Qin.</i></p>
<p>Session 5: Classification and Filter</p> <p>(Chair: Toshihiko Yamasaki)</p>	<p>Content-adaptive convolutional neural network post-processing filter (Regular Paper). <i>Maria Santamaria, Yat-Hong Lam, Francesco Cricri, Jani Lainema, Ramin G. Youvalari, Honglei Zhang, Miska M. Hannuksela and Esa Rahtu.</i></p>
	<p>Comprehensive Saliency Fusion for Object Co-segmentation (Short Paper). <i>Harshit Chhabra and Koteswar Rao Jerripothula.</i></p>
	<p>Semi-Supervised Audio Classification with Partially Labeled Data (Short Paper). <i>Siddharth Gururani and Alexander Lerch.</i></p>
<p>Session 6: Best Paper Session (I)</p> <p>(Chair: Mouzhi Ge)</p>	<p>Dynamic Motion Matching: Context-Aware Character Animation with Subspaces Ensembling (Regular Paper). <i>Adan Häfliger and Shuichi Kurabayashi.</i></p> <p>Opponent: Zackary P.T. Sin</p>
	<p>Inverse kinematics for full-body self representation in VR-based cognitive rehabilitation (Regular Paper). <i>Larissa Wagnerberger, Detlef Runde, Mustafa Teyfik Lafci, David Przewozny, Sebastian Bosse and Paul Chojeci.</i></p> <p>Opponent: Ayush Sarkar</p>

	<p>Ranking Micro-Influencers: a Novel Multi-Task Learning and Interpretable Framework (Regular Paper). <i>Adam Elwood, Alberto Gasparin and Alessandro Rozza.</i></p> <p>Opponent: Nannan Zou</p>
	<p>L3BOU: Low Latency, Low Bandwidth, Optimized Super-Resolution Backhaul for 360-Degree Video Streaming (Regular Paper). <i>Ayush Sarkar, John Murray, Malleshham Dasari, Michael Zink and Klara Nahrstedt.</i></p> <p>Opponent: Larissa Wagnerberger</p>
<p>Session 7: Best Paper Session (II)</p> <p>(Chair: Mouzhi Ge)</p>	<p>A hybrid NDN-IP Architecture for Live Video Streaming: A QoE Analysis (Regular Paper). <i>Ishita Dasgupta, Susmit Shannigrahi and Michael Zink.</i></p> <p>Opponent: Anastasia Natsiou</p>
	<p>Adversarial Perturbation Suppression using Adaptive Gaussian Smoothing and Color Reduction (Regular Paper). <i>Li-Yun Wang.</i></p> <p>Opponent: Kai Liu</p>
	<p>Novel Datasets for Evaluating Song Popularity Prediction Tasks (Regular Paper). <i>Michael Vötter, Maximilian Mayerl, Günther Specht and Eva Zangerle.</i></p> <p>Opponent: Carter Slocum</p>
<p>Session 9: Recommendation Systems in Multimedia</p> <p>(Chair: Mustafa Sert)</p>	<p>Open-domain Trending Hashtag Recommendation for Videos (Regular Paper). <i>Swapneel Mehta, Somdeb Sarkhel, Xiang Chen, Saayan Mitra, Viswanathan Swaminathan, Ryan Rossi, Ali Aminian, Han Guo and Kshitiz Garg.</i></p>
	<p>User Profiling for Tourist Trip Recommendations using Social Sensing (Short Paper). <i>Vincenzo Emanuele Carusotto, Giovanni Pilato, Fabio Persia and Mouzhi Ge.</i></p>
	<p>Enhancing Personalised Recommendations with the Use of Multimodal Information (Short Paper). <i>Taner Cagali, Mehrnoosh Sadrzadeh and Chris Newell.</i></p>
<p>Session 10: Miscellaneous Applications (I)</p> <p>(Chair: Giovanni Pilato)</p>	<p>Cross-Modality Wood Log Tracing (Short Paper). <i>Georg Wimmer, Rudolf Schraml, Lukas Lamminger, Alexander Petuschnigg and Andreas Uhl.</i></p>

	Combining Linked Open Data and Multimedia Knowledge Base for Digital Cultural Heritage Robotic Applications (Short Paper). <i>Kurosh Madani, Antonio M. Rinaldi and Cristiano Russo.</i>
	Social Interaction in Virtual Shopping (Poster Paper). <i>Nada Nasser, Elhassan Makled, Nada Sharaf and Slim Abdennadher.</i>
Session 11: Miscellaneous Applications (II) (Chair: Ling XIAO)	Analyses and Benchmark of a Spontaneous Student Affect Database (Short Paper). <i>Bo Sun, Sixu Lu, Yang Wen, Jun He and Lejun Yu.</i>
	Automated Clipping of Soccer Events using Machine Learning (Short Paper). <i>Joakim Valand, Haris Kadragic, Vajira Thambawita, Steven Hicks, Cise Midoglu, Tomas Kupka, Dag Johansen, Michael Riegler and Pål Halvorsen.</i>
	Effect of memory soft errors on media applications (Poster Paper). <i>Pooja Sundar, Suresh Vasu, Nithin Venkatesh and Praveen Prasad.</i>
Session 12: Image and Video Coding (Chair: João Ascenso)	Enhancing Image Coding for Machines with Compressed Feature Residuals (Regular Paper). <i>Joni Seppälä, Honglei Zhang, Nam Le, Ramin Ghaznavi-Youvalari, Francesco Cricri, Hamed Rezazadegan Tavakoli, Emre Aksu, Miska Hannuksela and Esa Rahtu.</i>
	Combining Global and Local Attention with Positional Encoding for Video Summarization (Regular Paper). <i>Evlampios Apostolidis, Georgios Balaouras, Vasileios Mezaris and Ioannis Patras.</i>
	Learned Enhancement Filters for Image Coding for Machines (Short Paper). <i>Jukka Ilari Ahonen, Ramin Ghaznavi Youvalari, Nam Le, Honglei Zhang, Francesco Cricri, Hamed Rezazadegan Tavakoli, Miska Hannuksela and Esa Rahtu.</i>
	Adaptation and Attention for Neural Video Coding (Short Paper). <i>Nannan Zou, Honglei Zhang, Francesco Cricri, Ramin G. Youvalari, Hamed R. Tavakoli, Jani Lainema, Emre Aksu, Miska Hannuksela and Esa Rahtu.</i>
	A sinusoidal signal reconstruction method for the inversion of the mel-spectrogram (Short Paper). <i>Anastasia Natsiou and Seán O'Leary.</i>

<p>Session 13: Neural Networks and Multimedia</p> <p>(Chair: Michael Zink)</p>	<p>Edge-Level Explanations for Graph Neural Networks by Extending Explainability Methods for Convolutional Neural Networks (Short Paper). <i>Tetsu Kasanishi, Xueting Wang and Toshihiko Yamasaki.</i></p>
	<p>Sequential Banner Design Optimization with Deep Reinforcement Learning (Short Paper). <i>Yusuke Kondo, Xueting Wang, Hiroyuki Seshime and Toshihiko Yamasaki.</i></p>
	<p>CCAP: Cooperative Context Aware Pruning for Neural Network Model Compression (Short Paper). <i>Li-Yun Wang.</i></p>
	<p>An Analysis of Lightweight Convolutional Neural Networks for Parking Space Occupancy Detection (Regular Paper). <i>Joshua Ellis, Anthony Harris, Naseem Saquer and Razib Iqbal.</i></p>
<p>MTEL Workshop</p> <p>(Chair: Florian Schimanke)</p>	<p>Intelligent Voice Assistant to Facilitate Elementary School English Learning: A Case Study Using Amazon Echo Dot (Workshop Paper). <i>Yi-Chieh Wu.</i></p>
	<p>The Impact of Spaced Repetition Learning on the Learning Success in Mobile Learning Games (Workshop Paper). <i>Florian Schimanke.</i></p>
	<p>Identifying Keyword Predictors in Lecture Video Screen Text (Workshop Paper). <i>Farah Naz Chowdhury.</i></p>

Detailed Sessions (IEEE AIKE 2021)

Session	Title
Session 1: Learning I (3 regular and 1 short papers) (Chair: Mirjam Minor) Regular paper: 20 mins Short paper: 15 mins	18. Increased Robustness of Object Detection on Aerial Image Datasets using Simulated Imagery (Regular Paper). <i>Kai Konen and Tobias Hecking.</i>
	22. Transfer Learning Operators for Process-oriented Cases (Regular Paper). <i>Mirjam Minor, Miriam Herold, Julius Rubbe, Stefan Dufner and Georgios Brussas.</i>
	26. Privacy-preserving Sharing of Industrial Maintenance Reports in Industry 4.0 (Regular Paper). <i>Hicham Hossayni, Imran Khan and Noel Crespi.</i>
	20. I have a model now what? On Continuous Integration, Continuous Delivery for Automated Deployment using MLOps (Short Paper). <i>Satvik Garg, Pradyumn Pundir, Geetanjali Rathee, Pradeep Gupta, Somya Garg and Saransh Ahlawat.</i>
Session 2: Knowledge Management (3 regular and 2 short papers) (Chair: Ajay Bansal) Regular paper: 20 mins Short paper: 15 mins	15. Towards Intelligent Legal Advisors for Document Retrieval and Question-Answering in German Legal Documents (Short Paper). <i>Christoph Hoppe, David Pelkmann, Nico Migenda, Daniel Hötte and Wolfram Schenck.</i>
	23. Controlled Query Evaluation over Ontologies through Policies with Numerical Restrictions (Short Paper). <i>Gianluca Cima, Domenico Lembo, Lorenzo Marconi, Riccardo Rosati, Domenico Fabio Savo and Daniele Sinibaldi.</i>
	12. A Survey on Open Set Recognition (Regular Paper). <i>Atefeh Mahdavi and Marco Carvalho.</i>
	21. Cross-lingual timeline summarization (Regular Paper). <i>Luca Cagliero, Moreno La Quatra, Paolo Garza and Elena Baralis.</i>
	33. Integrating a General Search Agent into an Imperative Programming Language (Regular Paper). <i>James Smith, Chris Henderson and Ajay Bansal.</i>
Session 3: Classification (3 regular and 3 short papers) (Chair: Srividya Bansal)	14. Robustness of Bayesian Neural Networks to White-Box Adversarial Attacks (Regular Paper). <i>Adaku Uchendu, Daniel Campoy, Christopher Menart and Alexandra Hildenbrandt.</i>
	29. A Machine Learning predictive model to classify severity (Benign or Malignant) of Breast Cancer based on Mammographic Mass Dataset

Regular paper: 20 mins Short paper: 15 mins	(Regular Paper). <i>A.K.M. Kamrul Islam.</i>
	34. Multi-Class Classification with Asymmetric Error Control for Medical Disease Diagnosis (Regular Paper). <i>Wasif Bokhari, James Smith and Ajay Bansal.</i>
	13. Data-Blind ML: Building privacy-aware machine learning models without direct data access (Short Paper). <i>Javier Pastorino and Ashis Kumer Biswas.</i>
	24. A Survey on State-of-the-art Techniques for Knowledge Graphs Construction and Challenges ahead (Short Paper). <i>Ali Hur, Naeem Janjua and Mohiuddin Ahmed.</i>
	4. Audio-Visual Event Localization based on Cross-Modal Interacting Guidance (Short Paper). <i>Qiurui Yue, Xiaoyu Wu and Jiayi Gao.</i>
Session 4: Learning II (3 regular and 4 poster papers) (Chair: Seong-je Cho) Regular paper: 20 mins Poster paper: 10 mins	7. Captcha Recognition based on Multi-task Convolutional Neural Network and Active Learning (Regular Paper). <i>Jucheng Qiu and Xiaoyu Wu.</i>
	27. Evolutionary Method to Discover Itemsets with Statistically Distinctive Backgrounds (Regular Paper). <i>Kaoru Shimada, Takaaki Arahira and Shogo Matsuno.</i>
	31. QLiG: Query Like a Graph For Subgraph Matching (Regular Paper). <i>Sumit Purohit, Patrick Mackey, Jeremy D Zucker, Ankur Bohra, Rahul Deshmukh and George Chin.</i>
	10. Deep Ensemble Learning Model for Long-Term Travel Time Prediction on Highways (Poster Paper). <i>Chih-Chieh Hung.</i>
	28. Epileptic Seizure Recognition Using EEG Signal Based on LSTM Models (Poster Paper). <i>A.K.M. Kamrul Islam.</i>
	30. Time-frequency Based EEG Motor Imagery Signal Classification with Deep Learning Network (Poster Paper). <i>A.K.M. Kamrul Islam.</i>
	39. The Quantum Mechanics Propagator as the Machine Learning Performance in Space-Time Displacements (Poster Paper). <i>Huber Nieto Chaupis.</i>