

# **2024 IEEE 15th International Conference on Cognitive Infocommunications (CogInfoCom 2024)**

**Hachioji, Tokyo, Japan  
16-18 September 2024**



**IEEE Catalog Number:** CFP2426R-POD  
**ISBN:** 979-8-3503-7825-2

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

**\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.**

IEEE Catalog Number:	CFP2426R-POD
ISBN (Print-On-Demand):	979-8-3503-7825-2
ISBN (Online):	979-8-3503-7824-5
ISSN:	2380-7350

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## TABLE OF CONTENTS

Investigation of Sentiments in Virtual Reality Game Reviews..... <i>Tibor Guzsvinecz, Judit Szucs</i>	11
Memes in the Machine: Ideological Propagation in Large Language Models .....	17
<i>Harriet Farlow, Claudio Ceruti, Matthew Garratt, Gavin Mount, Timothy Lynar</i>	
Issues in the Ethics of Using Generative AI .....	25
<i>Carl Vogel, Anna Esposito</i>	
Cloth Extraction and Restoration from DeepFashion for Pre-Training CNNs in Laundry Classification.....	31
<i>Nico Rabetge, Sven Heutger, Franz Kummert</i>	
Hypergraph-Based Modeling of Cognitive Dataflow Systems.....	37
<i>Csaba Hajdu, Adam B. Csapo</i>	
Assessing and Evaluating Potential Systems Resilience .....	43
<i>Eszter Sós, Péter Földesi, Borbala Tamás</i>	
MonoSR: A Monoidal-Monad Pattern for Bridging Gaps in Developer Communication and Code Semantics .....	51
<i>Ádám B. Csapó</i>	
Eye Movement Patterns Are Similar During Accurate Multiple-Target Tracking .....	59
<i>Kamyar Bagha, Shiva Kamkar, Hamid Abrishami Moghaddam, Lauri Oksama, Jie Li, Jukka Hyölä</i>	
How People Enjoy an Experience at an Amusement Park: Analysis of Brainwave .....	65
<i>Haruki Watanabe, Ayane Oki, G U Xiao, Kazutaka Ueda, Yuko Hiramatsu, Madoka Hasegawa, Yasunari Harada, Miwa Morishita, Atsushi Ito</i>	
Exploring Personalized Information Organization Strategies Using Obsidian in Higher Education .....	71
<i>Ildikó Horváth</i>	
Classification of the Noisy Texts Based on Feature Vectors.....	77
<i>Erzsébet Tóth, Zoltan Gal</i>	
A Numerical Study of Scientific Consensus Formation: A Case Study of Copernican Revolution .....	85
<i>Natsuko Katase, Takuma Torii, Shohei Hidaka</i>	
Motion Energy Alignment Analysis in Dialogue.....	91
<i>Zohreh Khosroabegi, Maria Koutsombogera, Carl Vogel</i>	
Transforming Higher Education with AI: A Cognitive Infocommunications Perspective .....	97
<i>Ildikó Horváth</i>	
Design and Development of Robust Yoga Pose Classifier Using Embedded Machine Learning.....	103
<i>Anushka Bhatt, Aastha Mishra, Udit Narayan Bera</i>	
Lean Supported Digital Education : Developing a Pull Digital Education Strategy .....	109
<i>Mária Csernoch, Júlia Csernoch</i>	

Virtual and Augmented Reality in Education Based on CogInfoCom and cVR Conference Insights.....	115
<i>Borbála Berki, Anna Sudár</i>	
"Interactive AI for Software Development Learning: Shifting Focus to Requirement Specification" .....	121
<i>Ami Otsuka, Akira Sasaki, Atsushi Ito</i>	
The Relationship Between Interoceptive Sensibility and Perceptual Switching .....	127
<i>Kairi Sugimoto, Katsumi Watanabe</i>	
Stick Shape Perception by Pseudo-Haptics Using Visual Stimuli.....	133
<i>Yuta Taneichi, Mie Sato</i>	
Outlines of a Fuzzy Approach for Characterizing Purposefulness in Human and LLM Generated Text.....	137
<i>Ádám B. Csapó</i>	
Weight Illusion by Emphasizing the Arm Motion Trajectory During Avatar Transformation.....	143
<i>Kosei Tomioka, Naoki Hashimoto, Mie Sato</i>	
TRRRACED – Towards Reproducible, Replicable and Reusable Affective Computing Experiments and Data.....	147
<i>Paul Schreiber, Florian Grensing, Maria Maleshkova</i>	
Questions of Digital Text Management in Library Environment .....	155
<i>Mária Csénoch, Keve Nagy, Júlia Csénoch, Erzsébet Dani</i>	
Emotional Valence and Gender Effects on Willingness to Interact with Virtual Agents in People with Depressive Symptoms .....	161
<i>Rosa Milo, Gennaro Cordasco, Anna Esposito</i>	
Presence and Navigational Experience in Desktop Virtual Reality .....	167
<i>Borbála Berki</i>	
How Willingness to Interact and Intelligibility of the Voice Affect Children's Interaction with an Interactive Dialogue System : A Pilot Study .....	173
<i>Miriam Veneziano, Marialucia Cuciniello, Terry Amorese, Gennaro Cordasco, Carl Vogel, Anna Esposito</i>	
Evaluating Objective Vs. Subjective Questionnaire Difficulty in Virtual Reality and 2D Web Scenarios .....	181
<i>Anna Sudár</i>	
Impact of Network Quality on Multiple Terminal Connections Using 802.11ah .....	187
<i>Yoshiko Sueda, Arata Koike</i>	
Evaluation of the Effectiveness of Spinning Aufheben Method : -Comparison of Idea Generation Methods-.....	189
<i>Atsushi Sakahara, Atsushi Ito, Madoka Hasegawa, Naoya Tsuruta, Yuta Takagi</i>	
Supporting Learning Processes Using Emerging Technologies and Gamification.....	197
<i>Ádám Gulácsi, Nikolett Dienes-Gulácsi, Róbert Tóth</i>	
Innovative Tools for Children's Language Learning: A Progressive Web Application Perspective.....	203
<i>Judit Szucs, Szofi Anna Egyed, Tibor Guzsvinecz, Patrik Vogronics</i>	
Advancing Data Science Education for Society 5.0: Identifying Gaps and Proposing Solutions .....	209
<i>Guanhong Li, Xiaoyun Guo</i>	

Computer Aided Learning of Mathematics : Survey Results .....	.211
<i>Katarzyna Chmielewska, Agnieszka Lukasiewicz</i>	
Applications of Virtual Reality for Teaching Dance History.....	217
<i>Anna Mária Bólya, Attila Gilányi, Katarzyna Chmielewska</i>	
The Social Contract .....	223
<i>Carl Vogel</i>	
Towards Understanding Player Experience Between Classic and Unfair 2D Platform Video Games .....	229
<i>Tibor Csali, Judit Szucs, Tibor Guzsvinecz</i>	
Navigation Design to Improve Interaction Technique in Multi-Browser Virtual Environment.....	235
<i>Mochammad Hannats Hanafî Ichsan, Cecilia Sik-Lanyi, Tibor Guzsvinecz</i>	
Optimizing User Interaction with Combined Avatars in BIM Systems.....	241
<i>Ildikó Horváth, Borbála Berki, Péter Baranyi</i>	
Trends in the Adoption of VR Technologies for Online Conferences .....	247
<i>Ildikó Horváth, Anna Sudár, Péter Baranyi</i>	
Impact of Rewarding and Punitive Behaviors on Robot-Induced Human Actions.....	253
<i>Otomo Uchikawa, Mihoko Niitsuma</i>	
Multi-Agents Trajectory Prediction for Autonomous Vehicles with Multi-Modal Predictions .....	259
<i>Husam A. Neamah, Mohammad Alghazawi, Peter Korondi</i>	
Effectiveness of Imagery Technique Supported by Virtual Reality Among Athletes .....	265
<i>Panna Márkus, Csilla Csukonyi, Ignéczi Tibor, Péter Korondi</i>	
The Role of Emotional Intelligence and Technological Adaptation in Human-Robot Interactions.....	271
<i>Bence Tamás Selejő Joó, Csilla Csukonyi, Balázs Orsi, Sebestyén Uray, Péter Korondi</i>	

#### **Author Index**