

PROGRAMME

9th International XR-Metaverse Conference

18-22 May 2024
Bexco, Busan, S. Korea
Hosted by Dong-Eui University



동의대학교
DONG-EUI UNIVERSITY



IAITI
International
Association of
Immersive Technology
Innovation





Location:

18 May 2024 - Doctoral Research Seminar

Dong-eui University
176 Eomgwang-ro, Busanjin-gu, Busan

20 May 2024 - Day 1:

Design Council Busan 6F
57 Centumdong-ro, Haeundae-gu, Busan

21-22 May 2024- Day 2-3:

BEXCO Convention Hall 2F
55 APEC-ro, Haeundae-gu, Busan



Events:

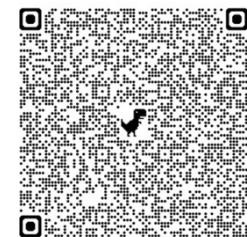
20 May 2024 - Day 1:

Welcome Party
Yeokjeon Grandma Beer
Busan Centum Branch
51 Centumdong-ro, Haeundae-gu, Busan



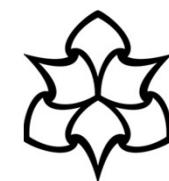
21 May 2024 - Day 2:

LaBellacitta Cheongsapo Branch
38, Cheongsapo-ro 58beon-gil, Haeundae-gu, Busan



ORGANIZATION

- IAITI (International Association of Immersive Technology Innovation)
- AI Research ICT Research Center, Dong-eui University
- SCSC Research Center, Pusan National University
- Manchester Metropolitan University



Manchester
Metropolitan
University

WELCOME



Timothy Jung

[Manchester Metropolitan University](#)

Chair Professor, Conference Chair
President, IAITI



Seok Chan Jeong

[Dong-eui University](#)

Professor, Conference Host and Local
Chair



M. Claudia tom Dieck

[Manchester Metropolitan University](#)

Reader, Academic Program Chair,
Director of Research, IAITI



Sung-Hee Kim

[Dong-eui University](#)

Professor, Conference Local
Programme Chair

CONFERENCE TEAM

Conference Host and Local Chair – Prof. Seok Chan Jeong, Dong-eui University, South Korea

Host Secretariat – Prof. Sunghyun Sim, Dong-eui University, South Korea

Conference Chair – Prof. Timothy Jung, Manchester Metropolitan University, UK

Academic Program Chair – Dr. Mandy Claudia tom Dieck, Manchester Metropolitan University, UK

Local Program Chair – Prof. Sung-Hee Kim, Dong-eui University, South Korea

Networking Chair – Prof. Dai-In Han, Zuyd University of Applied Sciences, Netherlands

Web Chair – Jung Soon Kim, Dong-eui University, South Korea

Social Media Strategist - Eunice Cijntje, University of Curacao, Curacao

Publicity Chair USA – Prof. Sun Joo (Grace) Ahn, University of Georgia, USA

Publicity Chair Europe – Prof. Philipp Rauschnabel , Universität der Bundeswehr München, Germany

Publicity Chair MENA – Dr. Ramy Hammady, University of Essex, UK

Publicity Chair Asia – Prof. Seok Chan Jeong , Dong-eui University, South Korea

2024 CONFERENCE COMMITTEE (ASIA/South Korea)

Prof. Seok Chan Jeong, Dong-eui University, South Korea

President Sung Bae Jun, Institute of Information & communications Technology Planning & Evaluation (IITP), South Korea

Prof. Sung-Hee Kim, Dong-eui University, South Korea

Prof. Sunghyun Sim, Dong-eui University, South Korea

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Prof. Tae Hwan Yoon, Dong-eui University, South Korea

Director of the Headquarters, You Sub Cho, Gyeongnam Technopark, South Korea

Prof. Jaesung Kim, Hanbat National University, South Korea

Dr. Myungil Kim, Korea Institute of Science and Technology Information (KISTI), South Korea

Monica Cha, CMO, YMX Co., South Korea

Prof. Yan SHI, Tokai University, Japan

Dr. Li Chi Ho Jimmy, Hong Kong Metropolitan University, Hong Kong

Dr. Agus Windharto, Institut Teknologi Sepuluh Nopember (ITS), Indonesia

Academic Keynote Speakers



Philipp A. Rauschnabel

[Universität der Bundeswehr
München](#)

XR / Spatial Computing
Researcher and Speaker
20th of May, 2024



Sun Joo Grace Ahn

[University of Georgia](#)

Professor at Grady College of
Journalism and Mass
Communication
22th of May, 2024



Woontack Woo

[KAIST](#)

Professor of UVR Lab

21st of May, 2024



Mark Billinghurst

[University of South Australia](#)
Director, Australian Research
Centre for Interactive and Virtual
Environments (IVE)
20nd May, 2024

Industry Keynote Speakers



Bibhas Roy

NHS

Consultant Orthopaedic Surgeon

20th of May, 2024

Philipp Sostmann

PWC

Intrapreneur, Speaker, Advisor

21st of May, 2024

DongKyu Kim

CALIVERSE

CEO

21st of May, 2024

Jennifer Hwang

NAVER Z

Tech Evangelist

21st of May, 2024

Industry Keynote Speakers



Harsh Gandhi

AstraZeneca

Chief Digital & Information
Officer

22nd of May, 2024



Robin Moser

EPAM

Head of Web3 & Metaverse

22nd of May, 2024



Jun Woo Lee

IITP

PM of Contents & Media Projects

22nd of May, 2024



TaeYeol Kim

Busan IT Industry promotion
Agency

President & CEO

22nd of May, 2024

EXHIBITORS & SPONSORS



IITP 정보통신기획평가원



부산정보산업진흥원
Busan IT Industry Promotion Agency



Zuyd Hogeschool ZU YD



Selim 세림 TSG



CALIVERSE





Saturday, 18th of May 2024



10:00 - 10:30	WELCOME Opening Remarks	
10:30 – 12:00	Session 1 : Uncovering Research Gaps and Dissertation Topics Strategies and tips for identifying compelling research gaps in XR. Interactive workshop on refining dissertation topics for impact and feasibility	
10:30 – 12:00	Session 2: Navigating the Publication Maze Common obstacles encountered when publishing XR research and how to overcome them. Expert panel discussion featuring guest speakers with extensive experience in XR research publication	
12:00 – 13:20	Lunch	
13:20 - 14:20	Session 3 : Crafting Impactful Papers The role of language in enhancing the clarity, engagement, and impact of your research papers. Hands-on session on writing techniques and tools to elevate your academic writing	
14:30 - 15:20	Session 4a : Building Your Personal Brand in XR <ul style="list-style-type: none">● Importance of personal branding for emerging researchers.● Practical advice on leveraging social media, networking, and collaborations to build your professional identity in the XR community	Session 4b : Means-End Chain Research in XR (by Prof. Harish Kumar) <ul style="list-style-type: none">● What is MEC?● What are MEC's strengths in studying new areas?● Tips and tools for application
15:30 - 17:00	Networking Session & Dinner An Opportunity to connect with fellow PhD students, established researchers, and industry professionals. Discussion potential research collaborations and mentorship opportunities	



Monday, 20th of May 2024



From 12:00	REGISTRATION (6F) Address: Design Council Busan (57 Centumdong-ro, Haeundae-gu, Busan)	
12:30 – 12:45	WELCOME (6F) M. Claudia tom Dieck (Manchester Metropolitan University) Sung-Hee Kim (Dong-Eui University)	
12:45 – 13:05	ACADEMIC KEYNOTE (6F) Philipp A. Rauschnabel (UniBW Munich) - The Era of Spatial Computing	
13:15 – 14:15	Room (6F) WORKSHOP I Rethinking experimental design to measure immersive experiences Dai-In Han (Zuyd University of Applied Sciences) Xander Lub (Utrecht University of Applied Sciences)	Room (4F) WORKSHOP II K-Metaverse Solution 1 Jinsong Roh (MetaVu Co.) - MetaVu XR Metaverse Platform David (Daehee) Kim (SAMWOO immersion Co.) - Industrial Job Training XR Content
14:15 – 14:45	COFFEE BREAK	
14:45 – 15:05	ACADEMIC KEYNOTE Mark Billinghurst (University of South Australia) - Title The Metaverse Vision: Are We There Yet?	
15:10 – 16:10	Room (6F) WORKSHOP III Co-producing the metaverse: towards a shared ontology Jessica Symons, Director, Visioning Lab	Room (4F) WORKSHOP IV K-Metaverse Solution 2 Myungsu Min (MIT Co) - MIT XR Solution Joseph Jonghyun Kim (YMX CO.) - MXspace
16:15 – 16:35	INDUSTRY KEYNOTE Bibhas Roy (NHS England) - Innovations and regulations in the Metaverse	
18:00	Welcome Party @ Yeokjeon Grandma Beer, Busan Centum Branch Address: 51 Centumdong-ro, Haeundae-gu, Busan	



Tuesday, 21st of May 2024

08:00 – 09:00	Registration and tea/coffee			Lobby
09:00 – 09:30	WELCOME			Room: 205
09:30 – 09:50	INDUSTRY KEYNOTE Philipp Sostmann (PwC) - Immersive Tech and the Future of Work: Unlocking Human-Centric and Technology-Driven Productivity			Room: 205
09:50 – 10:10	ACADEMIC KEYNOTE Woontack Woo (KAIST) - Metaverse 3.0: Toward Augmented Society!			Room: 205
10:15 – 11:15	<p>Room: 205</p> <p>XR Health and Wellbeing Chair: Sunghyun Sim</p> <p>K. Kantamaneni, S. Kondi, A. Konarski & B. Roy. Scope of Virtual Reality training in Trauma and Orthopaedic Surgery: an experimental study and review of the literature</p> <p>S. Kim, T. Jung, D. Kyung Sohn & Y. Chang. The Relationship between Perceived Interactivity and Intention for Continuous Use of Metaverse Psychosocial Support Platform: Serial Mediation Analysis</p> <p>B. van der Horst, F. Campos & M. van Gisbergen. Dementia – Where reality meets imagination: Designing XR soundscapes and visuals for Dementia patients</p> <p>A. Faiz Luai, N. A. Mohd Radzi, B. A. M. Sabri, E. H. Hassan, L. W. Shang & S. M. Xi. Navigating digital paradigms for innovative oral health education using metaverse: a qualitative study on perceptions of meta-ohe among secondary school students.</p>	<p>Room: 201</p> <p>XR and Metaverse for Industry Chair: Xander Lub</p> <p>L. Hirsch, Y. Uzun & L. Oppermann. Reusability of an Industrial Metaverse Demonstrator: Transferring a Collaborative XR Digital Twin Setup</p> <p>M. Rochi, P. Rauschnabel & Holzmair, M.. Recent Status of XR Adoption in the German Construction Industry</p> <p>R. Johnston, J. Mondol & A. Houlihan Wiberg. XR & Visual Communication survey of sustainable built environment KPIs: Including both AEC and none AEC industry professionals</p> <p>Y. Jeong, S. Lee & M.-A. Kim. Framework for Collaborative Multi-User in Heterogeneous Extended Reality Environments</p>	<p>Room: 202</p> <p>AI, XR and Metaverse Education & Learning Chair: Justin Cho</p> <p>V. Kuts, E. Cranmer, S. Luca Pizzagalli, P. Teh & Y. Bondarenko. Digitalisation of higher education laboratories: Creating a guideline rulebook</p> <p>A. Garcia-Milon, J. Pelegrín-Borondo, L. Blanco-Pascual & C. Olarte-Pascual. AI Adoption in Higher Education Teaching. An Ethical Exploration</p> <p>E. Cranmer, M.C. tom Dieck & P. Teh. Metaverse in Higher Education: Impact on learning and student outcomes</p> <p>J. Kim, Y. Choi & S.H. Kim. Review on the use of augmented reality technology on computational thinking education</p>	<p>Room: 203</p> <p>XR, Metaverse and Consumer Behavior Chair: Grace Ahn</p> <p>S. Alimamy & M. Chylinski. Neurodiversity in the Metaverse: Opportunities, Challenges, and Broader Technological Impacts</p> <p>H.-J. Kim & S.-H. Kim. Study on differences on consumer decision behavior for footwear design exploration on online platforms*</p> <p>Z. Rui & T. Moon. Comparison of South Korea and China on Customers' Repurchase Intention of Mobile Content Services Based on Motivation Theory</p> <p>K. Jaeger, J. Kautz & F. Akira Gauss. Metaverse beyond borders: A Deep Dive into Customer Experience and Next-Gen Key Performance Indicators Designed for the Upcoming Largest Metaverse Shopping Center Worldwide</p>



Tuesday, 21st of May 2024

11:15 – 11:45	COFFEE BREAK AND EXHIBITORS		
11:45 – 12:05	INDUSTRY KEYNOTE DongKyu Kim (Caliverse) - Next-generation metaverse and AI		Room: 205
12:10 - 12:40/55	<p>Room: 205</p> <p>INDUSTRY: XR Health, Training and Remote Working Chair: Leif Oppermann</p> <p>C. H. Li, T. T. Lee, S. L. Mak & F. W. F. Tang. Digital Twins (MR) Adoption for Improving Training and Inspection Process in the Property and Building Service Management Industry</p> <p>Philipp Sostmann & Jeremy Dalton. XR for work: Could remote work be better? Virtual Reality vs Video Conferencing*</p> <p>A. Konarski, K. Kantamaneni, S. Kondi & B. Roy. The development of Augmented and Mixed Reality in Orthopaedic Surgery: A review of its evolving use in the healthcare industry</p>	<p>Room: 203</p> <p>INDUSTRY: XR Technologies and Metaverse Evolution Chair: Dai-In Han</p> <p>J. Symons & J. O'Hare. Ordinary Ontologies : strategies for standardising metaverse processes, systems and technologies</p> <p>J. Jeon, H. Jeon, A. Yoon, S. C. Lee, S. J. Hwang & T. Jung. Proactive AI solution for efficient treatment of abnormal water caused by climate crisis</p>	<p>Room: 201</p> <p>MOU Ceremony</p> <p>MOU with AI Grand ICT Research Center and 6 companies.</p> <ul style="list-style-type: none">- MIT: Byungsu Min (CEO)- MetaVu: Jinsong Roh (CEO)- Samwoo Immersion: David Kim (CEO)- YMX: Park Tae wook (CEO)- ILJOOGNS: JeungYoub Kim (CEO)- RoyLabs: Lee Han (CEO)
12:40 – 14:00	LUNCH AND EXHIBITORS		

*shortlisted for best paper award



Tuesday, 21st of May 2024

14:00 – 14:20	INDUSTRY KEYNOTE Jennifer Hwang (Naver Z) - Realizing Your Dreams in the Metaverse: The ZEPETO Creator Ecosystem			Room: 205
14:20 – 14:45	PANEL DISCUSSION How is Artificial Intelligence influencing XR developments and the Metaverse? Moderator: M. Claudia tom Dieck Panelists: Jessica Symons (Visioning Lab); Robin Moser (EPAM); Jennifer Hwang (Naver Z); Leif Oppermann (Fraunhofer FIT)			Room: 205
14:50 – 15:50	Room: 205 XR and Metaverse Application and Systems Development Chair: Maksym Koghot Y. Bondarenko, V. Kuts, S. Luca Pizzagalli & T. Otto. Presence Drivers: A Unified Approach to User Representation in Spatial Computing Applications Y. Kim, S. C. Jeong, S. Lee & S. Sim. Legacy Learning for Automatic Font Design and Application in a Metaverse Environment: Case Study of Korean Fonts S. Y. Ssin & W. Woo. Smart-BuildSite-AR: A Safety Monitoring System for Construction Sites Using Augmented Reality M. Trunfio, G. Punzo & T. Jung. Experimenting the metaverse-scape: the impact of social interaction and flow state on feelings and post-experience behaviour	Room: 201 XR and Metaverse Usability Studies and User Behavior Chair: Harish Kumar E. Barton. Usability Evaluation of XR/Metaverse Technologies in Health Research Settings D.O.W. Hirschberg, O. Hein, F. Alt & P. A. Rauschnabel. From Stress to Success: User Responses to Augmented Reality Apps J. Heller, S. Köcher, R. Ciuchita & S. Köcher. How do we perform in VR? The role of virtual reality affect task performance? T. Hilken, S. Alimamy, M. Chylinski, J. Heller, D. Keeling, Do. Mahr & K. de Ruyter. Next-generation Service Interactions with Extended Reality Technologies: A Shared Reality Perspective	Room: 202 Immersive/ AI Experiences Chair: Alba Garcia Milon A. Maris, T. Hilken & G. Odekerken-Schröder. Immersive Attachment: how we attach to digital objects using immersive technologies H. Kim, Y. Kim, S. Byun, H. Lee & Y. Moon. Case study of Creativity Class Program using the Generative AI Y. Lee, Y. Byun, G. Son, G. Nam & H. Lee, Exploratory Study on the Types and Evaluation Criteria in the Usage Process of AI Generation Services D. La Foresta & I. Bruner. The role of immersive virtual spaces in enhancing civic participation in today's society	Room: 203 XR for Sport and Event Industry Chair: Anja von Bosse K. Park, S. Kim & J. Choi. Exploring the Adoption Dynamics of Virtual Reality in Spectator Sports M. van Gisbergen, M. Doicaru & K. Beeker. The Added Value of Virtual Reality Headsets on Esport Viewing Experience A. Kong, Z. Feng, N. Lau, M. Liu, R. Rehe & K.-P. Lee. Action Recognition in Sports Training: An Exploratory Study Using Machine Learning Algorithms for X-Reality S. Rezaei Rashnoodi, M. van Gisbergen, M. van der Burght & T. van Leperen. The Potentials of Volumetric Captured Augmented Reality to Enrich Music Event Experiences



Tuesday, 21st of May 2024

15:50 – 16:30	COFFEE BREAK AND POSTER PRESENTATION			
16:30 – 17:30	<p>Room: 205</p> <p>Legal concerns, Inclusion, Diversity & Ethical Implications Chair: Marnix van Gisbergen</p> <p>M. Nisevic & F. Ohai. Legal Challenges of Cooperative Real-Time Extended Reality: Insights from the EU *</p> <p>N. Menendez Gonzalez & E. Bozkir. Eye-tracking devices and their compatibility with the GDPR</p> <p>Y. Su & Y. Wang. Designing for Diversity: Shaping VR/AR Experiences for Marginalized Communities through Practice Theory</p> <p>P.P. Frigenti. The Adoption of Virtual Reality (VR) in Equity, Diversity, and Inclusion (EDI) Practices: An Empirical Study</p>	<p>Room: 201</p> <p>XR Marketing and Consumer Behavior Chair: Dominik Hirschberg</p> <p>S. Barta, D. Mahr, J. Heller, T. Hilken, C. Flavián & R. Gurrea. The effect of Augmented Reality on decision time. A view from heuristic-systematic processing</p> <p>H. Kumar, V. Arghashi & U. Venkatesh. Metaverse for business to business marketing: towards a theoretical framework</p> <p>T. Hilken, S. Alimamy, J. Heller, M. Chylinski & N. Moonen. Virtual Time Travel: How Virtual Reality Shapes Consumer Memory</p> <p>S. Kang. The Impact of Metaverse Experience Factors on Perceived Value and Intention to Continue Use: Based on Experience Economy Theory</p>	<p>Room: 202</p> <p>XR Avatars/Digital Humans/ Digital Twins/Robots Chair: Vladimir Kuts</p> <p>S. A. Schmid, P. A. Rauschnabel, J. Müetterlein & N. Goncharenko . The Virtual Mirror: Reflecting self-identity through Avatars</p> <p>R. Johnston, J. Mondol & A. Houlihan Wiberg. Creation of a Virtual Environment Fidelity Matrix for Extended Reality (XR)</p> <p>R.J. Lee, C. Yan, S. Zo & J. Park. Development of the AI Digital Human Based The Emperor Qin Shi Huang Terracotta Warriors XR Contents</p> <p>J.Y. Kim, K.H. Kim, Y.J. Kang & S.C. Jeong. Study on a LightGBM-Based Model for Detecting Anomaly Operation of Delta Robot</p>	<p>Room: 203</p> <p>XR and Metaverse in General Chair: Sung-Hee Kim</p> <p>M. An, N. Du & C.-Y. Kim. Digitization Route of Intangible Cultural Heritage and Future Development of Virtual Reality Technology Application</p> <p>M. Werner. 'How Do Virtual Reality Technologies Affect Online Work? Qualitative and Quantitative Evidence from an Online Survey'</p> <p>M. Alamgir, M.C. tom Dieck & T. Jung. Virtual Reality as a Possible Therapy for Improving General Health</p>
19:00 – 21:00	BANQUET DINNER			

*shortlisted for best paper award



Wednesday, 22nd of May 2024

08:30 – 09:00	REGISTRATION				LOBBY
09:00 – 10:00	<p>Room: 205</p> <p>XR and Metaverse Adoption Chair: Sergio Barta</p> <p>M. Koghut, M.C. tom Dieck & T. Jung. Augmented Reality Discontinuance: A multi-method study</p> <p>V. Argashi & Y. Gunalay. Metaverse and Young Generations: Millennials and Z Gen's Motivations for Adopting Metaverse</p> <p>S. Wang & T. Yoon. Charting the Travel Journey with Generative Artificial Intelligence (GAI): Interplay of Information Characteristics, Perceived Value, Attitude, and Behavioral Intention</p> <p>A. von Bosse & P. Rauschnabel. Towards a Three-Factor Theory for VR Headset Adoption</p>	<p>Room: 201</p> <p>XR/AI in Retail & Marketing Chair: Dominik Mahr</p> <p>A. von Bosse, E. Kutschma, D. Hirschberg, L. Hollebeek & P. Rauschnabel. Mobile Shopping in Augmented Reality: How does it differ from traditional 2D Apps?</p> <p>J. Heller, P. Rauschnabel, T. Hilken & D. Mahr. To touch or to talk – Investigating differences in AR content interaction for online retailing of hedonic and utilitarian products</p> <p>H. Kumar & N.Tuli. From Illusion to Inclusion: Enhancing Consumer Well-being through Augmented Reality Marketing</p> <p>C.E. Sung & O. Kwon. Digital Luxury NFT Fashion Brand Experience: Cross-Cultural Metaverse Social Community Strategies</p>	<p>Room: 202</p> <p>AI, XR and Metaverse Training, Education & Learning Chair: Sunghyun Sim</p> <p>J. Kang, S. Kwon & D. Chung. Words and Worlds, The Power of Immersive Learning</p> <p>A.de Alwis, A. Shrestha & T. Sarker. The importance of governance in metaverse/blockchain in education</p> <p>R. Di Palma, D. Mahr, T. Hilken, J. Heller & S. Beauseart. Enhancing Communication Skills through VR Feedback *</p> <p>A. Krispin, M. Pluymaekers & D. Mahr. Training oral communication skills using VR: A systematic literature review and conceptual model</p>	<p>Room: 203</p> <p>XR and Metaverse in Tourism and Cultural Heritage Chair: Timothy Jung</p> <p>A. Alsuwaidi & A. Almazrooei. Revolutionising Cultural Heritage Engagement through the Metaverse: Virtual Interactivity and Perception</p> <p>G. Liestøl, L. Bishop, E. Hadjidaki-Marder & Š. Ledas. Motion Capture for Augmented Reality Storytelling in Archeology & Cultural Heritage Dissemination: Simulating an Animal Sacrifice next to the Temple of Demeter at Ancient Phalasarna</p> <p>Liu, J. XR-Mediated Cultural Experiences: Enhancing Visitor Engagement</p> <p>J. Park, M. Tufail, H. Y. Park & D. Cheon. Virtual Museum and XR Content Creation for Takht-i-Bahi World Cultural Heritage Site</p>	
10:00 – 10:35	COFFEE BREAK AND POSTER PRESENTATION				

*shortlisted for best paper award



Wednesday, 22nd of May 2024



10:35 – 10:55	ACADEMIC KEYNOTE Sun Joo Grace Ahn (University of Georgia) - Community-Based Participatory Research: How to Take XR Outside of the Ivory Tower			Room: 205
11:00 – 11:20	INDUSTRY KEYNOTE Robin Moser (EPAM) & Harsh Gandhi (Astra Zeneca) - XR Platform for Clinical Collaborations*			Room: 205
11:25 – 12:25	<p>Room: 205</p> <p>INDUSTRY: Tourism, Museums and Cultural Heritage Chair: Mariapina Trunfio</p> <p>R. Haynes. Veholding Hands Makes a Metaverse: IIIF 3D Enabling XR Interoperability for Museums</p> <p>A. Mauro, A. Magnelli & N. Pireddu. A Journey through human art and AI. The case study of the National Museum of Matera</p> <p>A. Magnelli, A. Cavallaro & F. Basso. Eroica VR: A challenging production for experiencing a cycling event from all perspectives *</p> <p>J.H. Park, S. G. Park, H. S. Park, J. B. Park & A.P. Tribhuvan. Shilla Gyeongju Tourism AI-Bus using XR Realistic Content Technology</p>	<p>Room: 202</p> <p>Korea's Metaverse & Spatial Computing R&D Strategy -Korean Only Session-</p> <p>Jun Woo Lee (IITP)</p>	<p>Room: 203</p> <p>WORKSHOP V Empowering Hospitality Education through AR/VR Technologies – An evidence-based Co-creation session Praneschen (Che) Govender and Alexander Lennart Schmidt (Hotelschool The Hague)</p>	
12:25 – 13:40	LUNCH AND EXHIBITORS			

*shortlisted for best paper award



Wednesday, 22nd of May 2024

13:40 – 14:00	INDUSTRY KEYNOTE Taeyeol Kim (Busan IT Industry Promotion Agency) - Busan City's ICT-based Economic Growth Strategy				Room 205
14:05 – 15:05	<p>Room: 205</p> <p>Immersive Experiences Chair: Philipp Rauschnabel</p> <p>D.I. Han & M. Orlowski. Development of a holistic scale of immersive experiences</p> <p>W. Boode, M. Bastiaansen, I. Mayer, C. Perreira Santos & M. van Gisbergen. hARmony: an augmented dance performance</p> <p>N. Shamim, S. Gupta, M. Brannan & M. Shin. Effect of Ergonomics on User Engagement in an Immersive Environment</p> <p>S. Alimamy & T. Jung. Augmenting Realities in the Metaverse: The Transformative Role of Augmented Reality Cloud in Service Interaction and Value Co-Creation</p>	<p>Room: 201</p> <p>Artificial Intelligence and XR Chair: Sung-Hee Kim</p> <p>J.A. Choi. Understanding resistance to XR adoption using topic modeling</p> <p>J. Lee & S. Mikkilineni. Social Viewing Deepfake in Virtual Environments: How Social Viewing Deepfake Affects Misperception through Perceived Realism and Attention Allocation</p> <p>S. Sim, J. Lee, S. Lee, D. Kim & H. Bae. AI-based Real-time Maritime Logistics Metaverse for Addressing Environmental and Safety Issues in Maritime Logistics</p> <p>D. Henkel & B. Ivens. The Role of Artificial Intelligence in Shaping B2B Marketing: Current Insights and Future Prospects</p>	<p>Room: 202</p> <p>Eye tracking and XR methodologies Chair: Jonas Heller</p> <p>Z. Tupikovskaja-Omovie, T. Jung, S. Kim & J. Cho. The effect of gamified Metaverse on consumer sustainable behaviour: Eye-Tracking user journey and factors specific to gamified Metaverse environment</p> <p>L. S., N.j Kaushik & T.i Sharma. Decoding Public Sentiments: A topic modeling analysis of the metaverse using reddit discourse</p> <p>C.I. Lee, Y.C. Pan & H.I. Wu. Development of participatory exhibition-viewing and behavior analysis system using augmented reality environment tracking technology</p> <p>P. Tarafdar, A. Chung Man Leung, W. Thoo Yue & I.I. Bose. Can Touch Interaction Predict Product-Related Emotion? A Study on Mobile Augmented Reality</p>	<p>Room: 203</p> <p>XR Communication and Marketing Chair: Dai-In Han</p> <p>H. Kumar & R. Chhikara. Towards a theoretical framework for branding in the metaverse</p> <p>M.-W. Cho & D. Chung. Navigating the Virtual Reality Ad Wonderland</p> <p>A. Frank, S. Yuan, M. Browning & S. J. G. Ahn. Bolstering Storm Surge Risk Communication Through Virtual Reality: A Path to Heightened Involvement and Mitigation Intentions</p> <p>D. Wilhelm, S. Praxmarer-Carus & P. Rauschnabel. Augmented Reality in Luxury Brand Management</p>	
15:05 – 15:35	COFFEE AND EXHIBITORS				



Wednesday, 22nd of May 2024

15:35 – 16:35	Room: 205 XR and Metaverse Training and Education Chair: Martin Rochi O.S. Kim, G.S. Jang & S.I. Moon. The impact of VR-based safety experience education on safety awareness, safety behavior, and safety accident prevention: The empirical study of VR application in industrial safety education in Korea P. Govender & A. Schmidt. The impact of immersive hospitality training on job readiness and learning effectiveness E. Park. Development and effectiveness of immersive convergence education program J. Cho, E. Etienne, M. Schyns & T. Jung. Towards a framework for the implementation of virtual reality in legal education and training	Room: 201 XR, Metaverse and Tourism/Cultural Heritage Chair: M. Claudia tom Dieck M. Holzmair. Dynamic and Autonomous Curbside Management - Design Research in Virtual Reality for future Adaptive Street Spaces* E. Al Khalifah, R. Hammady, M. Abdelrahman, A. Darwish, K. Bourazeri, O. Al-Shamaileh, E. Cranmer & T. Jung. The influence of Utilitarian Values in Virtual Reality to change the attitude towards Religious Tourism A. Garcia-Milon, N. Medrano-Saez, M.C. tom Dieck, T. Jung & R. Ashraf. Christmas Market Virtual Visit. Intention to Recommend VR and Impact of Senses in Presence J. Lee. Heritage information research to improve digital heritage accessibility in Korea	Room: 203 Implications and Adoption of XR & Metaverse Chair: Sunghyun Sim Y. Jun. When Virtual Reality (VR) Backfires on Reality: Virtual Experience Can Reduce Desire for the Experience in Real Life D. Finken, T. Scheurer, L. Brandes & R. Hofstetter. Buyer, Beware: Augmented Reality Product Display Increases Consumer Preferences for Inferior but Not for Superior Products Z. Kamal. Metaverse Playground: Understanding the Role of Emotions, Social Interactions, and Game Rewards in Shaping Children's Consumer Behavior
16:40 – 17:00	International XR-Metaverse Conference Welcome to 2025 Conference Closing		Room 205

*shortlisted for best paper award

POSTER PRESENTATIONS (Tuesday, 21st of May)

#	Author/s and Title	#	Author/s and Title
1	Y. Shin, M. Lee, S. Lee, S. Kim & M. Lee. Development of Grip Strength Reflection System Based on SEMG of the Flexor Digitorum Profundus for Sensory VR Interaction	11	D. Lee & H. W. Kang. Introduction to a manual for using virtual reality-based Emotion To Emotion Therapy for Post-Traumatic Stress Disorder (PTSD) patients
2	I. Humdi, T. Hilken, J. Heller & D. Mahr. Virtual Realities Unveiled: Exploring Impact and Gamer Experiences in VR Games	12	J.-Y. Lee, D.-S. Lee & S.-K. Kwon. Intra Prediction Method for Video Coding Improvement Using Attention Mechanism
3	C. Eunyoung Sung & J. Merrill. Artificial Intelligence (AI) Agent: AI Advisory Credibility by Conversational Strategies in Financial Sector	13	J.H. Kim & S. K. Kwon. Human Weight Estimation by Measuring Body Shape Using Depth Image
4	J. Kim. A New Universal XR Metaverse Platform for Virtual Sports Games	14	J.-H. Yoon & S.-K. Kwon. 3D Human Motion Forecasting Method through Occluded Skeleton Prediction
5	T. Eom & Y. Jun. Threat of AI technology and consumer preference for nostalgic product	15	W. Weng & F. Li and C.Kim. Metaverse Museum Learning: Where Technology Meets Culture*
6	E.-T. Baek & H.-S. Yoon. Design and Implementation of a Digital Twin System for Real-time Monitoring and Management of Tree Health in the Tree Doctor EMR	16	S. Wang & C.-Y. Kim. A Study on the Use of Chat GPT for Learning Foreign Languages - Focusing on Intermediate Korean Reading Education
7	A. Bakhouyi, A. Dehbi, L. Amhaimar, S. Broumi & M. Talea. Immersive Learning in the XR-Metaverse: Enhancing Smart Education Through Virtual Environments		
8	D. J.-W. Hong. Are We Attractive to You ? A Study on Metaverse Recruitment and Organizational Attractiveness		
9	D. Kim, E.I Yang, K. Kim, Y. Jeong & J. Ryu. Developing Extended Reality Simulation for Core Basic Nursing Skills*		
10	Y. Jeong, E. Yang, K. Kim, Daeun Kim, & J. Ryu. Machine Learning Insights into Geography Education Enhancement in XR Environments		



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POSTER PRESENTATIONS (Wednesday, 22nd of May)

#	Author/s and Title	#	Author/s and Title
1	X. Sun. A Study on dating simulation mobile games for women Players on Motivation for use and Behavior	11	Y. Xu. The emergence of Multisensory Non-traditional Trademarks (MNTs) and its possible challenge under the registrability in trademark law
2	J. Been Ha & J. Kang. Environmental characteristics of virtual worlds as a workplace: A mixed-methods approach*	12	S.-Y. Han, Y. Jeon, N. Kwak & S. Lee. A Study on the Industrial Classification System : A Case study in South Korea
3	H. Ameyaw Domfeha, O. Henry & J. Kang. The effect of low-code/no-code platform features on behavioural engagement and organizational citizenship behaviour of citizen developers in South Korea: a mixed-methods approach	13	J. Kim, D. Kim & S.C. Jeong. Development of XR-based Smart Factory Digital Twin System
4	H. Sung, T. Hong & J.-I. Shin. Factors Affecting Attitude of Unmanned Convenience Store TBSS in Korea	14	J. Safari Bazargani, A. Sadeghi-Niaraki & S.M. Choi. 3D Content Generation for Mixed Reality Applications
5	G. Kang & W. Kim. Effect of information provision of e-commerce platform on reuse intention through customer satisfaction: Moderating roles of information recency and information playfulness	15	B. Tingting. A Study on the Application and Innovation of Extended Reality (XR) Technology in the Conservation and Inheritance of Traditional Culture - Focusing on Intangible Cultural Heritage
6	M. Kim, H. Park, E. Kim, E. Lee & C.-Y. Park. System for Monitoring Photovoltaic Power Generation based on Digital Twin and Deep Learning		
7	G. Jiayu. The impact of user engagement motivations on satisfaction in the Big data environment - Focused on K-POP challenge participation		
8	P. Simons. Systematic integration of XR in Education		
9	H.J. Kim & S.-K. Kwon. Estimation Method for Human Personality by Detecting Objects on Desk Using LERF		
10	J. Park, Y. Choi, S. Hong & H. Lim. Development of ICT-IoT-VR ocean healing platform using wearable device linkage application		



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WORKSHOPS

WORKSHOP I

Rethinking experimental design to measure immersive experiences (Dai-In Han & Xander Lub)

This session invites participants into a discourse of reflecting on traditional experimental design guidelines and their applicability to measure immersive experiences. Leaning on previous study findings, this workshop aims to collectively reflect on and share new approaches to experimental design relevant for measuring immersive experiences. The session outcome will be formulated into a 'Experiment guidebook for measuring immersive experiences', which will be shared with all session participants.

WORKSHOP III

Co-producing the metaverse: towards a shared ontology (Jessica Symons, Director, Visioning Lab)

As the metaverse as a concept gains traction, the need for greater clarification over its meaning becomes more compelling. Communicating via confusing acronyms such as AR/VR/XR and broad terms such as Immersive and 3D virtual environments acts as a barrier to adoption. This interactive workshop will consider work by the Metaverse Standards Forum, practitioners and academics to define the metaverse and draw out terminology, relationships and how these can be incorporated into design processes. It will engage with existing metaverse ontologies and knowledge graphs including those produced by AI tools such as ChatGPT, to define a structured approach to support the management of data and the integration of systems as 'the metaverse'.

WORKSHOP II

K-Metaverse Solution I (Jinsong Roh (MetaVu Co.), David(Daehee) Kim (SAMWOO immersion Co.))

This workshop session is designed for participants eager to explore practical, real-world solutions extensively employed in diverse fields. We will have engaging discussions regarding simulation technologies, training methodologies, case studies and practical applications.

WORKSHOP IV

K-Metaverse Solution II (Myungsu Min (MIT Co); Joseph Jonghyun Kim (YMX CO.))

This workshop session is designed for participants eager to explore practical, real-world solutions extensively employed in diverse fields. We will have engaging discussions regarding simulation technologies, training methodologies, case studies and practical applications.

WORKSHOPS

WORKSHOP V

Empowering Hospitality Education through AR/VR Technologies – An evidence-based Co-creation session

(Praneschen (Che) Govender and Alexander Lennart Schmidt)

Tertiary hospitality education traditionally emphasizes real-life professional contexts to cultivate managerial effectiveness and professional socialization. This educational model, crucial for preparing students for the dynamic hospitality industry, faced challenges during the COVID-19 pandemic, as remote learning became the norm. In fact, practical training and internships were put on a hold. Simultaneously, these challenges presented opportunities to innovate hospitality education through immersive technologies like AR and VR with a long-lasting impact on the educational model. These technologies are serving as a catalyst in reimagining how educational content is delivered, bridging the gap between theoretical knowledge and practical application.

Our workshop, drawing from a large-scale, multi-institutional research project and significant hands-on experiences in diffusing AR/VR into hospitality education, will explore mixed-method, and student-centric strategies to enhance learning effectiveness and engagement. The workshop will address the necessity of introducing immersive technologies in an accessible, low-stakes manner to reduce frustration among stakeholders. Participants will engage in interactive sessions showcasing AR/VR applications, discuss integration challenges, and brainstorm innovative solutions tailored to their individual educational needs.

FLOOR PLAN

21-22 May 2024 (Day 2-3)

BEXCO

55 APEC-ro, Haeundae-gu,
Busan

