2024 the 12th International Conference on Information and Education Technology

(ICIET 2024)

2024 International Conference on Innovative Education and Learning Resources

(IELR 2024)

Yamaguchi, Japan | March 18-20, 2024

Co-Sponsored by

YAMAGUCHI UNIVERSITY 山口大学　◆IEEE

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Venue: Kaikyo Messe Shimonoseki

Add.: 3-3-1 Buzendacho, Shimonoseki, Yamaguchi Prefecture, 750-0018, Japan

Web: http://www.kaikyomesse.jp/

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WELCOME MESSAGE

Dear all, we are delighted to welcome you to these conferences 2024 the 12th International Conference on Information and Education Technology (ICIET 2024), along with the workshop 2024 International Conference on Innovative Education and Learning Resources (IELR 2024) to be held in Yamaguchi, Japan, during March 18-20, 2024, which are co-sponsored by Yamaguchi University, Japan and IEEE.

The objective of the conference is to provide a premium platform to bring together researchers, scientists, engineers, academics and graduate students to share up-to-date research results. We are confident that during this time you will get the theoretical grounding, practical knowledge, and personal contacts that will help you build a long term, profitable and sustainable communication among researchers and practitioners in the related scientific areas.

This year's program is composed of 7 keynote speeches delivered respectively by Prof. Wenliang (Kevin) Du (Fellow of IEEE), from Syracuse University, USA; Prof Qing Li (Fellow of IEEE), from The Hong Kong Polytechnic University, China; Prof. Minjuan Wang, from San Diego State University, USA; Prof. Maiga Chang, from Athabasca University, Canada; Prof. Yeong-Kang Lai (Fellow of IET), from National Chung Hsing University, Taiwan; Prof. Yutaka Ishibashi, from Nagoya Institute of Technology, Japan and Mr. Takeshi Matsuzaki, from e-Learning Corporation, the only Moodle Certified Premium Partner in Japan, and E-LEARNING LMS PET. LTD., Singapore; 3 invited speeches delivered respectively by Assoc. Prof. Leander S. Hughes, from Saitama University, Japan; Assoc. Prof.David W. Del Testa, from Bucknell University, USA and Prof. Lilian Li, from Zayed University, UAE; 12 onsite oral sessions, 1 poster session and 4 online oral sessions. We would like to express our gratitude to all the speakers in these conferences. Special thanks to all of our committee members, all the reviewers, the attendees for your active participation. We hope the conferences will be proved to be intellectually stimulating to us all. Finally, we wish you very successful conferences!

Conference Organizing Committee

ICIET 2024

Ms. Ching Cao

Email: icietconf@vip.163.com

IELR 2024

Mrs. Yumiko

Email: ielr_conf@outlook.com

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Lecturer Tso Kar Ho, Hong Kong Institute of Vocational Education, Hong Kong
Mr. Kushagra Mishra, Nutanix, North Carolina, USA

GENERAL INFORMATION

A   Conference Venue

Venue: Kaikyo Messe Shimonoseki

Add.: 3-3-1 Buzendacho, Shimonoseki, Yamaguchi Prefecture, 750-0018, Japan

Web: http://www.kaikyomesse.jp/

The following page gives the information on the venue, Kaikyo Messe Shimonoseki:

https://www.yumetower.jp/abroad/english

B   On-site Registration

Registration desk→ Inform the staff of your paper ID→ Sign-in→ Claim your conference kits.

C   Devices Provided by the Organizer

Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

D   Materials Provided by the Presenter

Oral Session: Slides (pptx or pdf version). Format 16:9 is preferred. Poster Session: A1 size Printed poster.

Presentation Language: English only.

E   Duration of Each Presentation

Keynote Speech: 40min, including Q&A.

Invited Talk: 20min, including Q&A.

Oral Session: 15min, including Q&A.

Poster Session: 10min, including Q&A.

F   Notice

※ Please wear your delegate badge (name tag) for all the conference activities. Lending your badge to others is not allowed.

※ Please take good care of your valuables at any time during the conferences. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants during conference day.

G   Zoom Meeting

	Room	Meeting ID	Link
◇ ICIET Banner ◇ Zoom Background	A	867 6198 2583	https://us02web.zoom.us/j/86761982583
	B	889 8967 0199	https://us02web.zoom.us/j/88989670199

Note:

1. We recommend to install the Zoom platform beforehand. New users can login the Zoom meeting **without registration**.
2. Please set your display name before joining the online meeting. For instance,

   Author/Presenter: Paper ID_Name < C001_Veronica Reed >

   Delegate: Delegate_Name < Delegate_Veronica Reed >

H   No-Show Policy

    Papers unpresented at the conference, without prior written approval by the Conference Technical Program Chair, will be removed from the final conference proceedings before uploading to IEEE Xplore. No refund will be approved to authors of those papers.

AGENDA OVERVIEW

Session Time	Monday, March 18, 2024	Pre-Test/Registration	Venue
10:00-17:00	On-site Registration	8 Floor, Kaikyo Messe Shimonoseki
14:00-16:30	Zoom Pre-test, See below:	
14:00-14:30	C1002-A (Invited Talk), C186, C203, C209, C219, C251, C259, C372, C378, C611	
14:30-15:00	C380, C296, C032-A, C006, C112, C189, C195, C267, C222, C285, C382	Room A: 867 6198 2583
15:00-15:30	C145, C221, C397, C019, C095, C161, C306, C334, C360, C020, C226	
15:30-16:00	C012, C280, C114, C268, C338, C187, C355, C345, C367, C225, C260	
16:00-16:30	For other online participants, includes but not limited to keynote speakers, session chairs, committee members, delegates, etc.	

Presenters are required to join the rehearsal in Zoom on Monday, March 18, 2024. Duration: 2~3min apiece. Feel free to leave after you finish the test.

Session Time	Tuesday, March 19, 2024 (UTC+9)	Plenary Meeting	
08:50-09:20	On-site Registration *For offline participant who is not able to sign in on the first day.*	
09:30-10:00	*Host for Opening Ceremony - Japan Local Organizing Chair* **Prof. Yuanyuan Wang**. Yamaguchi University, Japan *Welcome Speech - Honorary Chair* **President Yukio Tanizawa**. Yamaguchi University, Japan *Congratulatory Speech - Conference General Co-Chair* **Prof. Wen-Chun Kao**. IEEE Fellow, IEEE CTSoc President, National Taiwan Normal University, Taiwan *Conference Overview - Conference General Chair* **Prof. Shingo Yamaguchi**. Yamaguchi University, Japan	Conf. Hall <10F> 867 6198 2583
10:00-10:40	*Host for Keynote Speeches - Conference Program Chair* **Prof. Masaru Fukushi**. Yamaguchi University, Japan *Keynote Speech I* Title: Developing an Internet and Blockchain Emulator for Research and Education **Prof. Wenliang (Kevin) Du,** IEEE Fellow, Syracuse University, USA	
10:40-11:10	Group Photo & Coffee Break (10F)	
11:10-11:50	*Keynote Speech II* Title: GSA: Facilitating Intra-Subject Study and Inter-Subject Development with Course Knowledge Graphs **Prof Qing Li,** IEEE Fellow, The Hong Kong Polytechnic University, China	
11:50-12:30	*Keynote Speech III* Title: Ask4Summary and Authorship Fingerprinting **Prof. Maiga Chang**, Athabasca University, Canada	
12:30-13:30	Lunch Time: Conf. Hall <10F>	

AGENDA OVERVIEW

Tuesday, March 19, 2024 (UTC+9) | Parallel Session (Onsite)

801<8F>	803<8F>	804<8F>	805<8F>	Conf. Hall<10F>
13:30-15:35				
Oral Session 1 AI-enabled Education and Personalized Learning Invited Talk: Lilian Li (C1007-A) C316-A, C264-A, C326, C024, C351, C393, C343	**Oral Session 2** Digital Teaching and IOT for Education Applications Invited Talk: David W. Del Testa (C1001-A) C117-A, C108, C115, C337, C347, C013-A, C026	**Oral Session 3** Sentiment Analysis and Pattern Recognition in Education C329, C057-A, C278, C125, C224, C133, C342-A, C124	**Oral Session 4** Online Learning and E-Learning C321, C150, C215, C384, C396, C255-A, C284-A, C262	**Oral Session 5** Computer Network Security and Artificial Intelligence Applications C272, C335-A, C295-A, C183-A, C349-A, C369-A, C139, C152
16:00-18:00				
Oral Session 6 Educational Innovation and Innovation Management C151, C265-A, C109, C314-A, C105, C263, C198	**Oral Session 7** Educational Data Mining and Intelligent Tutoring System C269, C308, C386, C298, C197-A, C100, C350, C411-A	**Oral Session 8** Educational Robotics and Technology Enhanced Learning C134, C157, C178-A, C257, C292, C214, C331-A	**Oral Session 9** Programming Education and Media Information Literacy C066, C088, C097, C136, C144, C410-A, C273-A, C087	**Oral Session 10** Educational Psychology and Professional Practice in Psychology C309, C207-A, C361-A, C208-A, C315-A, C204-A, C211-A, C606
18:30-20:30 Banquet Dinner				
Kaikyo Hall <9F >	Host: Prof. Yuanyuan Wang, Japan Local Organizing Chair, Yamaguchi University, Japan ✧ Congratulatory Speech: Conference General Co-Chair: Prof. Nobuo Funabiki, IEEE CTSoc Vice-President, Okayama University, Japan ✧ Kagami-biraki (Breaking of a Sake Cask) ✧ Toast: Conference General Co-Chair: Prof. Nobuo Funabiki, IEEE CTSoc Vice-President, Okayama University, Japan ✧ Conference Promotion ✧ Bingo Game (Winners are asked to make self-introduction)			

Tuesday, March 19, 2024 (UTC+9) | Parallel Session (Online)

Room A: 867 6198 2583	Room B: 889 8967 0199
13:30-16:20	
Online Session 1 Educational Informatization and Computer Assisted Learning Invited Talk: Leander S. Hughes (C1002-A) C186, C203, C209, C219, C251, C259, C372, C378, C611, C380	**Online Session 2** Online Learning and Blended Learning C296, C032-A, C006, C112, C189, C195, C267, C222, C285, C382
16:30-19:15	
Online Session 3 Educational Data Mining and Artificial Intelligence in Education C145, C221, C397, C019, C095, C161, C306, C334, C360, C020, C226	**Online Session 4** Educational Information Technology and Information Technology Applications C012, C280, C114, C268, C338, C187, C355, C345, C367, C225, C260

AGENDA OVERVIEW

Session Time	Wednesday, March 20, 2024 (UTC+9) | Plenary Meeting	
09:00-09:40	*Host for Keynote Speeches - Conference Program Co-Chair* **Prof. Mohd Anuaruddin**, Yamaguchi University, Japan	801<8F> 867 6198 2583
	Keynote Speech IV Title: Revolutionizing Multimedia Applications in the Era of Advanced VLSI Technology **Prof. Yeong-Kang Lai,** IET Fellow, National Chung Hsing University, Taiwan	
09:40-10:20	*Keynote Speech V* Title: Quality Assessment of Multisensory Communications: From Lower Layers to Upper Layers **Prof. Yutaka Ishibashi**. Nagoya Institute of Technology, Japan	
10:20-10:50	Group Photo & Coffee Break (8F)	
10:50-11:30	*Keynote Speech VI Online* Title: Metaverse for Immersive Education **Prof. Minjuan Wang**, San Diego State University, USA	
11:30-12:10	*Keynote Speech VI* Title: Why Moodle is No.1 LMS in many countries? **Mr. Takeshi Matsuzaki,** CEO of e-Learning Corporation, the only Moodle Certified Premium Partner in Japan, and CEO of E-LEARNING LMS PET. LTD., Singapore	
12:10-13:30	Lunch Time: Room A: 801<8F>	

Wednesday, March 20, 2024 (UTC+9)| Parallel Session (Onsite)		
801<8F>	**803<8F>**	**804<8F>**
13:30-16:00		
Oral Session 11 Game-Based Learning and Interactive Learning Environment C281, C305, C1006-A, C323-A, C241, C113, C253	**Oral Session 12** Digital Education Platform and Education Information System C098, C304, C240, C266, C294, C317, C275, C293, C216, C083	**Poster Session** Digital Education and Interactive Environment C091, C143, C106, C102, C058, C084, C362-A

INTRODUCTION OF KEYNOTE SPEAKER

Prof. Wenliang (Kevin) Du

IEEE Fellow, Syracuse University, USA

Developing an Internet and Blockchain Emulator for Research and Education

Abstract: To provide hands-on learning experience for cybersecurity education, we have developed 40 open-source labs (called SEED labs) during the last 20 years. These labs can be carried out inside a single virtual machine or on the cloud. Over 1100 institutes in more than 80 countries are using them. To enable the lab activities that involve many computers, we have also developed an open-source Internet Emulator (called SEED Emulator), which allows us to create a miniature Internet that can run inside a single personal machine. Even though it is small, it has all the essential elements of the real Internet. Many interesting network technologies can be deployed on the emulator. We have used this emulator to create a DNS infrastructure, a Botnet, a Darknet, an Internet worm, and BGP prefix hijacking attacks. We have also deployed the Ethereum blockchain on the emulator, creating a Blockchain emulator with tens or even hundreds of nodes, all inside a single computer. Although the emulator was initially developed for educational uses, it is also being used for research.

Biography: Dr. Wenliang (Kevin) Du, ACM Fellow and IEEE Fellow, is the Laura J. and L. Douglas Meredith Professor at Syracuse University. His current research interest focuses on Internet/blockchain emulation and cybersecurity education. He received his bachelor's degree from the University of Science and Technology of China in 1993 and Ph.D. degree from Purdue University in 2001. He founded the SEED-Labs open-source project in 2002. The cybersecurity lab exercises developed from this project are now being used by 1,100 institutes worldwide. His self-published book, "Computer & Internet Security: A Hands-on Approach", has been adopted as textbook by 280 institutes. He is the recipient of the 2017 Academic Leadership award from the 21st Colloquium for Information System Security Education. His research has been sponsored by multiple grants from the National Science Foundation and Google. He is a recipient of the 2021 ACSAC Test-of-Time Award and the 2013 ACM CCS Test-of-Time Award.

INTRODUCTION OF KEYNOTE SPEAKER

Prof Qing Li

IEEE Fellow, The Hong Kong Polytechnic University, China

GSA: Facilitating Intra-Subject Study and Inter-Subject Development with Course Knowledge Graphs

Abstract: Knowledge graphs (KGs) have been actively studied for pedagogical purposes. To depict the rich but latent relations among different concepts in the course textbook, increasing efforts have been proposed to construct course KGs for university students. However, the application of course KGs for real study scenarios and career development remains unexplored and nontrivial. First, it is hard to enable personalized viewing and advising. Within the intricate university curricula, instructors aim to assist students in developing a personalized course selection pathway, which cannot be fulfilled by isolated course KGs. Second, locating concepts that are important to individuals poses challenges to students. Real-world course KGs may contain hundreds of concepts connected by hierarchical relations, e.g., contain subtopic, making it challenging to capture the key points. To tackle these challenges, in this talk, we present GSA, a novel system based on course knowledge graphs, to facilitate both intra-course study and inter-course development for students significantly. More specifically, we establish an interactive web system for both instructors to construct and manipulate course KGs, and students to view and interact. To visualize the centrality of a course KG based on various metrics, concept-level advising is designed; we also propose a tailored algorithm to suggest the learning path based on what concepts students have learned. Finally, course-level advising is instantiated with a course network, which indicates the prerequisite relations among different levels of courses, corresponding to the annually increasing curricular design and forming different major streams. Examples will be given to illustrate the effectiveness of GSA.

Biography: Qing Li is a Chair Professor and Head of the Department of Computing, the Hong Kong Polytechnic University. He received his B.Eng. from Hunan University (Changsha), and M.Sc. and Ph.D. degrees from the University of Southern California (Los Angeles), all in computer science. His research interests include multi-modal data management, conceptual data modeling, social media, Web services, and e-learning systems. He has authored/co-authored over 500 publications in these areas, with over 36300 citations and H-index of 77 (source: Google Scholars). He is actively involved in the research community and has served as an associate editor of a number of major technical journals including IEEE Transactions on Artificial Intelligence (TAI), IEEE Transactions on Cognitive and Developmental Systems (TCDS), IEEE Transactions on Knowledge and Data Engineering (TKDE), ACM Transactions on Internet Technology (TOIT), Data Science and Engineering (DSE), and World Wide Web (WWW) Journal, in addition to being a Conference and Program Chair/Co-Chair of numerous major international conferences. He also sits/sat on the Steering Committees of DASFAA, ER, ACM RecSys, IEEE U-MEDIA, and ICWL. Prof. Li is a Fellow of IEEE.

INTRODUCTION OF KEYNOTE SPEAKER

Prof. Maiga Chang

Athabasca University, Canada

Ask4Summary and Authorship Fingerprinting

Abstract: While the generative AI is popular with the public, the dataset used for training the generative AI is too broad to be helpful for teaching and learning. For example, a teacher believes concept #A is more important than concept #B and has supplied all course materials and supplemental readings to students reflective of this concept weighting. If their students then use a generative AI tool trained with different dataset, which emphasizes concept #B, students might learn different materials and could even fail subsequent course exams. This talk will cover two of my Natural Language Processing (NLP) research. Ask4Summary (https://ask4summary.vipresearch.ca/) has a system periodically running backend services to process course's learning materials and answers user questions by identifying relevant content and generating summaries only based on the provided materials. Ask4Summary has reached 82.69% success rate for providing quick (0.766 seconds in average) responses of course relevant questions and is available for users in interactive web, Moodle plug-in form, and Python library. Authorship Fingerprinting research uses both of Statistical and Neural NLP to correctly distinguish the works created by ChatGPT 3.5, ChatGPT 4, and human authors with precision rate (i.e., not mis-pointing finger on human authors and incorrectly labelling their works as AI-written ones) 98.06% in our preliminary study.

Biography: Dr. Maiga Chang is a Full Professor in the School of Computing and Information Systems at Athabasca University, Canada. His research mainly focus on game-based learning, training and assessment; learning behaviour analysis; learning analytics and academic analytics; intelligent agent technology; health informatics; data mining; computational intelligence; natural language processing; artificial intelligence; museum education mobile learning and ubiquitous learning; healthcare technology, etc.

Dr. Chang is now Chair (2018~2023) of IEEE Technical Committee of Learning Technology (TCLT, https://tc.computer.org/tclt), Executive Committee member of IEEE Computer Society Special Technical Communities (https://www.computer.org/communities/special-technical-communities), Executive Committee member of Asia-Pacific Society for Computers in Education (2017~2024, APSCE, https://www.apsce.net/) and Global Chinese Society for Computing in Education (2016~2025, GCSCE, http://gcsce.org/), SVice President (2022~) of International Association of Smart Learning Environments (IASLE, http://iasle.net/), and Chair (2021~) of Educational Activities Committee, IEEE Northern Canada Section. Dr. Chang is also a Steering Committee member (2020~) for International Conference on Intelligent Tutoring Systems (ITS, https://its2021.iis-international.org/).

Dr. Chang is editors-in-chief (2019~) of Journal of Educational Technology & Society (https://www.j-ets.net/, Open Access SSCI), editor-in-chief (2014~) of International Journal of Distance Education Technologies (https://igi-global.com/ijdet, Open Access ESCI, SCOPUS, EI), and editor-in-chief (2020~) of Bulletin of Technical Committee on Learning Technology (https://tc.computer.org/tclt/bulletin/, Open Access ESCI).

Dr. Chang has given more than 125 talks and lectures in different events; He has participated in more than 310 international conferences and workshops as a Program Committee Member; and, he also has (co-)authored more than 240 book chapters, journal and international conference papers. He is an IEEE member since 1996 and also a member of ACM (2001-2017), AAAI (since 2001-2017), INNS (2004-2018), and Phi Tau Phi Scholastic Honor Society

INTRODUCTION OF KEYNOTE SPEAKER

Prof. Yeong-Kang Lai

IET Fellow, National Chung Hsing University, Taiwan

Revolutionizing Multimedia Applications in the Era of Advanced VLSI Technology

Abstract: In today's era of advanced VLSI technology, the possibility of integrating a system-on-a-chip (SoC) for multimedia applications has become a reality. To meet the increasing demand for efficient image and video coding, a multitude of standards such as JPEG, MPEG-1, MPEG-2, MPEG-4, H.264, HEVC, and VVC have emerged. These standards rely on hybrid coding schemes that combine predictive coding and transform coding techniques. As a result, there are two distinct approaches to implementing video coding algorithms.

The first approach involves dedicated architectures, which offer exceptional processing capabilities, ensuring high performance. However, the fabrication and testing of such architectures require significant time and effort, limiting their flexibility. On the other hand, programmable architectures provide function flexibility and multiprocessing capability, but often fall short in terms of performance due to their complex nature.

During this keynote, we will delve into these two design methodologies for video signal processors. We will explore the benefits and challenges associated with dedicated architectures, emphasizing their high performance but limited flexibility. Additionally, we will examine programmable architectures, highlighting their advantages in terms of function flexibility and multiprocessing capability, while acknowledging their potential performance limitations due to complexity.

Furthermore, we will emphasize the crucial role that image and video codecs play in today's highly demanding multimedia appliances. These codecs are predominantly implemented as dedicated architectures to handle the computational complexity of real-time constraints. To create high-performance and cost-efficient architectures, designers must possess a deep understanding of the characteristics of video data and coding algorithms. By applying advanced architecture design techniques, designers can achieve highly parallel designs with smooth data flow and maximum hardware utilization.

Join us in this keynote session as we explore the groundbreaking advancements in multimedia applications, fueled by VLSI technology. Discover the optimal balance between performance and flexibility, enabling the creation of cutting-edge multimedia solutions that meet the ever-increasing demands of today's digital world.

Biography: Yeong-Kang Lai received the Ph.D. degree from the Institute of Electrical Engineering, National Taiwan University, Taiwan, in 1997.

In 2001, he joined the faculty of the Department of Electrical Engineering, National Chung Hsing University, Taichung, Taiwan, where he is currently a full Professor. He served as the Director of Meng Yao Chip Center from 2013 to 2015 and the Chairman of the Electrical Engineering Department from 2019 to 2022. He has published more than 100 technical journal and conference papers. His research interests include 3D display, 3D video, video compression, DSP architecture design, video signal processor design, artificial intelligence, and VLSI signal processing.

Dr. Lai was a recipient of the Distinguished Teaching Award from National Chung Hsing University in 2011, 2013, and 2016. In 2010, he also received the Best Paper Award of the International SoC Design Conference. He is a Fellow of IET and a member of Phi Tau Phi. He served as an Associate Editor for IEEE Transactions on Consumer Electronics from 2012 to 2021, and a Technical Program Committee Member for several conferences.

Prof. Yutaka Ishibashi

Nagoya Institute of Technology, Japan

Quality Assessment of Multisensory Communications: From Lower Layers to Upper Layers

Abstract: During 44 years of research life from his student days to the present (that is, his retirement from Nagoya Institute of Technology at the end of March 2024), he has been consistently involved in the field of telecommunications and network research. In his research as a student, he conducted theoretical analysis of broadcast-type packet communication networks such as satellite packet communication and Ethernet at the data link layer of the OSI reference model. During the 10 years since he joined NTT Laboratories after completing his studies, he has been engaged in research and development of a personal computer communication system (i.e., an E-mail system using JUST-PC protocol), an HDTV videotex system, and a video-on-demand system. In parallel with the developments, he has been conducting theoretical analysis of communication protocols such as adaptive ARQ schemes, JUST-PC protocol, and FDDI network closely related to the developed systems from the data link layer to the transport layer. Then, for the first 8 years as an associate professor at Nagoya Institute of Technology, he conducted QoS control such as dynamic video quality and congestion control and media synchronization control and their evaluations by simulation and experiment at the network layer to the application layer. For the last 23 years as a professor, he has been involved in research of multi-sensory QoS control with haptic sensation (for example, networked haptic museum, remote haptic calligraphy system, collaborative haptic play with building blocks, remote haptic control system, and remote robot systems with force feedback) and its assessment by experiment at the application layer. Currently, he is engaged in research and development of an efficient support system of early detection, prevention, and recovery of/from frailty using multisensory information and communications technology, which is supported by "Knowledge Hub Aichi" Priority Research Project IV from Aichi Prefectural Government from 2022 to 2024. In this invited speech, he will review how he chose his research topics and achieved his results. He hopes it will be helpful for young researchers.

Biography: Yutaka Ishibashi received the B.E., M.E., and Ph.D. degrees from Nagoya Institute of Technology, Nagoya, Japan, in 1981, 1983, and 1990, respectively. In 1983, he joined the Musashino Electrical Communication Laboratory of Nippon Telegraph and Telephone Public Corporation (currently, NTT). From 1993 to 2001, he served as an Associate Professor of Department of Electrical and Computer Engineering, Faculty of Engineering, Nagoya Institute of Technology. Currently, he is a Professor of Graduate School of Engineering, Nagoya Institute of Technology. From June 2000 to March 2001, he was a visiting researcher, Department of Computer Science and Engineering, University of South Florida (USF), USA. He was the Head of Department of Computer Science, Faculty of Engineering, Nagoya Institute of Technology from 2005 to 2006, and the Head of Department of Computer Science, Graduate School of Engineering, Nagoya Institute of Technology from 2007 to 2009. He was also a College Director at Nagoya Institute of Technology from 2016 to 2020. His research interests include multisensory communications, QoS (Quality of Service) control, and remote robot control with force feedback.

He was the Chair of the IEICE Communication Quality Technical Committee from 2007 to 2009. He served as TPC Chair of IEEE CQR (Communications Quality and Reliability) Workshop in 2011 and 2012. He also served as NetGames (Network and Systems Support for Games) Workshop Co-Chair in 2006, 2010, 2014, and 2017, Executive Committee Chair of Tokai-Section Joint Conference on Electrical, Electronics, Information, and Related Engineering in Japan, Chair of IEEE MAW 2017 (Metro Area Workshop in Nagoya, 2017), Conference Co-Chairs of ICCC 2017 - 2023, Conference Chair of ICCCS 2018, TPC Chair of IEEE ICCE-TW 2018, Conference Co-Chairs of ICFCC 2019, 2020, ICCET 2019, WSCE 2019 - 2023, and ICCCI 2020 - 2023. He was IEEE Nagoya Section Chair in 2017 and 2018, ITE (The Institute of Image Information and Television Engineers) Vice President in 2020 through 2022, ITE Tokai Branch Chair in 2020 and 2021, and IPSJ (Information Processing Society of Japan) Tokai Branch Chair. He is a Fellow of IEICE, a Senior member of IEEE and IPSJ, and a Member of ACM, ITE, VRSJ, and IEEJ.

INTRODUCTION OF KEYNOTE SPEAKER

Prof. Minjuan Wang

San Diego State University, USA

Metaverse for Immersive Education

Abstract: Metaverse attracted worldwide attention since 2022. The Metaverse is considered the third wave of the Internet revolution, able to support persistent interconnected online 3D virtual environments (3DVE), and promising to bring new levels of social connection and collaboration. How to effectively design and use Metaverse in teaching and learning remains crucial for the development of effective learning experiences.

In this presentation, Dr. Wang will showcase exemplary Metaverse technologies and platforms, then share a newly published 3D Edu-Metaverse Ecosystem. She will then discuss pedagogical principles derived from this Ecosystem and the ethical considerations of using Metaverse in different educational settings.

Biography: Dr. Minjuan Wang is Professor and Program Head of Learning Design and Technology (LDT) and Editor-in-Chief of the IEEE Transactions on Learning Technologies (TLT). Previously, she worked as a program manager for the Chancellor's Office of CSU. She teaches Methods of Inquiry, Designing and Developing Learning for the Global Audience, and Mobile Learning Design. Her research specialties are multidisciplinary, focusing on learning across the Metaverse, Cross-Reality (XR) and Immersive Learning, AI in education, and the sociocultural aspects of learning design and the use of technology.

Currently Dr. Wang is a co-PI on NSF's Coupled Natural and Human Systems project led by SDSU's Department of Geography. As an internationally recognized scholar, Dr. Wang has served as an invited or keynote speaker to about 35 international conferences. She has more than 100 peer-reviewed articles published in indexed journals and books, and many of her publications are widely cited by researchers around the world.

INTRODUCTION OF KEYNOTE SPEAKER

Mr. Takeshi Matsuzaki

CEO of e-Learning Corporation, the only Moodle Certified Premium Partner in Japan, and CEO of E-LEARNING LMS PET. LTD., Singapore

Why Moodle is No.1 LMS in many countries?

Abstract: The presentation will focus on the following points: 3

1.   Why is Moodle No.1?

It is true, Moodle is one of the best LMSs in the world.

The basic reason for the position is Moodle LMS is Open-Source Software.

2.   Expanding Moodle LMS by e-learning Co., Ltd.

Video System, Linkage to academic affairs system, etc

SaaS has many merits than on-premise Moodle.

3.   The Institute EduDXlab.Asia was launched last year.

We have established the Lab in order to conduct surveys and research on the "digitalization of education" and return the results to society.

1.   Why is Moodle No.1?

It is very difficult to objectively judge No. 1 in the field of software. Here, as a result of investigating the share of LMS from data from various sites, it was found that there are statistics that are not No. 1, but at least they are members of the No. 1 group.

Next, we will introduce the reasons for the popularity of Moodle LMS from several aspects. Here's what the speaker thinks:

- Many standard features related to teaching and teaching

- Many plugins and additional services

- Interoperability

 ・Community

All these things occurred because Moodle LMS is open source. Many educators, administrators and developers have given the functions what they want in the classroom.

2.   Expanding Moodle LMS, e-Learning Inc.'s Initiative

Although Moodle LMS is used all over the world, there are some important considerations in actual operation. Here, we will introduce points to be aware of regarding actual operation and the extended functions required by universities.

- Enhanced version of Moodle Workplace for enterprises. Recently, the use of the service has been increasing at university-run adult schools

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· Video distribution system ELVideo

· Academic affairs system linkage ELReg

· Points for Moodle LMS SaaS migration

3.   The Institute EduDXlab.Asia was launched last year.

In today's world of various information, there are many cases where advertising is prioritized for the digitalization of education.

We launched E-duDX.Asia in 2023. The institute is to present the facts in an easy-to-understand format without being influenced by corporate advertising.

We believe that "Digitization of education" means not just moving traditional classroom activities online, but also transforming the entire educational process. Digital technology opens up new learning experiences and pedagogies, such as personalized and optimized learning, the use of interactive teaching and learning tools, and data analysis and feedback.

We have established the Lab in order to conduct surveys and research on the "digitalization of education" and return the results to society.

We hope that by presenting information from various angles, both domestic and international, we will be able to provide many people with opportunities and hints to think about DX in education.

Although e-Learning Co. Ltd. is a Moodle vendor, this lab is a completely independent organization. We are open to research on any topic related to the digitization of education, even if it is not related to Moodle.

Biography: Mr. Takeshi Matsuzaki is the founder & CEO of e-Learning Corporation, the only Moodle Certified Premium Partner in Japan, and CEO of E-LEARNING LMS PET. LTD., Singapore.

   He has been a programmer and networking instructor for more than 10 years, and in the course of his work, he has come to realize the limitations of classroom education. The limitations are,

   (1) In programming training, he wants to look at each person's code in detail, he can only look at a few people at a time, and he cannot teach them even though you know what they are coding.

   (2) As he teaches the same technical content for a long time, it loses its freshness and becomes uninteresting.

   Mr. Matsuzaki thought that e-learning, which was then gaining attention, could solve these problems and established e-learning, Inc. in 2000. At the time, e-learning was considered a "light education" as represented by the phrase "anywhere, anytime," but his ideal was "e-learning that goes beyond the classroom lesson.

   To achieve this ideal, he initially made original LMS, but when he learned of the existence of Moodle, he decided that Moodle and OSS were the way to realize his ideal.

   2011 "Cloud Labo," which he designed and programmed all, won the Japan E-Learning Grand Prize.

   2014 Recognized "Moodle Partner"

   2020 Recognized "Moodle "Premium Partner", the first one in the APAC region

   2020 APAC Partner of the year 2020

   2020 Moodle Premium Certified Partner of the Year-APAC 2020

   2020 Educator Partner of the year 2020

   2022 Recognized "IntelliBoard Partner", a global AI tool

   2022 "E-LEARNING LMS PET LTD" is established in Singapore, as the first Moodle Certified Premium Partner in the region

   2022 Became "the No.1 provider in Japan" for 9 consecutive years

   2023 Moodle Premium Certified Partner of the Year-APAC 2023

INVITED SPEAKER

Insights from Talking Through and to Computers

Assoc. Prof. Leander S. Hughes

Saitama University, Japan

Leander Hughes is an Associate Professor at the Saitama University Center for English Education and Development. His research focuses on developing and investigating technologies to better understand and enhance the language learning process. He is currently completing a Ph.D. in Foreign Language Acquisition at the Graduate School of Human and Environmental Studies, Kyoto University.

Abstract - What is the impact of communication on second language acquisition? Surprisingly, this question still lacks a clear answer. This presentation delves into a series of studies conducted to uncover the mechanisms underlying communicative language learning through comparing communicative and non-communicative computer-mediated vocabulary learning tasks. The results reveal novel effects of learner-learner communication that have yet to be addressed in the existing literature. In addition, the presentation will discuss preliminary findings of a study on the impact of human-AI interaction on language learning and their relationship with the studies on learner-learner communication. Altogether, these findings demonstrate how human-computer interaction can contribute to a deeper understanding of ourselves.

Improving accessibility and reducing barriers to access as a generalizable digital pedagogy to advance classroom inclusivity and enhance student learning

Assoc. Prof.David W. Del Testa

Bucknell University, United States

David W. Del Testa received his Ph.D. in History from the University of California at Davis in 2001. After three years at California Lutheran University in Thousand Oaks, California, Prof. Del Testa began work in 2004 as an assistant professor at Bucknell University in Lewisburg, Pennsylvania, receiving tenure in 2011. In addition to his scholarship on French colonial Indochina, Del Testa has long had a broad interest in digital pedagogy praxis, including teaching introductory and intermediate historical geographic information systems (H-GIS) and building hybrid analog-digital faculty-student collaborative historical research and presentation projects (e.g., student digitization and cataloging of World War II-era posters, on-line digital journeys through colonial and contemporary Vietnam digital presentations on Bucknell University's World War I veterans), culminating with a current project on AR-enhanced study abroad. Del Testa also has a strong sensitivity to enhancing student access in the classroom and learning materials. He has presented previously on digital pedagogy at ERTé, NERCOMP, ICIET, and the American Historical Association.

Abstract - As digital pedagogies become increasingly enmeshed with post-secondary education praxis, questions about maintaining accessibility and reducing barriers to access become increasingly important, especially since the need for students engage in lifelong education - and deal with the changing conditions of a long life - grows over time. However, educators and information technologists should not see ensuring physical accessibility and/or reducing barriers to access as a burden, but as a golden opportunity to improve their own teaching and the educational environment. The major desktop operating systems - Windows, Mac OS, and Linux - and the major smartphone operating systems - iOS and Android - come with impressive capabilities to enhance visual, audio, and haptic access, and the cost of hardware has fallen so dramatically that an average student can acquire models that support their needs at a very low cost. The challenge arises now not in capability, but in terms of human capital and accepting adaptive hardware and software as universally rather than just specifically applicable. Oftentimes, responsibility for specialized knowledge rests with a small group of specific staff or administrative offices, and accessibility - both in a special-needs sense and in terms of cost - remain specialized rather than generalized. Faculty often do not receive familiarization training either adaptive technologies or approaches to digital pedagogy that minimizes cost. Yet a simple investment in time and exposure could create opportunities to improve classroom inclusivity as well as amplify opportunities for new approaches to learning. What are often seen as adaptive approaches to the needs of special students should become generalized approaches to increase engagement with all students.

INVITED SPEAKER

Academic Libraries in the era of Artificial Intelligence

Prof. Lilian Li

Zayed University, UAE

Lilian currently serves as the Director of Library and Learning Commons at Zayed University in the UAE with the rank of Professor in Practice. With over 20 years of academic library leadership experience in Canada and overseas in the Middle East combined with her education background in information system, educational leadership, and educational technology, Lilian is well versed and experienced with the digital transformation in higher education, particularly in the areas of digital and smart libraries, technology integration of curriculum development, and international higher education leadership.

Abstract - In the era of artificial intelligence (AI), academic libraries in higer education are experiencing significant transformations in how services are provided to elevate user experience. AI presents a host of opportunities and challenges for academic librarians in many aspects. While AI can be integrated in academic libraries to enhance services, improve efficiency, and provide more personalized experiences for users, there are urgent needs to address ethical and privacy concerns, as well as ongoing training needs for librarians to adapt to the evolving landscape of AI technologies.

The main purpose of this research is to survey the AI integrations in the context of academic libraries and identify trends and issues going forward. The research aims to answer three questions: 1. What is the role of AI in academic libraries; 2: issues and concerns on AI in higher education; 3: professional competency in the era of AI. In the presentation, an AI Chatbot (Aisha) developed by Zayed University librarians will be showcased.

ORAL SESSION 1

Oral Session 1: AI-enabled Education and Personalized Learning Chairperson:		13:30-15:35 Tuesday, March 19 801<8F>
13:30-13:50	C1007-A (Invited Talk)	Academic Libraries in the era of Artificial Intelligence *Prof. Lilian Li, Zayed University, UAE*
13:50-14:05	C316-A	Educational Empowerment for Young Adults with Cognitive Disabilities: A Collaborative AI and AR Approach to Enhance Workplace Independence *Wen-Tso Huang, Chung Yuan Christian University, Taiwan*
14:05-14:20	C264-A	Co-creating in the 4th Industrial Revolution: Synergies between Artists and Machines *Edgar Paul Martínez Ludert Muñoz de Cote, Tecnologico de Monterrey, Mexico*
14:20-14:35	C326	The Impact of Self-Service Technology and Learning Spaces on Student Self-Directed Learning in the Post-Pandemic Era *Yu-Hsuan Wu, National Penghu University of Science and Technology, Taiwan*
14:35-14:50	C024	Distinguishing between AI Image Creation and Human Image Creation: Creators vs. Non-Creators *Xiang-Yi You, Southern Taiwan University of Science and Technology, Taiwan*
14:50-15:05	C351	Vocabulary Profiling of Reading Materials for Learning Chinese *John S. Y. Lee, City University of Hong Kong, Hong Kong*
15:05-15:20	C393	Exploring the Psychological Impact of Artificial Intelligence-Generated Green Walls on Students and Educators *Yi-Ting Yang, Chaoyang University of Technology, Taiwan*
15:20-15:35	C343	The Effects of Gamification and VR in Encouraging Pro-environmental Behavior *Peggy Mei-lan Ng, The Hong Kong Polytechnic University, Hong Kong*

ORAL SESSION 2

Oral Session 2: Digital Teaching and IOT for Education Applications Chairperson:			13:30-15:35 Tuesday, March 19 803<8F>
13:30-13:50	Invited Talk	Improving accessibility and reducing barriers to access as a generalizable digital pedagogy to advance classroom inclusivity and enhance student learning *Assoc. Prof. David W. Del Testa, Bucknell University, United States*	
13:50-14:05	C117-A	Mind the Gap: Rethinking Data Science Education for the Digital Society *Guanhong Li, Kyoto University of Foreign Studies, Japan*	
14:05-14:20	C108	Redefining Learning Environments: The Role of Drone Photogrammetry and Virtual Reality in Future Education *Jordi RábagoTecnológico de Monterrey, Mexico*	
14:20-14:35	C115	Expectations and Possibilities of Using IoT in Education *Yuki Kamiya, Gifu City Woman's College, Japan*	
14:35-14:50	C337	Fostering Self-Regulated Learning in a Flipped Classroom Approach and Developing Effective Web-Based Instruction for Pre-service Teachers of Mechatronics Engineering *Apichaya Khwankaew, King Mongkut's Institute of Technology Ladkrabang, Thailand*	
14:50-15:05	C347	Web Page Editor with Automatic Interconversion Function *Toru Goto, Waseda University, Japan*	
15:05-15:20	C013-A	Integration of an Advanced Academic IoT Project Course in a Higher Education Institution *Itai Dabran, CS Faculty, Technion, Israel*	
15:20-15:35	C026	Improving water knowledge outcomes in civil engineering by applying BIM *Pedro Cortez-Lara, Tecnológico de Monterrey, Mexico*	

ORAL SESSION 3

Oral Session 3: Sentiment Analysis and Pattern Recognition in Education Chairperson:		13:30-15:30 Tuesday, March 19 804<8F>
13:30-13:45	C329	Recognition of Student Engagement and Affective States Using ConvNeXtlarge and Ensemble GRU in E-learning *Mohd Anuaruddin Bin Ahmadon, Yamaguchi University, Japan*
13:45-14:00	C057-A	Analysis of differences in heart rate, heart rate variability, emotion, and brain waves during learning visual- and text-based languages *Katsuyuki Umezawa, Shonan Institute of Technology, Japan*
14:00-14:15	C278	A Design and Implementation of Stationery Product Recognition Method Using Two-Stage YOLO v8 Model *Xudong Zhou, Okayama University, Japan*
14:15-14:30	C125	Voice-Driven Emotion Recognition: Integrating Speaker Diarization for Enhanced Analysis *Peng Jiang, The University of Tokyo, Japan*
14:30-14:45	C224	A Proposal of sentiment analysis approach for comments based on semi-supervised learning and topic analysis *Chengyu Jin, Yamaguchi University, Japan*
14:45-15:00	C133	Facial Recognition: Decoding Emotions in Online Collaboration *Yunjie Wang, The University of Tokyo, Japan*
15:00-15:15	C342-A	What are the people around me doing? Egocentric Multi-Person Analysis for Assisting Visually Impaired *Aimoerfu, Keio University, Japan*
15:15-15:30	C124	Utilizing Verbal Response Modes to Analyze and Enhance Group Discussion Dynamics: A Case Study on Speech Behavior and Conversational Trends *Chu Wang, The University of Tokyo, Japan*

ORAL SESSION 4

Oral Session 4: Online Learning and E-Learning Chairperson:	13:30-15:30 Tuesday, March 19 805<8F>

13:30-13:45	C321	Breaking Language Barriers: The Power of Machine Translation in Online Learning *Xiaonan Sun, Coursera, Canada*
13:45-14:00	C150	Coaching in hybrid workplace: An examination of face-to-face and online coaching to enhance self-efficacy and knowledge creation *Ray Tak-yin HUI, NUCB Business School, Nagoya University of Commerce and Business, Japan*
14:00-14:15	C215	The Application of Arts Integration Technology for Online Learning in Early Childhood Education *Chieh-Chun Tseng, Chaoyang University of Technology, Taiwan*
14:15-14:30	C384	Can Online Collaborative Learning Foster Knowledge Sharing among Students? *Mei Mei Lau, School of Professional Education and Executive Development (SPEED), The Hong Kong Polytechnic University, Hong Kong*
14:30-14:45	C396	Applying Integrated Education Platform Technologies for Food and Agriculture Education in Elementary Schools *Yu-En Chen, Department of Landscape and Urban Design, Chaoyang University of Technology, Taiwan*
14:45-15:00	C255-A	We Are the Postgraduate Students at Open Distance Learning Institution: Listen to Us on the Support We Need *Kefiloe Maboe, University of South Africa, South Africa*
15:00-15:15	C284-A	Redefining Higher Education Citizenship: Cultivating Critical Global Perspectives Through Innovative Electronic Modules with Thunkable App Developer *Linda Oktaviani, Yogyakarta State University, Indonesia*
15:15-15:30	C262	Intuitive Editor Tool for Coloring Mathematical Expressions *Kouki Taniguchi, Graduate school of Osaka Kyoiku University, Japan*

ORAL SESSION 5

Oral Session 5: Computer Network Security and Artificial Intelligence Applications Chairperson:	13:30-15:30 Tuesday, March 19 Conf. Hall<10F>

13:30-13:45	C272	Implementation of Infection Environment for White-hat Worm and Malicious Botnet Using Mirai Source Code *Aoi Fukushima, Yamaguchi University, Japan*
13:45-14:00	C335-A	Efficient container replica deployment for sharing multiple Docker environments in hybrid P2P network *Shinji Sugawara, Chiba Institute of Technology, Japan*
14:00-14:15	C295-A	Deep Learning Based Effective Driver's Head Poses and Behaviors Detection for Driver Monitor System *Yu-En LEE, National Chung Hsing University, Taiwan*
14:15-14:30	C183-A	Dimensions of Parameterized Statistical Models in Three-layer Neural Networks *Tadashi Takahashi, Konan University, Japan*
14:30-14:45	C349-A	Qualitive and Quantitative Motion Monitoring through Video-Based Marker-less DgCHLAC Methodology *Fumito Yoshikawa, BIWAKO SEIKEI Sport College, Japan*
14:45-15:00	C369-A	Lightweight Action Recognition System Based on Spatiotemporal Convolutional Neural Network *Yu-Cheng Fan, National Taipei University of Technology, Taiwan*
15:00-15:15	C139	A Transposed Hand Silhouette Interaction System using Deep Neural Network *Tsung-Han Tsai, National Central University, Taiwan*
15:15-15:30	C152	Human-AI Pair Programming System: A Case Study on Railway Congestion Forecasting *Tomoya Fukada, Yamaguchi University, Japan*

ORAL SESSION 6

Oral Session 6: Educational Innovation and Innovation Management Chairperson:	16:00-17:45 Tuesday, March 19 801<8F>

16:00-16:15 C151 Visualizing and Revealing the Difference of Learner's Thought Process and Question Solving Method

Shin'Ichi Warisawa, The University of Tokyo, Japan

16:15-16:30 C265-A Impact of the Educational Innovation Novus projects on Higher Education at Northeastern México

Cynthia Karyna López Botello, Tecnológico de Monterrey, Mexico

16:30-16:45 C109 Effective Methods in Cybersecurity Education for Beginners

Daichi Aoyama, Chiba University, Japan

16:45-17:00 C314-A Critical Reading to Enhance Critical Thinking

Murni Sekar Pinilih, Yogyakarta State University, Indonesia

17:00-17:15 C105 FRACTAL methodology for Industry 4.0 & Society 5.0-Driven New Product Development: empowering engineering students for startup innovation

Donovan Esqueda-Merino, Tecnológico de Monterrey, Mexico

17:15-17:30 C263 Designing an Application for Track the Disease Transmission on Hospital Workers by Safety Climate Approach

Aulia Aghnia Nurilmianti, Telkom University, Bandung, Indonesia

17:30-17:45 C198 A Product Recommendation Method by Analyzing Sales Volume, Sales Period, and User Satisfaction

Haoyang Xia, Yamaguchi University, Japan

ORAL SESSION 7

Oral Session 7: Educational Data Mining and Intelligent Tutoring System Chairperson:		16:00-18:00 Tuesday, March 19 803<8F>
16:00-16:15	C269	Integrating Side Information into Collaborative Filtering Recommendation Method in Online Course Platform *Siti Muslimah Kusuma Haqqu Nurakhmadyavi, Department of Computer Science and Electronics, Universitas Gadjah Mada, Indonesia*
16:15-16:30	C308	Analysis of Solution Results of Code Writing Problems for Basic Object-Oriented Programming Study in University Java Programming Course *Khaing Hsu Wai, Okayama University, Japan*
16:30-16:45	C386	Electronic Parts Counting in Physics Laboratory using Difference of Gaussians Edge Extraction *Suphamit Chittayasothorn, School of Science, King Mongkut's Institute of technology Ladkrabang, Bangkok, Thailand*
16:45-17:00	C298	Contextualized and Personalized Math Word Problem Generation using GPT and Authentic Contextual Recognition *Ika Qutsiati Utami, Graduate Institute of Network Learning Technology, National Central University, Taiwan*
17:00-17:15	C197-A	An Intelligent Handwriting Teaching System Based on AI Edge Computing *Hsin-Yu Chen, National Kaohsiung University of Science and Technology, Taiwan*
17:15-17:30	C100	Approaches to Studying as Predictors of Academic Achievement *Mitja Dečman, University of Ljubljana, Slovenia*
17:30-17:45	C350	Using LLM Artificial Intelligence Systems as Complex SQL Programming Assistants *Suphamit Chittayasothorn, King Mongkut's Institute of Technology Ladkrabang, Thailand*
17:45-18:00	C411-A	A Social Mechanism for MOOC Course Recommendation *Yung-Ming Li, National Yang Ming Chiao Tung University, Taiwan*

ORAL SESSION 8

Oral Session 8: Educational Robotics and Technology Enhanced Learning Chairperson:	16:00-17:45 Tuesday, March 19 804<8F>

16:00-16:15	C134	Research on Support System for Programmatic Thinking based on Metacognition of Instructional Interaction *Alok Shrestha, Osaka Institute of Technology, Japan*
16:15-16:30	C157	Designing an Educational Chatbot for Enhanced Learning in Programming Courses *Wei Ying Wang, Electrical Department at Chung Yuan Christian University, Taiwan*
16:30-16:45	C178-A	Development of programming materials for elementary school students *Tadaaki Ikehara, Shonan Institute of Technology, Japan*
16:45-17:00	C257	A study on Dash & dot with using cooperative learning in higher grades of primary school *Yuli Chan, Department of Education and Learning Technology, National Tsing Hua University, Taiwan*
17:00-17:15	C292	A study on primary school students' English learning motivation through international robot competitions *Yen-Ni Lee, National Tsing Hua University Hsinchu, Taiwan*
17:15-17:30	C214	Crochet-Together: Cultivating Positive Emotional Well-being with the Touch of Technology-Enhanced Learning *Chandra Reka Ramachandiran, Xiamen University Malaysia, Malaysia*
17:30-17:45	C331-A	Avoiding Student Cynicism by Transparent Technology Integration into Teaching *Yu-sheng Jian, National Penghu University of Science and Technology, Taiwan*

ORAL SESSION 9

Oral Session 9: Programming Education and Media Information Literacy Chairperson:		16:00-18:00 Tuesday, March 19 805<8F>
16:00-16:15	C066	Gender-Inclusive Materials to Learn Programming through Data Visualization *Taeko Ariga, Doshisha Women's college of Liberal Arts, Japan*
16:15-16:30	C088	Navigating Learning Pathways: A Multifaceted Approach to Understanding Student Engagement and Progress in online programming courses *Xiaonan Wang, Graduate School of Intercultural Studies, Kobe University, Japan*
16:30-16:45	C097	Practical Report of Studying Unknown Programming Languages through Pictogram Contents Creation *Mikihiro Ishii, Aoyama Gakuin University, Japan*
16:45-17:00	C136	Collaborative Learning in Programming Education with the Programmed Visual Contents Comparison Method *Thanh Ha Nguyen, Graduate School of Intercultural Studies, Kobe University, Japan*
17:00-17:15	C144	Development and evaluation experiment of a classroom support system for programming education using tangibles educational materials *Koji Oda, Saitama Prefectural Kawaguchi Technical High School, Japan*
17:15-17:30	C410-A	Developing Educational Robots for Wireless Remote Programming: Tailoring to Mechanical Engineering Students *Kazuyuki Kojima, Shonan Institute of Technology, Japan*
17:30-17:45	C273-A	Visualization of Neural Network Structures on the Fly in AI Programming Education *Xiaoyin Wang, The University of Texas at San Antonio, USA*
17:45-18:00	C087	Factors affecting expectations of computerized cognitive training programs: a pilot study *Nigel Robb, Hokkaido University, Japan*

ORAL SESSION 10

Oral Session 10: Educational Psychology and Professional Practice in Psychology Chairperson:	16:00-18:00 Tuesday, March 19 Conf. Hall<10F>

16:00-16:15	C309	Whether Athletic Club Experience in Higher Education Develops Non-Cognitive Skills (Grit) *Kayoko Kurita, The University of Tokyo, Japan*
16:15-16:30	C207-A	Academic burnout, professional commitment and psychological capital in undergraduate clinical and health psychology students *Carlos Rodriguez, Tecnológico de Monterrey, Mexico*
16:30-16:45	C361-A	MOBILE PHONE DEPENDENCE OF COLLEGE STUDENTS: BASIS FOR A COURSE OF ACTION *Allen Paul Esteban, Nueva Ecija University of Science and Technology, Philippines*
16:45-17:00	C208-A	Strategies for the development of clinical interventions from the perspective of clinical psychology supervisors *Xochitl Garza-Olivares, Tecnológico de Monterrey, Mexico*
17:00-17:15	C315-A	Improving Students' Mathematical Disposition in Mathematics Learning: A Systematic Literature Review *Tiara Saharani, Yogyakarta State University, Indonesia*
17:15-17:30	C204-A	Attitudes toward professionalism in psychology students at Tecnológico de Monterrey *Brenda Domínguez, Tecnológico de Monterrey, Mexico*
17:30-17:45	C211-A	Clinical supervision for clinical and health psychology students at Tecnologico de Monterrey: qualitative exploration *Daniela Aguilar de Leon, Tecnológico de Monterrey, Mexico*
17:45-18:00	C606	Scholar Practitioner Identity Formation for a Socially Just Classroom *Andrew Enomoto, Bunkyo University, Japan*

ONLINE SESSION 1

Online Session 1: Educational Informatization and Computer Assisted Learning Chairperson:		13:30-16:20 Tuesday, March 19 Room A: 867 6198 2583
13:30-13:50	C1002-A (Invited Talk)	Insights from Talking Through and to Computers *Assoc. Prof. Leander S. Hughes, Saitama University, Japan*
13:50-14:05	C186	Exploring the Impact of Code.org's Block-Based Coding Curriculum on Student Motivation in K-12 Education *Wan Chong Cho, iIllinois Institute of Technology, United States*
14:05-14:20	C203	A Revising Support Method for Lecture Slides Based on Topic Explanation Quantity and Sequences *Itsuki Sano, Kwansei Gakuin University Graduate School, Japan*
14:20-14:35	C209	Proposal and Evaluation of STEAM Educational Materials Aimed at Creating a Related Population for University Students *Kanae Matsui, Tokyo Denki University, Japan*
14:35-14:50	C219	Enhancing Learning Effectiveness through YouTube Kids: A Case Study of Arts and Craft Learning in Malaysia *Pua Shiau Chen, Universiti Tunku Abdul Rahman, Malaysia*
14:50-15:05	C251	The Role of Teacher Feedback in Shaping Student Achievement during U-Physics Exploration Activity Design *Siska Wati Dewi Purba, Universitas Pelita Harapan, Indonesia*
15:05-15:20	C259	Development of 360-Degree Virtual Reality Chinese CLIL Learning Material for Intercultural Understanding Integrated with Sustainable Development Goals (SDGs) for Regional Revitalization *Koji Namba, Kobe Gakuin University, Japan*
15:20-15:35	C372	EduCredPH: Towards a Permissioned Blockchain Network for Educational Credentials Verification System *Mark Philip M. Sy, Cavite State University, Philippines*
15:35-15:50	C378	Macroeconomic Experimental Teaching Platform: Design and Implementation from an Educational Psychology Perspective *Anyuan Zhong, Shandong Jiaotong University, China*
15:50-16:05	C611	Enhancing Student Learning and Engagement with Object-Oriented Block-based Programming Tool *Qi Cao, University of Glasgow, Glasgow, Scotland, UK*
16:05-16:20	C380	Development of Web API Services of Higher Education Institutional Data *Masaaki Ida, National Institution for Academic Degrees and Quality Assurance of Higher Education, Japan*

ONLINE SESSION 2

Online Session 2: Online Learning and Blended Learning Chairperson:	**13:30-16:00** Tuesday, March 19 Room B: 889 8967 0199

13:30-13:45	C296	A Visualization Analysis of Using Moodle Within English Language Teaching and Learning via CiteSpace *Jing Wen, University of Electronic Science and Technology of China, China*
13:45-14:00	C032-A	The Impact of School Teaching Environment on Teaching Effectiveness *Eva Chang, National Sun Yat-sen University, Taiwan*
14:00-14:15	C006	Application of SPOCs-based Blended Teaching into Explicit Instruction on Syntactically Complex Constituents *Yuexin Zhong, Chengdu College of Arts and Sciences, China*
14:15-14:30	C112	Perceiving Web-based Language Learning and Collaborative Online International Learning *Dhaniar Asmarani, Bina Nusantara University, Indonesia*
14:30-14:45	C189	An Action Research on Blended Learning Model Applied to the Course Teaching *Yan Yang, Shanghai Normal University Tianhua College, Shanghai, China*
14:45-15:00	C195	Project-driven Flipped Classroom Develop Digital Competences in Preschool Education Students *Lu Lingming, Yulin Normal University, China*
15:00-15:15	C267	Can Online Meeting Platforms be Better Utilized in Teaching Scenarios? — A Study on the Impact of Online Meeting Layout on Learners *Shuchang Han, School of Design, Shanghai Jiaotong University, China*
15:15-15:30	C222	Evaluation Framework of Collaborative Competence in Project-based Collaborative Learning *Shurui Gao, Beijing Normal University, China*
15:30-15:45	C285	A Comparative Study of Interaction between Online and Offline Second Language Classes *Zhao FANG, East China University of Science and Technology, China*
15:45-16:00	C611	Research on the Reforming of Construction Safety Course Based on SPOC + MOOC *Guangyu Tian, Shenyang Jianzhu University, China*

ONLINE SESSION 3

Online Session 3: Educational Data Mining and Artificial Intelligence in Education Chairperson:	16:30-19:15 Tuesday, March 19 Room A: 867 6198 2583

16:30-16:45	C145	A Support Tool for Instructors to Better Understand How Students Work on Assignments in Small Classes *Keiichi Takahashi, Kindai University, Japan*
16:45-17:00	C221	Incorporating ChatGPT in English Classrooms: A Case Study *Shudong Wang, Shimane University, Japan*
17:00-17:15	C397	Measuring Student Satisfaction Based on Analysis of Physical Parameters in Smart Classroom *Farhad Mortezapour Shiri, University Putra Malaysia (UPM), Malaysia*
17:15-17:30	C019	Feature Mining Algorithm for Student Academic Prediction Based on Interpretable Deep Neural Network *Yiming Luo, University of Sydney, Australia*
17:30-17:45	C095	AMPNet: Academic Multi-task Prediction Network for Students' Grade and Graduation *Cui Xie, Ocean University of China, China*
17:45-18:00	C161	High School Students' Perception of AI and its Future Impact on Education *Mario Konecki, Faculty of Organization and Informatics, University of Zagreb, Croatia*
18:00-18:15	C306	Machine Learning Algorithm, Scaling Technique and the Accuracy: An Application to Educational Data *Indika Wickramasinghe, Prairie View A&M University, United States*
18:15-18:30	C334	Investigating Chinese Learners' Use and Perceptions of ChatGPT in EAP *Yanqiu Shen, University of Electronic Science and Technology of China, China*
18:30-18:45	C360	ChatGPT in Creative Writing Courses in Chinese Universities: Application and Research *Renzhang Chen, Jinan University, China*
18:45-19:00	C020	The Impact of AI Tools in Education Environment *Ahlem Khefacha, Budapest University of Technology and Economics, Hungary*
19:00-19:15	C226	Artificial Intelligence Enhancing Physical Education: A systematic literature review *Juan Zhao, King Mongkut's Institute of Technology Ladkrabang, Thailand*

ONLINE SESSION 4

Online Session 4: Educational Information Technology and Information Technology Applications Chairperson:	16:30-19:15 Tuesday, March 19 Room B: 889 8967 0199

16:30-16:45	C012	Design Knowledge Graph-Based Recommender System for Engineering Pedagogy *Yan Li, University of Nottingham Ningbo, China*
16:45-17:00	C280	Study for division of general-purpose software that helps with customization *Yoji Yamato, NTT Corporation, Japan*
17:00-17:15	C114	Research and Design of Automatic Questioning System Based on Question Generation *Qingting Liu, Northeastern University, China*
17:15-17:30	C268	The Effect of K-Means Clustering on Collaborative Filtering in Book Recommendation *Intan Hervianda Putri, Universitas Gadjah Mada, Indonesia*
17:30-17:45	C338	Graph Attention-enhanced Knowledge Tracing: Unveiling Exercise Variability and Long-term Dependencies *Qin Changjiu, East China Normal University, China*
17:45-18:00	C187	Decoding Academic Language: The Symbiotic Relationship between Boosters, Hedges, and Voice in EAP *Zhendong Du, Waseda University, Japan*
18:00-18:15	C355	On Combining the Potential of Social Robots and ChatGPT for Enhanced Learning *Abdelkader Nasreddine Belkacem, United Arab Emirates University, UAE*
18:15-18:30	C345	Usability Survey of Calligraphy Using Haptic Sense in Virtual Environment *Tetsuta Takahashi, Nagoya Institute of Technology, Japan*
18:30-18:45	C367	Based on Clustering Label Generation for View Type Noisy Learning *Tao Xin, University of Science and Technology of China, Hefei, China*
18:45-19:00	C225	Support System for Learning the Issues Involved in Achieving Exit Strategies for University Venture Companies *Tomoya Hirano, Yamaguchi University, Japan*
19:00-19:15	C260	DAT (Data Analytics Tool): A data-driven decision-making tool for data analytics *Froilan E. De Guzman, University of the East, Philippines*

OREL SESSION 11

Oral Session 11: Game-Based Learning and Interactive Learning Environment Chairperson:	13:30-15:15 Wednesday, March 20 801<8F>

13:30-13:45	C281	A Gamification System for Acquiring Appreciation Perspectives in Museum *Kaisei Nishimoto, Graduate School of Information Science, University of Hyogo, Japan*
13:45-14:00	C305	Game-Based Learning as an effective instructional strategy for improving students' critical thinking and collaborative experiences *Soon Hin Hew, Multimedia University, Malaysia*
14:00-14:15	C1006-A	Understanding Player Types to Inform Gamification and Game-Based Learning within a Blended Learning Environment *Jai Bishop, Aoba-Japan International School, Japan*
14:15-14:30	C323-A	Analysis of Students' Response Time and Performance in Kahoot! Quiz Games in a University Engineering Course *Zilu Liang, Kyoto University of Advanced Science, Japan*
14:30-14:45	C241	Viewing Experience Support Environment based on Knowledge Experience Design *Takayuki Hoshino, BIPROGY Inc., Japan*
14:45-15:00	C113	Enhancing the Motivation of Young Learners in Intangible Cultural Heritage Education: An Creative Real-Time Finger Tracking System for Chinese Shadow Puppetry *Anthony Kong, The Hong Kong Polytechnic University, Hong Kong, China*
15:00-15:15	C253	Impressing museum visitors by having them answer questions toward the realization of an interactive viewing support system *Yuna Morita, Graduate School of Information Science, University of Hyogo, Japan*

OREL SESSION 12

Oral Session 12: Digital Education Platform and Education Information System Chairperson:		13:30-16:00 Wednesday, March 20 803<8F>
13:30-13:45 C098	Edu MEAL: Food education application that promotes taste education *Keiko Kanazawa, Kobe Institute of Computing, Japan*	
13:45-14:00 C304	Experiential Learning Spaces Through an Academic Software Application to Simulate Production Lines of Rigid Bodies *Hector Rafael Morano Okuno, Tecnologico de Monterrey, Mexico*	
14:00-14:15 C240	Adaptive Evaluation for Barriers Elimination: The OpenEDR4C Platform *Inés Alvarez-Icaza, Tecnologico de Monterrey, Mexico*	
14:15-14:30 C266	Development of a Technological Tool to Improve the Learning of Students with Autism Spectrum Disorder *Jesus Enrique Chong Quero, Tecnologico de Monterrey, Mexico*	
14:30-14:45 C294	User Experience on a Culture-Based Learning Management System: Students' Perspective *Regina Garcia Almonte, City College of Calamba, Philippines*	
14:45-15:00 C317	Design-Implementation Discrepancy Analysis for Mobile Application Interfaces Using Object Detection Methods *Yen-Tse Hsueh, Feng Chia University, Taiwan*	
15:00-15:15 C275	Detection Of Crop Diseases And Insect Pests Based On Convolutional Neural Network *Rolaida L. Sonza, Nueva Ecija University of Science and Technology, Philippines*	
15:15-15:30 C293	Predicting the risk of course change in online education Using the Causal Shapley method *Miki Katsuragi, The University of Tokyo, Japan*	
15:30-15:45 C216	Effects of Input Enhancement on Vocabulary Learning in Web-based Learning Environment *Min Kang, Kobe University, Japan*	
15:45-16:00 C083	Structural Equation Modeling of Perceived Ability in Media and Digital Literacy among Japanese High School Students *Masataka Nakaue, Mukogawa Women's University, Japan*	

POSTER SESSION 1

Poster Session 1: Digital Education and Interactive Environment Chairperson:	13:30-14:40 Wednesday, March 20 804<8F>

13:30-13:40	C091	Digital Content Management and the Holocaust in K-12 Education in the United States: Examining the Present, Revolutionizing the Future? *Elisabeth Harrison, Bucknell University, United States*
13:40-13:50	C143	Experiential Media Wall Utilizing Hand Gesture Recognition *Yohan Hong, Korea Culture Technology Institute (GIST), Republic of Korea*
13:50-14:00	C106	A Look At Current Accessibility Standards Within The Digital Humanities *Bryce Merry, Bucknell University, United States*
14:00-14:10	C102	Digital Spaces and Study Abroad for LGBTQIA+ Students: A Necessary Reexamination *Grace Garvey, Bucknell University, United States*
14:10-14:20	C058	International Virtual Exchange as a Microcosm of the Corporate University: Preliminary Reflections *Renee Palma, Bucknell University, United States*
14:20-14:30	C084	GIS Barriers to Access and Implementation in Secondary Schools *Dylan Christie, Bucknell University, United States*
14:30-14:40	C362-A	DEVELOPMENT OF INTELLIGENT INFORMATION SYSTEM FOR RESEARCH AND EXTENSION OF STATE UNIVERSITIES *Allen Paul Esteban, Nueva Ecija University of Science and Technology, Philippines*

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