ICCE 2024
32nd International Conference on Computers in Education
MANILA, PHILIPPINES

Conference Program
Monday, 25 November 2024

Monday, 25 November 2024		
09:00 to 10:30	**ECW**: Early Career Workshop Session Chair: Chiu-Lin LAI **ECW01**: Can Use of Technologies help Reduce Biases in Academic Recruitment *Kashmira DAVE* **ECW02**: Leveraging AI-Powered Virtual Meeting Summaries: Towards an Evidence-Based Classroom Observation Assessment *Arlene Mae CELESTIAL VALDERAMA* **Advisors** Tzu-Chi YANG 　Assistant Professor, National Yang Ming Chiao Tung University Cheng-Huan CHEN 　Associate Professor, National Tsing Hua University Shao-Chen CHANG 　Assistant Professor, Yuan Ze University	Doreen Black Box
	W01-1: 4th International Workshop on Embodied Learning: Technology Design, Analytics & Practices Session Chair: Rwitajit MAJUMDAR **W01-004F**: Exploring Cognitive Engagement in AI-Driven Adaptive Psychomotor Sport Training *Miguel PORTAZ, Rwitajit MAJUMDAR & Olga C. SANTOS* **W01-005F**: Exploring Graph Slopes Through a Series of Embodied Learning Experiences *Priyadharshni ELANGAIVENDAN, Melwina ALBUQUERQUE, Shizuka DARA & Sanjay CHANDRASEKHARAN*	The Loft
	W03-1: Analysis and Design of Problems/Questions in the Digital Environment: The 17th Workshop on Technology Enhanced Learning by Posing/Solving Problems/Questions Session Chair: Yusuke HAYASHI **W03-002**: Question Generation Support System Using Others' Research Frames *Daiki MAEDA, Kota KUNORI & Tomoko KOJIRI* **W03-005**: Learning Effectiveness and Reflections on AI Literacy in Junior High School Students with Game-Based Learning and Problem-Based Learning *Shih-Hua HUANG & Ting-Chia HSU* **W03-009**: Does Experience of Feedback Generation Promote Student Novel Problem Posing? An Empirical Study in a Database Course *Kazuaki KOJIMA*	The Hive

Monday, 25 November 2024

09:00 to 10:30	**W08-1**: The 12th Workshop on Technology-Enhanced STEM Education (TeSTEM Workshop) Session Chair: Pawat CHAIPIDECH **W08-001F**: Novice Programmers' Saccadic Patterns in Error Message Comprehension and Syntax Error Identification *Caren PACOL, Maria Mercedes RODRIGO & Christine Lourrine TABLATIN* **W08-004F**: Challenges and Opportunities for Designing and Implementing Ubiquitous Game-Based Learning to Cultivate Digital Citizenship in Thailand *Patcharin PANJABUREE, Gwo-Jen HWANG, Niwat SRISAWASDI, Ungsinun INTARAKAMHANG & Sasipim POOMPIMOL* **W08-005S**: Reducing Undergraduate Students' Information Technologies (ITs) Anxiety Through Implementation of Blended Learning: A Case Study in the Basic Natural Science Course *Anggiyani Ratnaningtyas Eka NUGRAHENI, Anggraeni Dian PERMATASARI & Antuni WIYARSI*	JJ Atencio Lighthouse
	W09-1: The 4th Workshop on Innovative Technologies for Enhancing Interactions and Learning Motivation Session Chair: Jerry Chih-Yuan SUN **W09-001S**: AR^2: Augmented Reality for Enhanced Reading Comprehension *Allan Jay ESTEBAN* **W09-002S**: Developing the Interactive Game-Based Picture Book "Food Ninja" to Enhance Creativity in Elementary School Students *Wen Chun LAN, De Jun MO & Joni Tzuchen TANG* **W09-003F**: An Estimation of Student Well-Being Using Experience Sampling *Arthur W. NEBRAO, Jr. & Maria Mercedes T. RODRIGO* **W09-004S**: Exploring the Use of Short Video Social Media for Learning ESL in Indonesia *Riska SAPUTRA, Tsaqufal JALILIY & Intan SETIANI* **W09-005S**: Narrative Introduction Text Generation Support System According to Reader Preferences *Ryusei SHIMONAKA, Kota KUNORI & Tomoko KOJIRI* **W09-007S**: Galvanic Skin Responses and Flow: Insights from Multimodal Learning Analytics in Personal Learning Environment *Yu-Lin HO, Yuan-Hsuan LEE & Jiun-Yu WU*	Campos Interactive Teaching Lab
10:30 to 10:50	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space

Monday, 25 November 2024

10:50 to 12:20	**W01-2**: 4th International Workshop on Embodied Learning: Technology Design, Analytics & Practices Session Chair: Jayakrishnan M. WARRIEM **W01-006F**: Unpacking Interaction Markers of Critical Thinking *Aditi KOTHIYAL, Rwitajit MAJUMDAR, Shitanshu MISHRA, Jayakrishnan Madathil WARRIEM & Prajakt PANDE* **W01-007F**: Actions and Interactions at Collaborative Engineering Design Hackathon: Looking Through the Lens of Embodied Cognition *Soumya NARAYANAN, Navneet KAUR & Rwitajit MAJUMDAR* **W01-008F**: Designing an AI-Enhanced Timeline for Monitoring Multimodal Interactions in Embodied Learning Environments *Joyce FONTELES, Namrata SRIVASTAVA, Eduardo DAVALOS, Ashwin T S & Gautam BISWAS*	The Loft
	W03-2: Analysis and Design of Problems/Questions in the Digital Environment: The 17th Workshop on Technology Enhanced Learning by Posing/Solving Problems/Questions Session Chair: Shitanshu MISHRA **W03-004**: Difficulty-Controllable Reading Comprehension Question Generation Considering the Difficulty of Reading Passages *Yuto TOMIKAWA & Masaki UTO* **W03-006**: Iterative Problem Solving in the Integration of Design Thinking and Game-Based Learning into Enhancing Computational Thinking and AI Literacy *Tai-Ping HSU & Ting-Chia HSU* **W03-007**: Design and Development of a Stepwise Learning Environment for Problem Posing of Arithmetic Word Problem *Yusuke HAYASHI, Nagito YAMAMOTO, Susumu SHIMAKAWA & Tsukasa HIRASHIMA*	The Hive
	W08-2: The 12th Workshop on Technology-Enhanced STEM Education (TeSTEM Workshop) Session Chair: Pawat CHAIPIDECH **W08-002F**: Predicting Emotional Impact on Peer Review, Peer Assessment, and Self Assessments Using Deep Learning and NLP in STEM Education *Pascal Muam MAH* **W08-008F**: Leveraging Generative AI for Automatic Scoring in Chemistry Education: A Web Based Approach to Assessing Conceptual Understanding of Colligative Properties *Sri YAMTINAH, Dimas Gilang RAMADHANI, Antuni WIYARSI, Hayuni Retno WIDARTI & Ari Syahidul SHIDIQ* **W08-010S**: Fostering TPACK Self Efficacy Among Pre-Service Chemistry Teachers: A Case Study from Indonesia *Anggiyani Ratnaningtyas Eka NUGRAHENI & Niwat SRISAWASDI*	JJ Atencio Lighthouse

Monday, 25 November 2024

Time	Session	Location
10:50 to 12:20	**W09-2**: The 4th Workshop on Innovative Technologies for Enhancing Interactions and Learning Motivation Session Chair: Tzu-Chi YANG **W09-006F**: Transforming Student Feedback into Institutional Action Plans: A Data-Driven Approach *Arlene Mae CELESTIAL VALDERAMA* **W09-008F**: BioMol DigiGames: An App for the Mastery of Biomolecules *Joshua TUMOLVA, Armando Victor GUIDOTE, John Lorence VILLAMIN & Joselito Christian Paulus VILLANUEVA* **W09-009S**: The Era of Learning Programming Through Program: Challenges and Potential of ChatGPT in Revolutionizing High School Programming Education *Tzu-Chi YANG* **W09-010S**: Code Visualization System for Writing Better Code Through Trial and Error in Programming Learning: Classroom Implementation and Practice *Shintaro MAEDA, Kento KOIKE & Takahito TOMOTO* **W09-011S**: Optimization of Non-Verbal Information for English Conversation Agents Using Interactive Evolutionary Computation *Yuma SHIMOSAKA, Emmanuel AYEDOUN & Masataka TOKUMARU*	Campos Interactive Teaching Lab
12:20 to 13:20	**Lunch** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
13:20 to 17:00	**IE01**: Interactive Event-1 **Educ-AI-tion: Bridging Divides with Educational GenAI** *Ahmad Salahuddin Mohd Harithuddin, Nurul Amelina NASHARUDDIN, Nur Aira Abd Rahim, & Mas Nida Md Khambari* Universiti Putra Malaysia, Malaysia	The Loft
	IE02: Interactive Event-2 **Improving Learning through Information Organization Using Kit-Build Concept Map** *Rian FITRIANSYAH & Lintang Matahari HASANI* Hiroshima University, Japan	Doreen Black Box
	TU01: Tutorial 1 **Leveraging Deep NLP for Agentic LLM Use in Teaching and Learning** *Michelle BANAWAN* Asian Institute of Management, Philippines	The Hive

Monday, 25 November 2024

13:20 to 17:00	**W08-3**: The 12th Workshop on Technology-Enhanced STEM Education (TeSTEM Workshop) Session Chair: Anggiyani Ratnaningtyas Eka NUGRAHENI **W08-003F**: Math Learning Application on Mobile Devices Following the STEAM Educational Model *Nguyen-Manh THANG & Pham-Duc THO* **W08-011F**: Does Interactive Augmented Reality Enhance Primary Students' Geometric Understanding and Visual-Spatial Skills in Mathematics Learning? *Atcharaporn ASSAWAPHUM, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH* **W08-007S**: Promoting Quantitative Analysis in School Chemistry with Technology-Supported Hands-On Laboratory Learning: A Case of Arduino-Based Portable Spectrophotometer *Ari Syahidul SHIDIQ, Fa'ari SALSABIILA, Sri YAMTINAH, Sri MULYANI, Murni RAMLI, Hayuni Retno WIDARTI & Nahadi*	JJ Atencio Lighthouse
	W09-3: The 4th Workshop on Innovative Technologies for Enhancing Interactions and Learning Motivation Session Chair: Yanjie SONG **W09-012S**: Exploring the Benefits of Strategic Hesitations in Language Learning Robots *Ryusei AZUMA, Emmanuel AYEDOUN & Masataka TOKUMARU* **W09-013S**: Zooming In on Educator Well-Being: Exploring Behavior Attributes, Zoom Fatigue, and Burnout Dynamics *Kevynn DELGADO, Mary Rose MARTINEZ, Christine Jamela VALSADO & Ryan EBARDO* **W09-014S**: The Effect of Collaborative Anchoring on the Development of Digital Curation Skills Among Nursing College Students *Chun-Hao CHANG* **W09-015F**: Enhancing Health Education and Learning Motivation in Primary Students Through Augmented Reality and Game-Based Learning: A Case Study *Nattapat BUNYUEN, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH* **W09-016S**: Improving Engagement in Museums Through Virtual Reality Educational Escape Rooms (VREER): A Framework and Usability Study *Eric Cesar E. VIDAL Jr., Nicko R. CALUYA, Joan Dominique L. LEE, Kenneth King L. KO, Jed Laszlo O. JOCSON & Gerick Jeremiah Niño N. GO* **W09-017S**: Explore the Effect of Metacognitive Awareness on University Students' Learning Outcomes in the Metaverse: Evidence from Eye-Tracking Data *Tinghui WU, Yanjie SONG & Xuesong ZHAI*	Campos Interactive Teaching Lab
14:50 to 15:10	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space

Monday, 25 November 2024

| 15:10 to 17:00 | **W08-4**: The 12th Workshop on Technology-Enhanced STEM Education (TeSTEM Workshop)
Session Chair: Anggiyani Ratnaningtyas Eka NUGRAHENI
W08-009F: The Urgency of Small-Scale Laboratory Learning Media with Ethno-Electrochemical Contexts Based on Content Creators
Hayuni R. WIDARTI, Sumari, Munzil, Nahadi, Ari S. SHIDIQ, Berliyana I. PANULATSIH, Ghaitsa Z. S. P. PUTRI, Nafisah KHAIRUNNISA & Deni A. ROKHIM
W08-012F: Exploring the Effect of Marker-Based AR Gamification on Primary Students' Science Concepts and Motivation
Pawat CHAIPIDECH, Sasivimol PREMTHAISONG, Phattaraporn PONDEE & Niwat SRISAWASDI
W08-006S: Exploring the Impact of Digital Divide on the Academic Performance of STEM Students in Hybrid Modality
May Marie P. TALANDRON-FELIPE & Jundy V. INTAO | JJ Atencio Lighthouse |

Tuesday, 26 November 2024		
09:00 to 10:30	**W02-1**: The 13th International Workshop on ICT Trends in Emerging Economies (WICTTEE 2024) Session Chair: Ryan EBARDO **W02-003F**: Exploring Learning Analytics: A Case Study of Tertiary Educators' Utilization and Integration of AnimoSpace LMS in the Online Learning Environment *Rozanne Tuesday G. FLORES & Ethel C. ONG* **W02-007F**: An Implementation of Augmented Reality in Guided Inquiry-Based Learning for Enhancing Primary Students' Mental Models in Science *Sasivimol PREMTHAISONG, Pawat CHAIPIDECH, Phattaraporn PONDEE & Niwat SRISAWASDI* **W02-001S**: Design and Assessment of a Mobile Cloud Learning Platform for the Classroom: Examining the Efficiency of Blended Learning in Post-COVID Science Education *Joselito Christian Paulus VILLANUEVA, John Lorence VILLAMIN & Joshua TUMOLVA*	Doreen Black Box
	DSC-1: Doctoral Student Consortium Session Chair: Feng LIN **244**: Real-Time Adaptive Learning Environments Using Gaze and Emotion Recognition Engagement and Learning Outcomes *Aboul Hassane CISSE* **254**: Developing a Multimodal Learning Analytics Approach for Collaborative Learning and Metacognitive Strategies in Virtual Learning Environments for Primary Science Education *Lei TAO & Yanjie SONG* **223**: Competition and Collaboration: A Multi-Modal Analysis of Cognitive Load and Behavior Patterns in Game-Based Learning *Lishan ZHENG & Wenli CHEN*	The Loft
	W04-1: The 8th Computer-Supported Personalized and Collaborative Learning Session Chair: Cheng-Huan CHEN **W04-007F**: Investigating the Role of AI Book Talk Companion in Enhancing Student Performance: A Pilot Study on Self-Efficacy *Yi-Cheng TSAI, Hsiao-Tung YANG, Chang-Yen LIAO, Yen-Cheng YEH & Tak-Wai CHAN* **W04-008F**: Investigating Students' Online Learning Perception Through the Lens of Constructivism *May Marie P. TALANDRON-FELIPE, Kent Levi A. BONIFACIO & Gladys S. AYUNAR* **W04-001S**: Integrating Virtual Environment in Teaching Courses *Chiu-Jung CHEN & Pei-Lin LIU*	The Hive

Tuesday, 26 November 2024

09:00 to 10:30	**W06-1:** GenAI in Education - From Hallucinations to Reality: Integrating Learning Analytics and Generative AI for Enhancing Personalized Learning Experiences Session Chair: Yiling DAI **W06-001F**: Analyzing Teacher-Student Dialogues in Online One-on-One Primary Mathematics Tutoring: A Lag Sequential Analysis of Group Differences *Gary CHENG, Bo JIANG, Daner SUN, Ming GAO & Zhixuan SONG* **W06-004F:** Supporting Teacher-Student Book Talk and Book Wish Lists with AI-Driven Technology *Chih-En KUO, Hong-Min TU, Chang-Yen LIAO & Tak-Wai CHAN* **W06-005F**: AVERY: A GenAI-Based Approach to Enhancing Learner Engagement in English Writing *Ka-Lai WONG, Patrick OCHEJA, Brendan FLANAGAN & Hiroaki OGATA*	JJ Atencio Lighthouse
	W07-1: The 7th Workshop on Predicting Performance Based on the Analysis of Reading and Learning Behavior **W07-001F**: Exploring Cross-Disciplinary Education: Enhancing Science Learning with Digital Picture Books *Yan-Yu JAU & Joni Tzuchen TANG* **W07-002F**: Methods of Balancing Model Explainability and Performance in Identifying At-Risk Students *Tiffany T.Y. HSU, Brendan FLANAGAN & Owen H.T. LU*	Campos Interactive Teaching Lab
10:30 to 10:50	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
10:50 to 12:20	**W02-2**: The 13th International Workshop on ICT Trends in Emerging Economies (WICTTEE 2024) Session Chair: Ryan EBARDO **W02-014F**: Exploring Skills Enhancement in Student Teacher Through Implementation of Design Thinking in Unplugged Game Creation *Tian Wong LING, Mas Nida Md. KHAMBARI, Mohd Mokhtar MUHAMAD, Sharifah Intan Sharina Syed-ABDULLAH & Saiful Hasley RAMLI* **W02-017F**: Factors Influencing ChatGPT Use Behaviour Among Trainee Teachers *Sarala VALAIDUM & Jazihan MAHAT* **W02-009S**: Design and Implementation of an Educational Escape Rooms Class *Jesus Alvaro C. PATO, Gerick Jeremiah Niño N. GO, Paolo Santino P. CAOILE, Gio Gabriel C. REYES, Joaquin Enrique B. SINJIAN, Jerold Luther P. AQUINO & Maria Mercedes T. RODRIGO*	Doreen Black Box

Tuesday, 26 November 2024

10:50 to 12:20	**DSC-2**: Doctoral Student Consortium Session Chair: Alwyn Vwen Yen LEE **253**: A Proposal for a Quantitative Evaluation Model for Error Image Generation in L2 Vocabulary Learning *Kazuki SUGITA, Wen GU, Koichi OTA, Prarinya SIRITANAWAN & Shinobu HASEGAWA* **212**: Development and Validation of a Problem-Solving Instrument (Multiple-Choice Questions) for Computational Thinking Among Trainee Teachers in the Klang Valley, Malaysia *Ahmad Sarji Abdul Hamed, Su Luan WONG & Mohd Zariat Abdul Rani* **217**: OKLM: Open Knowledge and Learner Model Using Educational Big Data *Kensuke TAKII, Changhao LIANG & Hiroaki OGATA*	The Loft
	W04-2: The 8th Computer-Supported Personalized and Collaborative Learning Session Chair: Chin-Jung CHEN **W04-013F**: Investigation of Skills Training System Using TF-IDF for the Plasterer's Skeletal Data *Ryota TANAKA, Naka GOTODA, Lee SAERON, Ryo KANDA, Ayaka HUNABIKI, Hirotake KANISAWA, Kanae KANDA, Yuka TAKAI & Toshihiro HAYASHI* **W04-002S**: The Trends in Computer-Supported Virtual Reality Collaborative Learning *Ching-Yi CHANG & Cheng-Huan CHEN* **W04-003F**: Investigating the Impact of Cooperative Group Learning on Blended Teaching and Learning Outcomes: A Case Study of Sixth-Grade Students in an Elementary School *De Jun MO & Joni Tzuchen TANG*	The Hive
	W06-2: GenAI in Education - From Hallucinations to Reality: Integrating Learning Analytics and Generative AI for Enhancing Personalized Learning Experiences Session Chair: Patrick OCHEJA **Panel Discussion**	JJ Atencio Lighthouse
	W07-2: The 7th Workshop on Predicting Performance Based on the Analysis of Reading and Learning Behavior **W07-003F**: Effects of the Self-Regulated Learning and Motivation on Learning Achievements of the Programming Courses *Mu-Sheng CHEN & Ting-Chia HSU* **W07-004F**: GazeViz: A Web-Based Approach for Visualizing Learner Gaze Patterns in Online Educational Environment *Eduardo DAVALOS, Namrata SRIVASTAVA, Yike ZHANG, Amanda GOODWIN & Gautam BISWAS*	Campos Interactive Teaching Lab
12:20 to 13:20	**Lunch** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space

Tuesday, 26 November 2024		
13:20 to 14:50	**W02-3**: The 13th International Workshop on ICT Trends in Emerging Economies (WICTTEE 2024) Session Chair: John Byron TUAZON **W02-002S**: A Preliminary Investigation of the Definition and Components of Computational Thinking in the Malaysian Education Landscape: From Educational Technology Experts' Perspective *Ahmad Sarji Abdul HAMED, Su Luan WONG, Mohd Zariat Abdul Rani, Mas Nida Md KHAMBARI, Nur Aira Abd RAHIM, Fariza KHALID & Priscilla MOSES* **W02-006S**: PERS: A Personalized Recommender System for Student-Generated Questions in Programming Courses *Pham-Duc THO* **W02-010S**: A User Acceptance Testing Tool for Mobile Game-Based Learning Application *Christian Jade D. GUILLEN & Saturnina F. NISPEROS* **W02-016S**: Sociotechnical Challenges of Older Educators in Delivering Medical Education Online *Ryan EBARDO, John Byron TUAZON & Miriam Louella FERMIN*	Doreen Black Box
	DSC-3: Doctoral Student Consortium Session Chair: Feng LIN **248**: Exploring the Young Learners' Interactions with AI-Generated Multimodal Feedback in Collaborative Writing *Xinyu GUO* **241**: The Bane of AI in Teaching: Innovation Resistance in Higher Education Instructional Design & Delivery *Estefanie BERTUMEN & Ethel ONG* **Discussion**	The Loft
	W04-3: The 8th Computer-Supported Personalized and Collaborative Learning Session Chair: Jonathan Y. CHIN **W04-012F**: Addressing Public Speaking Anxiety with an AI Speech Coach *Frederick Voltair GARCIA Jr., Nicanor Froilan PASCUAL, Miguel Elijah SYBINGCO & Ethel ONG* **W04-005S**: Exploring the Impact of Integrating Auto-Photography and Imagery Strategies into Computer-Supported Collaborative Learning: A Case Study in a General Education Course on Climate Change *Wen-Lung HUANG & Chia-Jung CHANG* **W04-010S**: Developing an LLM-Empowered Agent to Enhance Student Collaborative Learning Through Group Discussion *Sixu AN, Yicong LI, Yu YANG, Yunsi MA, Gary CHENG & Guandong XU*	The Hive

Tuesday, 26 November 2024

13:20 to 14:50	**W06-3:** GenAI in Education - From Hallucinations to Reality: Integrating Learning Analytics and Generative AI for Enhancing Personalized Learning Experiences Session Chair: Tzu-Chi YANG **W06-007F**: How AI Supports Returning Adult Learners in a Developing Economy: Enhancing Academic Writing Through Self-Determination Theory *Mary Rose MARTINEZ & Ryan EBARDO* **W06-009F**: Developing a Multimodal Learning Analytics Approach to Examine Students' Cognitive Presence and Metacognition in a Metaverse Environment *Yanjie SONG, Lei TAO, Hao DENG & Jiachen FU* **W06-010F**: Integrating ChatGPT into Flipped Learning: Enhancing Students' Creative Writing Skills and Perception *Worapong KHUIBUT, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH*	JJ Atencio Lighthouse
13:20 to 17:00	**SW**: Student Wing Chair: *Yanjie SONG*, The Education University of Hong Kong **Introduction** Topic: **Get Your Research Published: Essential Tools and Strategies** *Yin YANG*, The Education University of Hong Kong **Q&A Session** Topic: **Unlock Your Early Career Success: Tips and Opportunities for Securing Grants** *Shurui BAI*, The Education University of Hong Kong **Q&A Session** **Interactive Session** **Closing**	Campos Interactive Teaching Lab
	TU02: Tutorial 2 **Designing Learning Experiences for Science, Technology, Engineering and Mathematics (STEM) Education using Minecraft** *Dominique Marie Antoinette MANAHAN & Louise Marie TULAYBA* Ateneo de Manila University, Philippines	Assemble at Ubuntu Space
14:50 to 15:10	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space

Tuesday, 26 November 2024

15:10 to 17:00	**W02-4**: The 13th International Workshop on ICT Trends in Emerging Economies (WICTTEE 2024) Session Chair: Ryan EBARDO **W02-013S**: Minecraft as a Tool for Digital Game-Based Learning: Enhancing Conceptual Understanding and Attitudes in Mathematics Learning *Sakda CHALEEPLIAM, Sasivimol PREMTHAISONG & Pawat CHAIPIDECH* **W02-008S**: Cognicraft: Smart Exam Question Generation with AI and Bloom's Taxonomy *Christian SAGADRACA, Zainal SANTOS, Danilo SIMON Jr., Marianne Jessica TOLENTINO & Reymar VENTURA* **W02-004S**: Development and Evaluation of a Hybrid Mobile-Learning App Using Design Science Research (DSR) Framework *John Lorence VILLAMIN, Joselito Christian Paulus VILLANUEVA & Joshua TUMOLVA*	Doreen Black Box
	DSC: Doctoral Student Consortium **Discussion**	The Loft
	W04-4: The 8th Computer-Supported Personalized and Collaborative Learning Session Chair: Chia-Jung CHANG **W04-006S**: Exploring the Effect of Collaborative Programming Learning Environment on Student's Computer Programming Competencies and Cognitive Learning *Chia-Jung CHANG & Wen-Lung HUANG* **W04-009S**: Investigating the Impact of Kahoot! On EFL Grammar Learning *Jonathan Y. CHIN & Ben CHANG* **W04-011S**: Designing an LLM-Based Dialogue Tutoring System for Novice Programming *Julieto PEREZ & Ethel ONG*	The Hive
	W06-4: GenAI in Education - From Hallucinations to Reality: Integrating Learning Analytics and Generative AI for Enhancing Personalized Learning Experiences Session Chair: Owen LU **W06-011F**: Competency-Based Assessment in the Era of Generative Artificial Intelligence: Perspectives of Selected STEM Educators *Friday Joseph AGBO, Heather Kitada SMALLEY & Kathryn NYMAN* **W06-006S**: A Case Study for Educators with ChatGPT and Plato's Allegory of the Cave *Anna Y.Q. HUANG, Jain-Wei TZENG, Chi-Sheng HUANG, Zhi-Qi LIU, Bryan Carl TANUJAYA & Owen H.Q. LU* **W06-008S**: Supporting Students' Post-Exam Reflection Needs in College Automation Engineering Course Using LLM *Edward ANOLIEFO, Patrick OCHEJA, Regina OCHONU, Brendan FLANAGAN & Hiroaki OGATA*	JJ Atencio Lighthouse
17:00 to 19:30	**Welcome Reception**	Ubuntu Space

Conference Program

Wednesday, 27 November 2024

C1: AIED/ITS   C2: CSCL   C3: ALT   C4: TEML

C5: EGG   C6: TELL   C7: PTP

BOPN	Best Overall Paper Award Nominee
BSPN	Best Student Paper Award Nominee
BTDPN	Best Technical Design Paper Award Nominee
F	Full Paper (20 minutes presentation + 5 minutes Q&A)
S	Short Paper (10 minutes presentation + 5 minutes Q&A)
ES	Extended Summary (9 minutes presentation + 5 minutes Q&A)

Wednesday, 27 November 2024

Time	Session	Location
09:00 to 10:00	**Opening Ceremony**	Hyundai Hall
10:00 to 10:20	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
10:20 to 11:20	**Keynote Speech: _Dragan GAŠEVIĆ_** **Getting Ready for the Age of AI: Developing Self-Regulated Learners** Session Chair: Jon MASON	Hyundai Hall
11:20 to 12:20	**Panel-3** **Learning Languages in "Smarter" Ways: Theory-Informed Utilization of Smart Technologies in Contextualized, Authentic & Communicative Language Learning** _Lung-Hsiang WONG, Yun WEN, Vivian Wen-Chi WU, Yoshiko GODA & Ting-Chia HSU_	Hyundai Hall
	ALT-1 Session Chair: Ashwin T. S. **64F**: Proficiency Modeling in Junior High Math: Adapted Cognitive Statistical Models to E-Book Learning Contexts _Changhao LIANG, Kensuke TAKII & Hiroaki OGATA_ **98F**: An Embodied Projection Recognition System for Situated Learning to Enhance Learning Effectiveness and Self-Reflection Ability _Hui-Ting LIU, Zi-Ting DING, Su-Hang YANG, Jian-Yu WU, Jen-Hang WANG, Po-Yao CHAO, Yung-Yu ZHUANG & Gwo-Dong CHEN_	Doreen Black Box
	TEML-1 Session Chair: Ivica BOTICKI **71F BSPN**: Linking Real-World Experiences with Course Contents: A Text Mining Approach Toward Effective "There and Back Again" _Manabu ISHIHARA, Izumi HORIKOSHI & Hiroaki OGATA_ **75F BTDPN**: Marrying Physical and Virtual Realms: An Embodied, Multi-Modal Approach to Situational Learning in Digital Reality _Vando Gusti AL HAKIM, Yao-En CHEN, Meng-Heng LIN, Chia-Ying CHANG, Jen-Hang WANG, Chih-Kai CHANG, YungYu ZHUANG, Su-Hang YANG & Gwo-Dong CHEN_	The Loft

Wednesday, 27 November 2024

Time	Session	Location
11:20 to 12:20	**AIED/ITS-1** Session Chair: Brendan FLANAGAN **58F BSPN**: The Impact of Instructional Videos Supported by AI-Driven Tutoring System on EFL Listening and Speaking *Xiangyu TAN & Xiuyuan ZUO* **137F**: LLM-Generated Personalized Analogies to Foster AI Literacy in Adult Novices *Cassie Chen CAO, Eason CHEN, Zoe FANG, Lydia Y CAO, Jionghao LIN & Ruizhe LI*	The Hive
	PTP-1 Session Chair: Sahana MURTHY **24F**: Do Academic Stress and Risk Propensity Affect Behavioral Intention to Use ChatGPT Among University Students? *Brylle SAMSON, Ronnie LURIAGA & Ryan EBARDO* **53F**: Who Is a Good Computational Thinker? Mapping Behavioral Dispositions of Middle-School Children Based on Real-Life, Algorithmic Tasks *Shashaank V. PINNAMARAJU, Lazar TONY & Anveshna SRIVASTAVA*	JJ Atencio Lighthouse
	International Program Committee (IPC) Meeting (open meeting) All program committee members are welcome to attend this meeting	Campos Interactive Teaching Lab
12:20 to 13:20	**Lunch** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
13:20 to 14:00	**Theme-Based Invited Speech** Session Chair: Yun WEN **How to Better Understand the Collaborative Component in Computer-Supported Collaborative Learning (CSCL): Current Landscape, Challenges and Future Prospects** *Johanna PÖYSÄ-TARHONEN*	Hyundai Hall
14:00 to 15:00	**ALT-2** Session Chair: Shinobu HASEGAWA **196F BOPN**: Combining Multimodal Analyses of Students' Emotional and Cognitive States to Understand Their Learning Behaviors *Ashwin T S, Caitlin SNYDER, Celestine E. AKPANOKO, Srigowri M P & Gautam BISWAS* **136S**: Development of Metacognitive Reflection Support System on Creative Discussion *Toshimasa SHIMIZU, Yuki HAYASHI & Kazuhisa SETA* **149S**: Utilization of Japanese Public Educational Data by Retrieval Augmented Generation for Policy Research *Kyosuke TAKAMI*	Doreen Black Box
	Meet the APSCE Executive Committee	The Loft

Wednesday, 27 November 2024

Time	Session	Location
14:00 to 15:00	**AIED/ITS-2** Session Chair: Maria Mercedes T. RODRIGO **13S**: UniSpLLM: An Integrated Approach for Enhancing Reasoning and Education with Large Language Models *Hanyu ZHAO, Yuzhuo WU, Yang YU, Xiaohua YU & Liangyu CHEN* **106S**: Availability and Effectiveness of Generative AI for Web-Based Investigative Learning *Yutaka WATANABE & Akihiro KASHIHARA* **122S**: Developing a LLMs-Driven System Based on Human-AI Progressive Code Generation Framework to Assist Mathematics Learning *Chun Yan Enoch SIT, Yin YANG, Wing Kei YEUNG & Siu Cheung KONG*	The Hive
	TELL-1 Session Chair: Brendan FLANAGAN **123F BSPN**: TAMMY: Supporting EFL Translation Practice with an LLM-Powered Chatbot *Steve WOOLLASTON, Brendan FLANAGAN, Patrick OCHEJA, Yiling DAI & Hiroaki OGATA* **172F BTDPN**: Impact of Online Video Dubbing Activities on Grade 5 Students' Pronunciation, Accuracy, and Fluency in English Speaking: An Experimental Research *Min XIE & Alex Wing Cheung TSE*	JJ Atencio Lighthouse
	CSCL-1 Session Chair: Cheng-Huan CHEN **31F**: Unveiling the Interplay of Students' Epistemic Emotions and Knowledge Building Activities in Design Studios *Alwyn Vwen Yen LEE, Chew Lee TEO, Aloysius ONG & Katherine YUAN* **144F BOPN, BSPN**: MESHing Minds: Bridging the Gap Between Creativity and IoT Programming Through Collaborative Mixed Reality *Yusuke SAKABE, Emmanuel AYEDOUN & Masataka TOKUMARU*	Campos Interactive Teaching Lab
15:00 to 15:20	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
15:20 to 16:50	**Panel-2** **Global Harwell in an Examination Driven Education System and an Excellence Pursuing Society: Possible? How? Better with Digital Technologies** *Fu-Yun YU, Tak-Wai CHAN, Sahana MURTHY, Su Luan WONG, Wenli CHEN, Hyo-Jeong SO & Hiroaki OGATA*	Hyundai Hall

Wednesday, 27 November 2024

15:20 to 16:50	**ALT-3** Session Chair: Ashwin T. S. **97F**: Analyzing Student Behavior in Viat-Map: Steps and Time as Performance Indicators *Banni Satria ANDOKO, Vivin Ayu LESTARI, Agung Nugroho PRAMUDHITA, Amalia NURAINI, Inda Khoirun NISAK & Tsukasa HIRASHIMA* **113F**: Comparison of Learners' Self-Direction Behavior Across Contexts and Phases *Junya ATAKE, Chia-Yu HSU, Huiyong LI, Izumi HORIKOSHI, Rwitajit MAJUMDAR & Hiroaki OGATA* **131S**: Progressive Behavior Patterns of Online Discussion at Different Circle of Self-Regulated Learning *Shih-Hua HUANG, De-Yu SHIAU, Yung-Sian FANG & Ting-Chia HSU* **143S**: Forest/CR: Critical Paper Reading Support System *Tomoya KII, Kazuhisa SETA & Yuki HAYASHI*	Doreen Black Box
	EGG-1 Session Chair: Hyo-Jeong SO **16F BSPN**: Design and Evaluation of the Usability of a Game-Based Learning Application for Learners with Dyslexia *Vincent GARCIA, Arnel OCAY, Joshua PERADILLA, Mary Rose SAGUIPED & Myla Karen ARENAS* **72F**: Comparing Effects of Adaptive Gamification and One-Size-Fits-All Gamification on Students' Task Completion Process and Learning Performance *Shurui BAI & Yingxue LIU* **162F BOPN**: Dialogue Game-Based Learning for AI Ethics Education *Hyo-Jeong SO & Sung-Eun KIM* **125S**: Detecting Off-Task Behavior of Learners in Minecraft Using Exploration and Personalized Features *Maricel A. ESCLAMADO & Maria Mercedes T. RODRIGO*	The Loft
	AIED/ITS-3 Session Chair: May Marie TALANDRON-FELIPE **175F**: Evaluating the Performance of Copula-Based Item Response Theory Models for Interpretable Assessment *Eduardo GUZMÁN & Eva MILLÁN* **80S**: Enhancing Diversity in Difficulty-Controllable Question Generation for Reading Comprehension via Extended T5 *Teruyoshi GOTO, Yuto TOMIKAWA & Masaki UTO* **190S**: The Effect of Feature Reliability on the Generalization of Machine Learning Models in Educational Data *Yingbin ZHANG* **258ES**: Exploring High School Students' Transition from Traditional Search Engines to ChatGPT for Course Learning: A Push-Pull-Mooring Model Perspective *Chien-Liang LIN, Chih-Yu YANG, Pei-Chi WU, Yu-Cheng LIN & Chi-Heng LI* **266ES**: Exploring Dialogue Patterns in Argumentation with Pre-Set ChatGPT Personas *Seunmin EUN & Seonmin JIN*	The Hive

Wednesday, 27 November 2024

15:20 to 16:50	**PTP-2** Session Chair: Jayakrishnan WARRIEM **61F BOPN**: Representing Learning Progression of Unguided Exercise Solving: A Generalization of Wheel-Spinning Detection *Taisei YAMAUCHI, H. Ulrich HOPPE, Yiling DAI, Brendan FLANAGAN & Hiroaki OGATA* **6S**: Factors Contributing to the Negative Online Learning Academic Self-Concept of College Students *Rex BRINGULA, Roman Paulo BAET, Ralph Lawrence GARCIA, Franchesca Mari MORALES, Jan Carlo RAMOS, Hanna Sophia SARMIENTO & Edmon TORRES* **7S**: Teachers' Perspectives on Integrating AI Tools in Classrooms: Insights from the Philippines *Vanessa B. SIBUG, Vicky P. VITAL, John Paul P. MIRANDA, Emerson Q. FERNANDO, Almer B. GAMBOA, Hilene E. HERNANDEZ, Joseph Alexander BANSIL, Elmer M. PENECILLA & Dina D. GONZALES* **10S**: Research on the Dual-Pathway Impact of Artificial Intelligence Technology on Teachers' Human-Machine Collaboration *Yujie XU & Yiling HU* **30S**: Does Learning Interest Predict Academic Performance in an Interest-Driven HyFlex Course? *Liang Jing TEH, Su Luan WONG, Mohd Zariat Abdul Rani, Mas Nida MD KHAMBARI & Sai Hong TANG*	JJ Atencio Lighthouse
	SIG 2 Community Building (CB) Session Computer-Supported Collaborative Learning and Learning Sciences (CSCL) Chair: *Lenka SCHNAUBERT*, University of Nottingham, United Kingdom	Campos Interactive Teaching Lab
16:50 to 17:50	**Poster Session 1** Posters Work-in-Progress Posters (WIPP) SATELUC	Innovation Lobby (2nd Floor)
18:00 to 22:00	**APSCE Executive Committee (EC) Meeting** (closed meeting)	

Conference Program
Thursday, 28 November 2024

C1: AIED/ITS   C2: CSCL   C3: ALT   C4: TEML

C5: EGG   C6: TELL   C7: PTP

BOPN	Best Overall Paper Award Nominee
BSPN	Best Student Paper Award Nominee
BTDPN	Best Technical Design Paper Award Nominee
F	Full Paper (20 minutes presentation + 5 minutes Q&A)
S	Short Paper (10 minutes presentation + 5 minutes Q&A)
ES	Extended Summary (9 minutes presentation + 5 minutes Q&A)

Thursday, 28 November 2024

Time	Session	Venue
09:00 to 10:00	**Keynote Speech: *Mirjam HAUCK*** **Critical Virtual Exchange for Critical Global Citizenship Education** Session Chair: Yanjie SONG	Hyundai Hall
10:00 to 10:20	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
10:20 to 11:00	**Theme-Based Invited Speech: *Ching Sing CHAI*** **In Search of Intelligent Pedagogical Content Knowledge (IPACK)** Session Chair: Rwitajit MAJUMDAR	Hyundai Hall
	Theme-Based Invited Speech: *Wenli CHEN* **Multi-Modal Learning Analytics for Learning Design** Session Chair: Ivica BOTICKI	Doreen Black Box
11:00 to 12:00	**Panel-1** **Digital Technology for Inclusive and Equitable Quality Education** *Weiqin CHEN, Jon MASON, Faisal BADAR, Shitanshu MISHRA & Maria Mercedes T. RODRIGO*	Hyundai Hall
	ALT-4 Session Chair: Yilling DAI **4S**: Exploring the Relationship of Personality Domains and Visual Attention Patterns in Novice Programmers *Caren PACOL, Maria Mercedes RODRIGO & Christine Lourrine TABLATIN* **35S**: Construction of a Japanese Language Learning Support System That Enables Word Accent Learning *Satoru KOGURE, Kazuki TOMITA, Yasuhiro NOGUCHI, Koichi YAMASHITA, Tatsuhiro KONISHI & Makoto KONDO* **41S**: Developing a Feedback Analytic Tool to Support Instructor Reflection *Feng LIN, Chenchen LI, Rebekah Wei Ying LIM & Yew Haur LEE* **139S**: Effect of Re-Composition Concept Mapping for Sharing Reference Maps on Serial Concept Mapping: A Preliminary Study *Rian FITRIANSYAH, Harry Budi SANTOSO, Lia SADITA, Baginda Anggun Nan CENKA, Syifa NURHAYATI, Yusuke HAYASHI & Tsukasa HIRASHIMA*	Doreen Black Box

Thursday, 28 November 2024

11:00 to 12:00	**AIED/ITS-4** Session Chair: Michelle BANAWAN **94F BOPN**: Predicting and Analyzing Students' Higher-Order Questions in Collaborative Problem-Solving *Shan ZHANG, Toni V. EARLE-RANDELL, Qian SHEN, Anthony F. BOTELHO, Maya ISRAEL, Kristy Elizabeth BOYER, Collin F. LYNCH & Eric WIEBE* **120F BTDPN**: Reflection Support System with Audience Robots for Presentation Practice *Yuya KISHIMOTO & Tomoko KOJIRI*	The Loft
	TEML-2 Session Chair: Changhao LIANG **132F**: Classifying Self-Reflection Notes: Automation Approaches for GOAL System *Zixu WANG, Chia-Yu HSU, Izumi HORIKOSHI, Huiyong LI, Rwitajit MAJUMDAR & Hiroaki OGATA* **50S**: Using Educational VR Systems to Promote Inquiry-Based Learning in Natural Science *Shu-Ying TSAI, Zhi-Hong CHEN & Min-Hsuan WENG* **135S**: Generative Artificial Intelligence in Education: Evaluating Students' Self-Efficacy and Utilization in Their Homework *Elanie VIZCONDE, Ma. Rowena CAGUIAT & Ethel ONG*	The Hive
	PTP-3 Session Chair: Mas Nida MD KHAMBARI **19S**: Using a Teaching Framework to Identify Resilient and Persistent Teaching Practices During the Pandemic *Ma. Monica L. MORENO, Johanna Marion R. TORRES, Timothy Jireh GASPAR, Jenilyn A. CASANO & Maria Mercedes T. RODRIGO* **92S**: Evaluating the Effectiveness of a Professional Development Course on Artificial Intelligence Literacy for Administrative Staff in Higher Education *Siu Cheung KONG, Zoe Wai Sum MAK, Yue WU & Yin YANG* **140S**: From Textbooks to Classroom Implementation: Experience Report of Middle School Science Teachers' Pedagogy for Activity-Based Learning *Zun Phoo MO, Sunny Prakash PRAJAPATI, Sheeja VASUDEVAN & Sahana MURTHY* **155S**: Appropriating AI-Powered Pedagogical Affordances for Vocabulary Learning *Xinyu GUO & Yun WEN*	JJ Atencio Lighthouse
12:00 to 13:00	**Lunch** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
13:00 to 14:00	**Keynote Speech: *Michelle BANAWAN*** **Learning from Generative AI for Cognitive and Pedagogical Advancement** Session Chair: Maria Mercedes RODRIGO	Hyundai Hall

Thursday, 28 November 2024

14:00 to 15:30	**ALT-5**	Doreen Black Box

ALT-5

Session Chair: Banni Satria ANDOKO

48F BTDPN: Designing Recommendations for Productive Learning Habit-Building from Learning Logs
Chia-Yu HSU, Izumi HORIKOSHI, Huiyong LI, Rwitajit MAJUMDAR & Hiroaki OGATA

101F: Designing Interaction Scenario for Alleviating Persistence in Learning Strategies
So SASAKI & Akihiro KASHIHARA

166F: Enhancing Vocational Training Through Immersive Technology: A Study on Digital Magic Mirrors
Jen-Hang WANG, Hung-Wei TSENG, Su-Hang YANG, Chih-Kai CHANG, Yung-Yu ZHUANG & Gwo-Dong CHEN

145S: Facilitating Thinking like a Historian in Open-Ended Learning Space: A White Box Approach
Aoi MATSUURA, Yuki HAYASHI & Kazuhisa SETA

Doreen Black Box

CSCL-2

Session Chair: Ben CHANG

52S: Students' Verbal Interaction Patterns in Computer-Supported Collaborative Learning: The Role of Individual Preparation
Wenli CHEN, Lishan ZHENG, Mei-Yee Mavis HO, Qianru LYU, Hua HU & Zirou LIN

88S: Enhancing Social Learning in Active Video Watching
Ehsan BOJNORDI, Antonija MITROVIC, Matthias GALSTER, Sanna MALINEN, Jay HOLLAND & Negar MOHAMMADHASSAN

124S: Rethinking Trust in Human-AI Collaboration in the Generative AI Era
Yijie LU & Bo JIANG

147S: Infrastructuring for Collective Cognitive Responsibility: A Case Study of Student Knowledge Building Design Studio
Chew Lee TEO, Aloysius ONG, Alwyn LEE, Guangji YUAN & Kennedy LOO

148S: Review of Different Assessment Methods Used by Online Inquiry-Based Learning Systems That Support Argumentation
Nitesh Kumar JHA, Plaban Kumar BHOWMIK & Kaushal Kumar BHAGAT

200S: Investigating Secondary School Students' Academic Emotions in Data Science Learning
Gaoxia ZHU, Chew Lee TEO, Guangji YUAN, Chin Lee KER, Aloysius ONG & Alwyn Vwen Yen LEE

The Loft

EGG-2

Session Chair: Jie-Chi YANG

65F BTDPN: A Robot-Assisted Scenario Training for Students with ASD
Ka Yan FUNG, Kwong Chiu FUNG, Tze-Leung Rick LUI, Feifan PANG, Huamin QU, Shenghui SONG & Kuen Fung SIN

103F: Exploring the Impact of Incorporating Digital Escape Room on Learners' Performance and Motivation in Environmental Sustainability Education
Yu-Chao LAI & Jie-Chi YANG

133S: Middle School Students' Ability to Detect Lies When Interacting with an Educational AI Robot
Ahmed SALEM & Kaoru SUMI

The Hive

Thursday, 28 November 2024

Time	Session	Location
14:00 to 15:30	**PTP-4** Session Chair: Shitanshu MISHRA **114F BTDPN**: Extraction of Important Characteristics for Data-Informed Guidance and Counseling from Daily Usage Log Data *Junya ATAKE, Chia-Yu HSU, Izumi HORIKOSHI & Hiroaki OGATA* **146F**: Driving Informed EdTech Quality Decisionmaking: A Research-Practice Partnership-Based Solution for Diverse Stakeholders' Needs *Ishika ISHIKA, Angelina Susan PHILIP, Sheeja VASUDEVAN & Sahana MURTHY* **20S**: Determinants of ChatGPT Adoption in Academe & Other Fields – A Review on Theoretical Perspective *Gerand Boy O. ELINZANO & Michelle Renee CHING* **171S**: Exploring the Entanglement Between Technology and Pedagogy: A Case Study of Knowledge Building *Yee Yin TAN, Seng Chee TAN & Chew Lee TEO*	JJ Atencio Lighthouse
	SIG 9 Community Building (CB) Session Educational Use of Problems/Questions in Technology-Enhanced Learning（EUPQ） Chair: *Shitanshu MISHRA*, Indian Institute of Technology Bombay, India	Campos Interactive Teaching Lab
15:30 to 15:50	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
15:50 to 16:50	**ALT-6** Session Chair: Shinobu HASEGAWA **91S**: Boosting Course Recommendation Explainability: A Knowledge Entity Aware Model Using Deep Learning *Tianyuan YANG, Baofeng REN, Boxuan MA, Tianjia HE, Chenghao GU & Shin'ichi KONOMI* **191S**: Error Tolerance in Automatic Short Answer Grading with Large Language Models: The Case of Handwriting Recognition Errors *Ziqi TAN, Yingbin ZHANG & Su MU* **209ES**: Identifying Key Indicators of Proficiency in Junior High Math: Roles of Daily Handwriting Learning Logs *Yudai OKAYAMA, Changhao LIANG, Kensuke TAKII & Hiroaki OGATA* **267ES**: Relationship Analysis Between Procrastination Behavior and Non-Cognitive Abilities *Yasuhisa TAMURA & Keito MORINO*	Doreen Black Box

15:50 to 16:50	**AIED/ITS-5** Session Chair: Rwitajit MAJUMDAR **151F**: Facilitating Holistic Evaluations with LLMs: Insights from Scenario-Based Experiments *Toru ISHIDA, Tongxi LIU, Hailong WANG & William K. CHEUNG* **126S**: Is Internal State Feedback in an E-Learning Environment Acceptable to People? *Atsushi ASHIDA, Ryosuke KAWAMURA, Shizuka SHIRAI, Noriko TAKEMURA, Mehrasa ALIZADEH, Hideaki HAYASHI & Hajime NAGAHARA* **211ES**: Integrating Explanations in Active Video Watching *Raul Vincent LUMAPAS, Antonija MITROVIC, Matthias GALSTER, Sanna MALINEN, Pasan PEIRIS & Jay HOLLAND*	The Loft
	TELL-2 Session Chair: Yanjie SONG **158F BOPN**: Open Knowledge and Learner Model: Mathematical Representation and Applications as Learning Support Foundation in EFL *Kensuke TAKII, Changhao LIANG & Hiroaki OGATA* **157S**: The Effect of LINE Chatbot with Escape Game Design on English Learning Achievement, Situational Interest, and Student Engagement *Elva Yi-Fang LO & Jerry Chih-Yuan SUN* **112S**: Examining Augmented Reality's Influence on Pronunciation Training: Insights from PinyinGuo's Application and Comparative Avatar Testing *Daria SINYAGOVSKAYA*	The Hive
	PTP-5 Session Chair: Aditi KOTHIYAL **95S**: Determinants of ICT Competency Among Public School Teachers in Bukidnon *Gladys S. AYUNAR, Nathalie Joy G. CASILDO, May Marie P. TALANDRON-FELIPE, Kent Levi A. BONIFACIO, Jinky G. MARCELO & Fe S. SEBUGUERO* **226ES**: Preliminary Exploration on the Dimensions of Digital Learning Agility Among Teachers in Malaysia *Nur Dania MOHD ROSLI, Kamilah ABDULLAH, Mas Nida MD. KHAMBARI, Su Luan WONG, Noor Syamilah ZAKARIA, Priscilla MOSES & Nur Aira ABDRAHIM* **228ES**: Analysis of Factors Influencing Teacher Behavioural Engagement in Distance Training Based on MOA and SDT *Zhou JIN* **257ES**: The Impact of AI Literacy on Teacher Efficacy and Identity: A Study of Korean English Teachers *Seunmin EUN & Anna KIM*	JJ Atencio Lighthouse

ICCE 2024
32nd International Conference on Computers in Education
MANILA, PHILIPPINES

Thursday, 28 November 2024		
16:50 to 17:50	**SIG 6 Community Building (CB) Session** Technology Enhanced Language Learning (TELL) Chair: *Yanjie SONG*, The Education University of Hong Kong, Hong Kong	JJ Atencio Lighthouse
	Poster Session 2 Posters Work-in-Progress Posters (WIPP) SATELUC	Innovation Lobby (2nd Floor)
18:30 to 21:30	**Conference Banquet**	Leong Hall Roof Deck

Conference Program

Friday, 29 November 2024

C1: AIED/ITS   C2: CSCL   C3: ALT   C4: TEML

C5: EGG   C6: TELL   C7: PTP

BOPN	Best Overall Paper Award Nominee
BSPN	Best Student Paper Award Nominee
BTDPN	Best Technical Design Paper Award Nominee
F	Full Paper (20 minutes presentation + 5 minutes Q&A)
S	Short Paper (10 minutes presentation + 5 minutes Q&A)
ES	Extended Summary (9 minutes presentation + 5 minutes Q&A)

Friday, 29 November 2024

Time	Session	Location
09:00 to 10:00	**Keynote Speech:** *Seiji ISOTANI* **Personalized Gamification Experiences: From Design to Impact** Session Chair: Bo JIANG	Hyundai Hall
10:00 to 10:20	**Coffee / Tea Break** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft 　Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
10:20 to 12:00	**ALT-7/8** Session Chair: Huiyong LI **70F**: Effectiveness of Information Organizing Activities After Lecture in Mathematics: A Comparison Between Kit-Build Concept Mapping and Structured Summary Writing *Lintang Matahari HASANI, Kasiyah JUNUS, Lia SADITA, Tsukasa HIRASHIMA & Yusuke HAYASHI* **77F BSPN**: Automated Recommendations for Revising Lecture Slides Using Reading Activity Data *Erwin D. LOPEZ Z, Cheng TANG, Yuta TANIGUCHI, Fumiya OKUBO & Atsushi SHIMADA* **40S**: Optimizing Causal Inference Approach for Exploring Shallow Reading Behavior with Generative Adversarial Networks *Yu BAI, Fuzheng ZHAO, Wenhao WANG & Chengjiu YIN* **60S**: Exploring Linguistic Sophistication of Discussion Board Posts in University Learning Management Systems *Michelle P. BANAWAN, Clarence James MONTEROZO & Maria Mercedes T. RODRIGO* **227ES**: Toward Contextualized Handwriting Process Analysis: Comparison Between Problem Types in Math *Shunsuke TONOSAKI, Taito KANO, Satomi HAMADA, Izumi HORIKOSHI & Hiroaki OGATA*	Doreen Black Box

ICCE 2024
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Friday, 29 November 2024		
10:20 to 12:00	**TEML-3/4** Session Chair: Sasipim POOMPIMOL **51F BOPN**: Low vs. High Immersion in Metaverse-Based Learning: How Pre-Service Teachers Balanced Between Instruction and Assessment in Learning Design *Darmawansah DARMAWANSAH, Dani PUSPITASARI & Gwo-Jen HWANG* **160S**: Participatory Design of an AI Digital Textbook with Deaf and Hard-of-Hearing Students *Ga Young LEE, Jieun CHOI, Seonhee NA & Hyo-Jeong SO* **161S**: Technology Considerations in Building Virtual Educational Avatars *Antun DROBNJAK & Ivica BOTICKI* **194S**: Data-Driven Peer Recommendation and Its Applications in Extracurricular Learning *Peixuan JIANG, Changhao LIANG & Hiroaki OGATA*	The Loft
10:20 to 11:10	**AIED/ITS-6** Session Chair: Riichiro MIZOGUCHI **238ES**: Personalized Comment Reviewing in Active Video Watching: Investigation of Learners' Cognitive Load *Ehsan BOJNORDI, Antonija MITROVIC, Matthias GALSTER, Sanna MALINEN & Jay HOLLAND* **251ES**: AI-Driven Feedback for Enhancing Students' Mathematical Problem-Solving: The ScaffoldiaMyMaths System *Daner SUN, Jingyun WANG, Lan YANG, Kee-lee CHOU, Zhixuan SONG & Zhizi ZHENG* **259ES**: A Study on High School Students' Continuance Intention to Use ChatGPT for Learning Assistance: An Exploration Based on Self-Determination Theory *Chien-Liang LIN, Tian-Yun LIN, Shi-En LIN & Yu-Chen LIN*	The Hive
	CSCL-3 Session Chair: Gaoxia ZHU **185F**: Online Making-Based Learning at Scale: Towards Equity in STEM Learning *Deeksha GAUTAM, Aditi KOTHIYAL, Rashmi SHEORAN, Neha GARG, Adithi IYER, Ashutosh BHAKUNI, Jay THAKKAR, Jyothi KRISHNAN & Manish JAIN* **99S**: Verbal Interaction Patterns in Online Collaborative Learning Design: Comparison of High Performing and Low Performing Groups *Wenli CHEN, Lishan ZHENG, Mei-Yee Mavis HO, Hua HU & Qianru LYU*	JJ Atencio Lighthouse

Friday, 29 November 2024

Time	Session	Location
11:10 to 12:00	**TELL-3** Session Chair: Daria SINYAGOVSKAYA **115S**: Improve English Pronunciation at Word Level for Thai EFL Learners in Southern Region Using End-to-End Automatic Speech Recognition *Nattapol KRITSUTHIKUL, Kongpop BOONMA, Jirapond MUANGPRATHUB, Wasan NA CHAI & Thepchai SUPNITHI* **128S**: Investigation on the Usage Status of a Support System for Writing English Paragraph Outlines in English Classes *Afifah ILHAM, Tomohiro KUROKI, Akira NAKANO & Hidenobu KUNICHIKA* **152S**: Mapping Morphological Patterns: A Framework for Rinconada Bikol Language Morphological Analysis and Stemming *Tiffany Lyn PANDES & Joshua MARTINEZ*	The Hive
	PTP-6 Session Chair: Arlene VALDERAMA **183F**: Constructing Desirable Learning Habits: Evidence from an Instructional System Design Course Based on the IDC Theory *Anveshna SRIVASTAVA, Sandeep YADAV, Sahana MURTHY & Sridhar IYER* **188F BSPN:** The Impact of Using an Online Collaborative Platform in Blended Learning on Postsecondary Vocational School Year One Students' Self-Regulated Learning Abilities: A Quasi-Experimental Research *Siyou WU & Alex Wing Cheung TSE*	JJ Atencio Lighthouse
12:00 to 13:00	**Lunch** Food Service Station & Dining Area: Ubuntu Space Food Service Station: The Loft Dining Area: The Loft, The Hive, JJ Atencio Lighthouse	The Loft & Ubuntu Space
13:00 to 14:00	**ALT-9** Session Chair: Anveshna SRIVASTAVA **9S**: Code Tracing Support Environment Based on Visualization of Cooperative Behavior of Multiple-Flows *Yasuhiro NOGUCHI, Kotaro SUNAMA, Satoru KOGURE, Raiya YAMAMOTO, Koichi YAMASHITA & Tatsuhiro KONISHI* **90S**: Peer Feedback Feature Analysis with Large Language Models: An Exploratory Study *Qianru LYU, Zirou LIN & Wenli CHEN* **214ES**: Relationship Between Students' Scores in Weekly Tests and Final Exam *Satomi HAMADA, Izumi HORIKOSHI & Hiroaki OGATA* **218ES**: Exploring Reading Speed Profiles in EFL Extensive Reading *Hatsune ICHIDATE, Yiling DAI, Brendan FLANAGAN & Hiroaki OGATA*	Doreen Black Box

Friday, 29 November 2024

13:00 to 14:00	**TELL-4** Session Chair: Leung Ho Philip YU **14S**: Enhancing Chinese Language Education Through AI-Assisted Project-Based Learning: A Qualitative Study on Learning Values and Multimedia Skills Development *Satoko SUGIE* **184S**: Development of a Chatbot and Evaluation of Its Effects on Learning and Intrinsic Motivation of a Public Secondary School's Spanish Language Learners *Julian Eymard JANUBAS, Josiah Jose DEYSOLONG, Hanz Lucas ESTOPIA, Karl Mykell TABBAY & Jun Rangie OBISPO* **186S**: Enhancing Language Learning Through Multimodal AI-Driven Feedback on Picture Descriptions: An Eye-Tracking Study *Ruibin ZHAO, Zhiwei XIE, Yipeng ZHUANG, Huixian LI, Philip L. H. YU*	The Loft
	EGG-3 Session Chair: Ming-Chi LIU **73S**: FLOU: Evaluating the Intrinsic Motivation of Learners in Gamifying Academic Programs Through a Gamified Mobile Application *Marl Vincent AGRAVANTE, Jeru Kian FERNANDEZ, Ma. Louisa PEREZ & Joshua MARTINEZ* **164S**: Designing an Educational Game for Facilitating Development of Media and Information Literacy *Jun XIE, Xiang LI, Kotomi HASEGAWA, Zhichun LIU & Frank REICHERT* **262ES**: Developing a Visualized Data Guessing Game to Assess Data Literacy *Ruei-Yi XIE & Ming-Chi LIU*	The Hive
14:15 to 15:15	**Closing Ceremony**	Hyundai Hall

Poster Session 1

C1: AIED/ITS

47P: Image-Based Pili (Canarium ovatum, Engl.) Fruit Variety Classifier App: An Approach to Enhancing Teaching Biodiversity and Crop Science
Leo Constantine BELLO & Joshua MARTINEZ

54P: Authorship Forensics Portal
Robert SCHMIDT, Maiga CHANG, Hsiang-Han CHENG, Greg FREDIN, Kevin HAGHIGHAT & Rita KUO

55P: Designing Learner-Centered Collaborative Learning by Incorporating AI-Based Teacher/Learner Agents with a Cognitive Model
Yugo HAYASHI, Shigen SHIMOJO & Tatsuyuki KAWAMURA

59P: Student Perceptions of Using Generative AI Chatbot in Learning Programming
Ean Teng KHOR, Leta CHAN, Elizabeth KOH & Peter SEOW

C3: ALT

12P: Towards the Development of PIA 2.0: A Pedagogical Agent That Exhibits Synthetic Facial Expressions
John Lorenz DELA CRUZ, Paulyn Joy DELA CRUZ, Joyce Antonette GUADALUPE, Jiabianca MACARAEG, Piolo Jose MONTESA, Mark Paul RAMOS & Rex BRINGULA

32P: Early Detection of At-Risk Students Through Leaning-Activity Forecasting
Yuya OZAKI, Daisuke DEGUCHI, Haruya KYUTOKU & Hiroshi MURASE

165P: What Insights Are Gained from Students' Trace Data in Homework?
Satomi HAMADA, Yuko TOYOKAWA, Taito KANO, Izumi HORIKOSHI & Hiroaki OGATA

C4: TEML

36P: A TPB-TAM Approach to Identifying Adoption Factors of Hyflex Among Educators
Elanie VIZCONDE, Joshua ISAGUIRRE, Gabriel Luis LIWANAG & Ryan EBARDO

111P: Designing Interactive Mathematical Teaching Tools for Tablet-Based Learning: Enhancing Student Engagement and Tactile Exploration
Loong-Chuan LEE, Chia-Ying LIN, Yu-Han TAN & Kuo-Yu LIU

C6: TELL

127P: Implementation and an Evaluation of a Search Function Allowing Misspelling for a Japanese Learning System
Hidenobu KUNICHIKA & Miguel Antonio VILLALOBOS ZUNIGA

C7: PTP

2P: An Experience Sampling Study of Student Emotional Life: Preliminary Results
Maria Mercedes T. RODRIGO, Liane Peña ALAMPAY, Queena N. LEE-CHUA & Irish Danielle MORALES

3P: Theory-Driven Design for the Development of a Student-Centered Error-Correction Online Learning System
Fu-Yun YU

62P: Contextual Factors Affecting Large-Scale Educational Technology Implementation: Policy Intention Versus Practice
Arjun PRASAD, Jayakrishnan WARRIEM & Sridhar IYER

Poster Session 1

Wednesday, 27 November 2024, 16:50–17:50

WIPP

216WIPP: Support System for Focused Discussion in Consensus Building for Team Sports
Kazuma KUWADA & Tomoko KOJIRI

222WIPP: Understanding Collaborative Teacher Growth from the Lens of Digital Learning Agility: A Pathway to Educational Excellence
Kamilah ABDULLAH, Mas Nida MD KHAMBARI, Su Luan WONG, Noor Syamilah ZAKARIA, Nur Dania MOHD ROSLI, Nur Aira ABD RAHIM & Priscilla MOSES

239WIPP: Online Educational Game for Interior Design with Design Thinking Process and Multidimensional Scaffolding
Chou-Pai YEOH & Huei-Tse HOU

247WIPP: Microlearning Strategy in ICT Education
Kotaro TORII

250WIPP: What Do University Students Say About ChatGPT? A Topic Modeling of Perception on GenAI in Academic Writing
Lingxi JIN, Kyuwon KIM, Hyo-Jeong SO & Ga Young LEE

265WIPP: Generative AI and XR in Education: Student Co-Created Metaverse Worlds in an International Virtual Exchange
Masako HAYASHI

SATELUC

207SAT: Transforming Education in Timor-Leste: The Role of E-Learning and Artificial Intelligence in Boosting Student Achievements
*Estanislau SOUSA SALDANHA, Edio DA COSTA, Aderita MARIANA TAKELEB, Salustiano DOS REIS PIEDADE & Carla ALEXANDRA DA COSTA (**Timor-Leste**)*

208SAT: Learning with Virtual Avatars: Insights into Performance and Resource Needs
*Antun DROBNJAK & Ivica BOTICKI (**Croatia**)*

219SAT: MS Teams Acceptance Factors Among Polish and Ukrainian Students
*Nataliia DEMESHKANT, Sławomir TRUSZ, Tetiana MATUSEVYCH & Amy SEPIOŁ (**Poland / Ukraine**)*

225SAT: Boosting Literacy with an Educational RPG for Polytechnic Students
*Agung Nugroho PRAMUDHITA, Puteri Ardista Nursisda MAWANGI & Banni Satria ANDOKO (**Indonesia**)*

230SAT: Development of the Board Game 'Career Champion': Gamification for Understanding Job Interview Preparation
*Farid Angga PRIBADI, Banni Satria ANDOKO & Erina SEVIYANTI (**Indonesia**)*

232SAT: AI Tools Experience in Civitas Academic Portal in Timor Leste
*Agostinho Dos Santos GONÇALVES, Sebastião PEREIRA & Saida ULFA (**Timor-Leste**)*

233SAT: AI Literacy Among Lecturers in University: A Case Study in a Private University in Timor Leste
*Agustinho Dos Santos GONCALVES, Jacinto de OLIVEIRA JUNIOR, Natalino Pereira PARADA & Saida ULFA (**Timor-Leste**)*

235SAT: Lecturer Performance Assessment System Based on Tridharma Using Saw Method
*Anita GUTERRES, Delfim da SILVA & Antonio GUTERRES (**Timor-Leste**)*

252SAT: AI as a Co-Teacher: Enhancing Creative Thinking in Underserved Areas
*Roberto ARAYA (**Chile**)*

268SAT: Global Trends in Computational Thinking in Curricula: A Comparative Review
*Martha Nury BONILLA-CASTAÑEDA, Klinge Orlando VILLALBA-CONDORI, Hector CARDONA-REYES, Claudia ACRA-DESPRADEL & Kee-Fui TURNER-LAM (**Colombia / Peru / Mexico / Dominican Republic**)*

Poster Session 2

Thursday, 28 November 2024, 16:50–17:50

C1: AIED/ITS

66P: Quality Criteria Acquisition Support System of Product by Explaining It with Components
Kota KUNORI & Tomoko KOJIRI

74P: Exploring Explainable Artificial Intelligence in Active Video Watching
Raul Vincent LUMAPAS, Antonija MITROVIC, Matthias GALSTER & Sanna MALINEN

87P: A Proposal of Quality Assurance Programming Exercise
Nobuya ISHIHARA, Samsul HUDA & Yasuyuki NOGAMI

89P: Enhancing Engagement in Distance Learning: Overcoming Learner Isolation Through ICT Tools
Kumiko AOKI, Itaru KANEKO, Ken KURIYAMA, Takeo TATSUMI & Takahiro MIYAJIMA

96P: Scaffolding Students' Ill-Structured Problem Solving via LLM — Multi-Armed Bandit Problem as a Case
Jiayi LIU & Bo JIANG

102P: Navigating Europe's Artificial Intelligence Act: Application of LLMs in Classrooms
Upasana DASGUPTA & Rwitajit MAJUMDAR

142P: Learning Support Environment with Fill-in-Blank Exercise Based on Program Visualization System
Koichi YAMASHITA, Shuya SUZUKI, Satoru KOGURE, Yasuhiro NOGUCHI, Raiya YAMAMOTO, Tatsuhiro KONISHI & Yukihiro ITOH

C2: CSCL

38P: Pyzzles: Towards the Design of a Zugzwang-Inspired Learning Tool for Novice Programmers and Its Effect on Debugging Skills and Self-Perceived Debugging Confidence
Elijah Justin CALLANTA

195P: BioAnalogica: SBF-Based Analogical Stories to Enhance Understanding of Complex Biological Processes
Meera PAWAR, Sheeja VASUDEVAN & Sahana MURTHY

198P: Challenging the Eye-Mind Link Hypothesis: Visualizing Gazes for Each Programming Problem
Michael T. LOPEZ II

C3: ALT

49P: Program Learning Support System with Visualization Reflecting Teacher's Intent for Learner's Code
Kenzo KOBAYASHI, Satoru KOGURE, Yasuhiro NOGUCHI, Raiya YAMAMOTO, Koichi YAMASHITA, Tatsuhiro KONISHI & Yukihiro ITOH

154P: Development of Annotation System for Learning from Others in Public Space Design Using Extended Reality
Toshiki MUGURUMA, Yusuke YAGI, Yusuke KOMETANI, Saerom LEE, Naka GOTODA & Rihito YAEGASHI

156P: Development of Laborer Digital Twin Generation and Visualization Function for Hazard Prediction in Off-Site Training
Kaito MINOHARA, Toshiki MUGURMA, Yusuke KOMETANI, Naka GOTODA, Saerom LEE, Ryo KANDA, Shotaro IRIE & Toru HARAI

176P: HyCode: A Code Similarity Assessment Tool Utilizing Recurrent Neural Networks
James Marcel A. ABAWAG, Aleczia S. TORDILLA & Joshua C. MARTINEZ

178P: Empowering Educational Researchers with a Privacy-Centric Data Platform: Design, Implementation, and Implications
Isanka WIJERATHNE, Brendan FLANAGAN & Hiroaki OGATA

199P: Exploring the Relationship Between Assignment Submission Behavior and Final Grade of Information Literacy Education Using Big Data
Yuki OE, Etsuko KUMAMOTO, Huiyong LI & Chengjiu YIN

Poster Session 2

Thursday, 28 November 2024, 16:50–17:50

C5: EGG

5P: Exploring the Effects of Leaderboards on an Online Professional Development Course for Teachers
Aime Michelle LAZARO & Marlene DE LEON

170P: Game-Based College English Translation Instructional Design Based on Representational Redescription Model: Implicit Knowledge Transformed into Explicit Knowledge
Xinyu JIANG, Mengya CHEN & Lu HUANG

C7: PTP

11P: Online Student Testlet-Generation as an Innovation Approach to Student-Created Assessment Its Learning Effects
Fu-Yun YU & Ya-Shin CHANG

110P: AI and Data Science Literacy Framework for Educators
Nurul Amelina NASHARUDDIN, Nurfadhlina MOHD SHAREF & Mohd Khaizer OMAR

138P: Challenges to Augmenting Literacy in the Digital Environment
Khalid KHAN & Jon MASON

169P: Unboxing Learner Engagement in an Online SEL for Teachers Course on FramerSpace
Hritik GUPTA, Nandini Chatterjee SINGH & Shitanshu MISHRA

WIPP

221WIPP: Influence of Telepresence Robot on Discussion in Hybrid Classes
Hiroaki ARUGA & Akihiro KASHIHARA

234WIPP: Proposal for Simulation Environment to Support Understanding of Tactical Positioning
Yuki OHTSUKA & Tomko KOJIRI

240WIPP: An Online MMORPG Card Game Based on Multi-Dimensional Scaffolding to Develop Reading Comprehension and Contextual Problem-Solving Skills
Cheng-Tai LI, Chou-Pai YEOH, Yu-Chi CHEN, Hung-Yu CHAN, Yun-Chien CHUNG, Yu-Jen LIN, Min-Hsiong HONG, Cheng-Yuan WEI & Huei-Tse HOU

249WIPP: Instructors' Perceptions and Use of Feedback Dashboard
Feng LIN & Rebekah Wei Ying LIM

255WIPP: Exploring Student Emotion via Facial Expressions Using Transfer Learning
Tita HERRADURA, Macario CORDEL II & Merlin Teodosia SUAREZ

263WIPP: The Effect of Stimulus Concurrence on Memorizing Constellations in VR
Nicko CALUYA, Eiji YAHARA & Damon CHANDLER