

Conference
Program

AIET 2024

The 2024 5th International Conference on
Artificial Intelligence in Education Technology

Barcelona, Spain | July 29-July 31, 2024





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WELCOME MESSAGE

Dear Distinguished Delegates,

On behalf of the organizing committee, it is an honor to extend a heartfelt welcome to all attendees of 2024 5th International Conference on Artificial Intelligence in Education Technology, which taking place in University of Barcelona, Spain during July 29-July 31, 2024.

For the past few years, AIET was held successfully in Berlin (2023), Wuhan (2022, 2021). This year, we are excited to announce that AIET 2024 will be held as a hybrid event, offering participants the flexibility to engage either in person or virtually. The conference will insist on providing a platform to share and get the latest insights from every area of Artificial Intelligence in Education Technology.

We are also pleased to share that this year, we received an overwhelming response from researchers and educators worldwide, including Australia, Bulgaria, Canada, China, Germany, Greece, Hong Kong, India, Ireland, Italy, Japan, Macao, Malaysia, Malta, Mexico, Morocco, Netherlands, Oman, Perú, Portugal, Qatar, South Korea, Saudi Arabia, Spain, Sri Lanka, Taiwan, Turkey, UAE, UK, United States and New Zealand. After a rigorous review process, we are proud to announced that 60 submissions are accepted for presentation at this conference, 25 delegates are joining in AIET 2024. In this program, there are 3 keynote speeches, 1 invited speech, 6 onsite sessions and 3 online sessions. A word of special welcome is given to our speakers who are pleased to make contributions to our conference and share their new research ideas with us.

Meanwhile, we'd like to express our sincere gratitude to our fellow members of the organizing committee composed by Advisory Chair, General Chair, General Co-Chairs, Program Chairs, Program Co-chairs, Publicity Chair, Technical Committee for their excellent work in encouraging participation and securing a substantial input of papers from all over the world.

We truly believe all participants will find the discussion fruitfully and will enjoy the opportunity for setting up future collaborations. Wish all of you have an unforgettable and prefect experience in this conference.

We hope you'll have a good time in Barcelona, Spain!

Your sincerely,
AIET 2024 Conference Organizing Committee





CONFERENCE COMMITTEE

◆ Advisory Chair

Stylianos Mystakidis, University of Patras, Greece

◆ General Chair

Mario Barajas Frutos, University of Barcelona, Spain

◆ General Co-Chairs

Tim Schlippe, IU International University of Applied Sciences, Germany

Cristina Galván, University of Barcelona, Spain

◆ Program Chairs

Eric C.K. Cheng, Yew Chung College of Early Childhood Education, Hong Kong, China

Yanjiao Chen, Zhejiang University, China

Cheng Siong Chin, Newcastle University, Singapore

Charalampos Karagiannidis, University of Thessaly, Greece

Flora Amato, University of Naples Federico II, Italy

◆ Program Co-Chairs

Grigorios N. Beligiannis, University of Patras, Greece

Yongbin Zhang, Beijing Institute of Graphic Communication, China

◆ Publicity Chair

Edmundo Tovar, Technical University of Madrid, Spain

◆ Technical Committee (In Alphabet Order)

Aditi Singh, Cleveland State University, United States

Adrian Groza, Technical University of Cluj-Napoca, Romania

Alexandre St-Vincent Villeneuve, Université du Québec à Montréal (UQAM), Canada

Anna Kuwana, Wayo Women's University, Japan

Annop Piyasinchart, King Mongkut's Institute of Technology North Bangkok, Thailand

Bob Barrett, American Public University, United States

Chan Nee Nee, UCSI University, Malaysia





CONFERENCE COMMITTEE

Enrico Chavez, Technological Institute of the Philippines-Manila, Philippine
Eryka Wilson, ReadyAI, Keiser University, USA
Felipe Hernández-Rodríguez, Tecnológico de Monterrey, Mexico
Francisco Bellas, Universidade da Coruña, Spain
Hartwig Hochmair, University of Florida, USA
Heba Nuseibeh, Sharjah Education Academy, United Arab Emirates
Hector Rafael Morano Okuno, Tecnológico de Monterrey, Mexico
Hsi-Min Chen, Feng Chia University, Taiwan
Huichuan Dai, Guangdong University of Science and Technology, China
Hui-Wen Huang, Shaoguan University, China
Jia Chen, Central China Normal University, China
Kim Hung Joe Lam, The Hong Kong Polytechnic University, Hong Kong, China
Kristina Schaaff, IU International University of Applied Sciences, Germany
Lei Niu, Central China Normal University, China
Michael Losavio, University of Louisville, Louisville, USA
Mohd. Elmagzoub Ahmed Eltahir, Ajman University, United Arab Emirates
Nicoletta Di Blas, Politecnico di Milano, Italy
Qi Xu, Central China Normal University, China
Qing Li, Southwestern University of Finance and Economics, China
Rachel John Robinson, IU Hochschule, Germany
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Stefanie Krause, Harz University of Applied Sciences, Germany
Sule Tasli Pektas, OSTIM Technical University, Turkey
Teh Faradilla Abdul Rahman, Univevrsiti Teknologi MARA, Malaysia
Tsao Chun-Ning, the English Department of Chinese Culture University, Taiwan
Tsvetana Stoyanova, University of National and World Economy -Sofia, Bulgaria
Yukari Shirota, Gakushuin University, Japan
Zille Huma Kamal, University of Waterloo, Canada



CONFERENCE VENUE

University of Barcelona (Mundet Campus)

Address: Pg. de la Vall d'Hebron, 171, 08035 Barcelona



➔ Traffic guidance

✈ From Barcelona International Airport (BCN)

①	  >  	Take the Train-R2N from Aeroport T2 to Passeig de Gràcia , then change to the metro L3 to Mundet station and walk 270 meters to the university.	47 mins
②	  >  	Take the Bus-A1 from Aeroport T1 to Pl. Espanya , then change to the metro L3 to Mundet station and walk 270 meters to the university.	48 mins
③	  >  	Take the Bus-A2 from Aeroport - Terminal C to Pl. Espanya , then change to the metro L3 to Mundet station and walk 270 meters to the university.	50 mins
④	  >  	Take the Metro-L9S from Aeroport T1 to Zona Universitària , then change to the metro L3 to Mundet station and walk 270 meters to the university.	67 mins





CONFERENCE VENUE



From Barcelona Sants Train Station (Estació Sants)

①	> L3	From Estació de Sants , walk 300 meters to the metro station Sants Estació and take L3 to Mundet station and walk 270 meters to the university.	30 mins
②	R2S / R2N > L3	Take the Train-R2S/R2N from Estació de Sants to Passeig de Gràcia , then change to the metro L3 to Mundet station and walk 270 meters to the university.	30 mins

Conference Room Information - Onsite Participants

Room in Palau de les Hores	Activities	Floor
Auditorium	Keynote Speeches & Invited Speech	Ground Floor
Room 1	Parallel Onsite Session 1~3	1st Floor
Room 2	Parallel Onsite Session 4~6	1st Floor

Conference Room Information - Online Participants

Zoom Meeting ID and Link	Activities
840 8371 5995 https://us02web.zoom.us/j/84083715995	Keynote Speeches & Invited Speech
	Online Session 1
	Parallel Online Session 2
	Online Closing Ceremony
833 3575 4447 https://us02web.zoom.us/j/83335754447	Parallel Online Session 3





ONSITE/ONLINE GUIDELINES

Onsite Guideline

- ◆ **Oral Presentation**
 - Oral presentation language: English.
 - Regular oral presentation: 15 minutes (including Q&A).
 - Get your presentation PPT files prepared. Presentations MUST be copied in the conference laptop at least 10 minutes before session starts.
 - Conference organizer will provide presentation laptop, USB, projector and screen, laser pointer.

- ◆ **Important Notes**
 - Please enter the meeting room at least 10 minutes before your session. Your punctual arrival and active involvement will be highly appreciated.
 - Please wear your name tag during the conference activities. Lending it to others is not allowed. If you have any accompanying person, please do inform our staff in advance.
 - Please keep all your belongings (laptop and camera etc.) at any time. The conference organizer does not assume any responsibility for the loss of personal belongings.
 - Please show name tag and meal coupons when dining.

Online Guideline

- ◆ **Time Zone: Madrid Time (GMT+2)**
 - Please attention the time difference.

- ◆ **ZOOM Download link:** 
 - <https://zoom.us/download>

- ◆ **Equipment Needed**
 - A computer with internet connection and camera.
 - Stable internet connection.
 - A quiet place and Proper background.

- ◆ **Test Your Presentation PPTX.**
 - Date: July 29, 2024
 - Prior to the formal meeting, presenters shall join the test room to ensure everything is on the right track. Please check your test time in this program. All the online presenters must attend the test.

- ◆ **Online Oral Presentation**
 - Timing: a maximum of 15 minutes in total, including 2-3 minutes for Q&A. Please make sure your presentation is well timed.
 - Please join the meeting room 10 minutes in advance.





CONFERENCE AGENDA

Day 1

July 29 | Monday | GMT+2

➤ **Online participants only**

Time	Activities	Meeting Room
10:00-12:00	Equipment Test	Zoom ID: 840 8371 5995
14:00-16:00		Link: https://us02web.zoom.us/j/84083715995

- ◆ Participants who are going to do an online presentation are required to join the Zoom pre-test.
- ◆ Please download the Zoom and prepare your presentation slides before you take the pre-test.
- ◆ Duration: 2~3 minutes apiece. Free to leave after your rehearsal is done.

Name Setting before Entry!

Keynote Speaker: Keynote-Name

Committee: Position-Name

Invited Speaker: IS-Name

Session Chair: SC-Name

Author's Presentation: Paper ID-Name

Delegate: Delegate-Name

➤ **Onsite participants only**

Time	Activities	Location
10:00-16:00	Onsite Sign-up Conference Materials Collections	Ground Floor in Palau de les Heures

University of Barcelona (Mundet Campus)
Address: Pg. de la Vall d'Hebron, 171, 08035 Barcelona





CONFERENCE AGENDA

Day 2

July 30 | Tuesday | GMT+2 | Onsite

Time	Activities	Morning Conference	Onsite Meeting Room: Auditorium Online Zoom ID: 840 8371 5995
10:00-10:05	Opening Remarks Welcome Address	Prof. Dr. Mario Barajas Frutos , University of Barcelona, Spain	
10:05-10:45	Keynote Speech	Prof. Dr. Fatos Xhafa , Universitat Politècnica de Catalunya (UPC), Spain <i>Speech Title: Intelligent Affective Edge: eLearning Spaces at Edge Computing</i>	
10:45-11:20	Group Photo & Coffee Break		
11:20-12:00	Keynote Speech (Online)	Prof. Dr. Stylianos Mystakidis , University of Patras, Greece <i>Speech Title: Facing the Herculean Dilemma for Artificial Intelligence in Education</i>	
12:00-12:40	Keynote Speech	Prof. Dr. Cristina Galván , University of Barcelona, Spain <i>Speech Title: Serendipities and Pirates: The Perfect Symbiosis in AI for Education</i>	
12:40-13:10	Invited Speech	Assoc. Prof. Dr. Osama Taani , Higher Colleges of Technology, UAE <i>Speech Title: The Impact of Artificial Intelligence on Leadership in UAE Higher Education System</i>	
13:30-14:30	Lunch	Location: University Cantine	
Time	Activities	Parallel Sessions - Onsite Only	Onsite Room 1 (Session 1~3) Onsite Room 2 (Session 4~6)
14:30-16:00	Session 1	Topic: "Educational Data Mining and Personalized Recommendation System" Session Chair: Prof. Ahmed Al Khateeb, King Faisal University, Saudi Arabia Session Chair: Lecturer. Luis Daniel Ibáñez, University of Southampton, UK Presenters: TA009, TA017, TA318, TA047, TA098, TA019	
16:00-16:20	Coffee Break		
16:20-17:50	Session 2	Topic: "Educational Metaverse and Virtual Reality in Education" Session Chair: Assoc. Prof. Samuel Antonio Rosas Melendez, Tecnológico de Monterrey, Mexico Session Chair: Assoc. Prof. Osama Taani, Higher Colleges of Technology, UAE Presenters: TA101-A, TA032-A, TA114-A, TA099, TA052-A, TA119	
17:50-18:10	Coffee Break		
18:10-19:40	Session 3	Topic: "Generative Artificial Intelligence in Education" Session Chair: Prof. Hartwig Hochmair, Florida International University, United States Presenters: TA041, TA067, TA084, TA102-A, TA122, TA094	
14:30-16:00	Session 4	Topic: "AI Chatbots and Intelligent Tutoring Systems" Session Chair: Prof. Yukari Shirota, Gakushuin University, Japan Presenters: TA021, TA040, TA088-A, TA053, TA012-A, TA027	
16:00-16:20	Coffee Break		
16:20-17:50	Session 5	Topic: "AI-Driven Image Processing and Educational Innovation" Session Chair: Prof. Alberto Montresor, University of Trento, Italy Presenters: TA101, TA020, TA001, TA036, TA044, TA120-A	
17:50-18:10	Coffee Break		
18:10-19:40	Session 6	Topic: "Artificial Intelligence Enhanced Learning and AI Education" Session Chair: Assoc. Prof. Kevin Gold, Boston University, USA Presenters: TA060, TA061, TA097-A, TA042-A, TA082, TA303-A	
20:00	Dinner	Restaurant at city center	





CONFERENCE AGENDA

Day 3

July 31 | Wednesday | GMT+2 | Online

Time	Activities	Online Presentations Only	Session 1 Meeting ID: 840 8371 5995
10:00-12:00	Session 1	<p>Topic: “Modern Educational Technology and Educational Innovation”</p> <p>Session Chair: Assoc. Prof. M. Nedim Alpdemir, Intelitics Ltd. And Ankara Bilim University, Turkey</p> <p>Presenters: TA050-A, TA062, TA066, TA315, TA321-A, TA046, TA076, TA116</p>	
12:00-14:00	Break Time		
Time	Activities	Parallel Sessions-Online Only	Session 2 Meeting ID: 840 8371 5995 Session 3 Meeting ID: 833 3575 4447
14:00-16:00	Session 2	<p>Topic: “Educational Data Mining and Large Language Models”</p> <p>Session Chair: Dr. Alexandre St-Vincent Villeneuve, Université du Québec à Montréal (UQAM), Canada</p> <p>Presenters: TA055, TA086, TA007, TA023, TA011, TA026, TA091, TA096-A</p>	
14:00-16:00	Session 3	<p>Topic: “Artificial Intelligence and Intelligent Virtual Tutors in Education”</p> <p>Session Chair: Lecturer. Aditi Singh, Cleveland State University, United States</p> <p>Presenters: TA030, TA121-A, TA113, TA305, TA048, TA018-A, TA049, TA022</p>	
			Meeting ID: 840 8371 5995
16:15-16:30		<p>Closing Ceremony</p> <p>Host: Prof. Dr. Mario Barajas Frutos, University of Barcelona, Spain</p>	



KEYNOTE SPEAKER



Prof. Dr. Fatos Xhafa

Universitat Politècnica de Catalunya (UPC), Spain

Editor in Chief: Elsevier Book Series "Intelligent Data Centric Systems"

Editor in Chief: Springer Book Series "Data Engineering and Communication Technologies"

Editor in Chief: Internet of Things; Engineering Cyber Physical Human Systems, Elsevier

Biography: Fatos Xhafa, PhD in Computer Science, is Full Professor at the Technical University of Catalonia (UPC), Barcelona, Spain. He has held various tenured and visiting professorship positions. He was a Visiting Professor at the University of Surrey, UK (2019/2020), Visiting Professor at the Birkbeck College, University of London, UK (2009/2010) and a Research Associate at Drexel University, Philadelphia, USA (2004/2005). Prof. Xhafa has widely published in peer reviewed international journals, conferences/workshops, book chapters, edited books and proceedings in the field (H-index 62). Prof. Xhafa has an extensive editorial service. He is founder and Editor-In-Chief of Internet of Things - Journal - Elsevier (Scopus and WoS Science) and of International Journal of Grid and Utility Computing, (Scopus and WoS Science). Prof. Xhafa is a member of the IEEE Communications Society, IEEE Systems, Man & Cybernetics Society and Founder Member of Emerging Technical Subcommittee of Internet of Things. His research interests include IoT and Cloud-to-thing continuum computing, massive data processing and collective intelligence, optimization, and machine learning, among others. Please visit:

<http://www.cs.upc.edu/~fatos/> and <http://dblp.uni-trier.de/pers/hd/x/Xhafa:Fatos>

Speech Title: *Intelligent Affective Edge: eLearning Spaces at Edge Computing*

Speech Time: 10:05-10:45 | July 30, 2024 | GMT+2

Abstract: Recently, Affective Computing has been explored as an important paradigm to support effective online learning. Differently from face-to-face learning, in online learning it is more challenging to inquire the emotional state of learners during the learning processes. The latest advances of Cloud-to-thing continuum computing support the Intelligent Affective Edge, which aims at using the end devices, at the edges of the Internet, to know the emotional state of learners. In this talk, we will discuss some affective computing models in Cloud-to-thing continuum, its challenges and opportunities for the Intelligent Affective Edge, processing and analyzing the IoT data streams in real time to classify learners' emotional states and e-classroom affective state.





KEYNOTE SPEAKER



Prof. Dr. Stylianos Mystakidis
University of Patras, Greece

Biography: Dr. Stylianos Mystakidis is an awarded Innovator and Researcher on Educational Technology at the University of Patras, Greece, Adjunct Faculty member at the International Hellenic University and the Hellenic Open University and Visiting Professor at the International Telematic University UNINETTUNO, Italy. His

expertise lies in the intersection of immersive technologies such as metaverse, virtual worlds, VR and AR with instructional design and game-based methods. His name has been included in Stanford University's list of scientists in the field of Education with the most citations of their research work in the world for 2022 (top 2%).

Google Scholar profile: <https://scholar.google.com/citations?user=M4yfbJ4AAAAJ>.

(Online) Speech Title: *Facing the Herculean Dilemma for Artificial Intelligence in Education*

(Online) Speech Time: 11:20-12:00 | July 30, 2024 | GMT+2

Abstract: This interactive presentation aims to facilitate education stakeholders, policy makers, managers, instructional designers, developers, educators, and students to tackle the herculean dilemma that they face already and will face repeatedly in the future in the context of artificial intelligence in education. First, the pragmatic dimensions of this metaphorical moral dilemma will be analyzed with tangible examples. Second, strategies, guidelines and resources for a practical and ethical decision-making procedure will be illustrated and proposed for discussion.



KEYNOTE SPEAKER



Prof. Dr. Cristina Galván
University of Barcelona, Spain

Biography: Prof. Cristina Galván received her Ph.D. in Education and Society from the University of Barcelona in 2015. Currently, she serves as a Lecturer in Educational Theory in the Digital Society at the University of Barcelona. Dr. Galván is the director of the Virtual Learning Research Group (GREAV), as well as the Virtual Learning and AI, Interactivity, and Accessibility Innovation Group.

Additionally, she oversees the Masters in Digital Learning Environments mediated by Digital Technologies. She also serves on the scientific board of the Q2 Scopus-indexed journal, Digital Education Review.

Speech Title: *Serendipities and Pirates: The Perfect Symbiosis in AI for Education*

Speech Time: 12:00-12:40 | July 30, 2024 | GMT+2

Abstract: The aspirations of artificial intelligence (AI) include finding solutions to our problems, fulfilling desires, and uncovering what we seek, even if we are unaware of it. Regular use of generative AI (GenAI) can lead to a clear goal and itinerary, or it can result in getting lost in a labyrinth. As the Cheshire Cat in Alice in Wonderland said:

"Would you tell me, please, which way I ought to go from here?"
"That depends a good deal on where you want to get to," said the Cat.
"I don't much care where—" said Alice.
"Then it doesn't matter which way you go," said the Cat.

Depending on their proficiency with GenAI and their commitment to the subject matter, students may seek unexpected, almost magical outcomes, akin to serendipity. However, this effect, stemming from a superficial learning approach, can lead to the pirate effect. Quoting Jack Sparrow:

"We must embrace the most noble of pirate traditions. We must fight... and then run away."

This translates to using GenAI to search, copy, submit, await a grade, and, if questioned, evade answers and flee. Educators risk focusing solely on the misuse of GenAI instead of on formative academic evaluation.

By examining the serendipity and pirate effects, this paper explores the various symbioses resulting from the use of GenAI in education. It also addresses how new guidelines for GenAI use emphasize digital competence in AI and academic integrity.



INVITED SPEAKER



Assoc. Prof. Dr. Osama Taani
Higher Colleges of Technology, UAE

Biography: Osama Taani, PhD, is an esteemed Associate Professor of Mathematics Education at the Higher Colleges of Technology in Abu Dhabi, UAE. Dr. Taani completed his Ph.D. in Mathematics at New Mexico State University.

Dr. Taani's extensive career spans the United States and the UAE, where he has excelled in roles that required deep expertise in mathematics education, curriculum development, and the management of educational accreditation processes. His tenure at Plymouth State University in the U.S. as Chair of the Math Department and Director of Math Education Graduate Programs was marked by strategic curriculum innovations and effective management of accreditation requirements. Currently, at the Higher Colleges of Technology, Dr. Taani imparts his knowledge through courses in primary education, early childhood education, and teaching practicum. He plays a crucial role in shaping the educational experiences of future educators, emphasizing dynamic learning environments and interaction-based teaching. Beyond teaching, he is pivotal in curriculum design and the development of educational assessments, continually enhancing the quality of education provided.

Dr. Taani is a certified online educator and has been recognized for his contributions to mathematics education through various awards and honors, including the Ed and Marilyn Wixson Endowed Professorship.

Speech Title: *The Impact of Artificial Intelligence on Leadership in UAE Higher Education System*

Speech Time: 12:40-13:10 | July 30, 2024 | GMT+2

Abstract: Artificial Intelligence shows a great potential to improve the leadership within the higher education institutions including Admission Directors, Human Resource Directors, Deans, University Presidents, Chief Academic Officers, and Department Heads. The Key findings of a mixed method study conducted in UAE reveal that AI-powered data analytics significantly improve data-driven decision-making and automate routine administrative tasks, positively affecting leadership effectiveness. Although Intelligent Tutoring Systems (ITS) and AI virtual assistants strongly correlate with student engagement and resource allocation, their direct impact on leadership is not statistically significant. The qualitative insights emphasize the advantages of personalized learning platforms, adaptive learning systems, instant feedback, AI-powered smart systems, and advanced data analytics in optimizing resource allocation and making evidence-based decisions.

The study concludes that AI has the potential to transform leadership in HEIs by enhancing efficiency and providing personalized support to students and faculty. However, it also identifies challenges such as ethical concerns, technology dependency, and balancing AI-driven with human-based decisions. Recommendations include implementing AI data analytics for personalized guidance, integrating AI-driven predictive analysis in enrollment and admissions, and utilizing AI virtual assistant tools to improve decision-making efficiency. Future research should explore other Middle Eastern countries, investigate emerging technologies like augmented and virtual reality, and address AI integration challenges to better understand its impact on transformational leadership in higher education.





PARALLEL ONSITE SESSION 1

Topic: “Educational Data Mining and Personalized Recommendation System”

Time: 14:30-16:00 | July 30 | Tuesday

Session Chair: Prof. Ahmed Al Khateeb, King Faisal University, Saudi Arabia

Session Chair: Lecturer. Luis Daniel Ibáñez, University of Southampton, United Kingdom

Onsite Meeting Room: Room 1

For each presenter, please copy your presentation PPT to the conference laptop before the session start, and stay onsite for the whole session.

TA009 14:30-14:45	AI-based Recommender System for Employee-Project Matching of IT Specialists Vanessa Mueller, Kristina Schaaff Presenter: Kristina Schaaff, IU International University of Applied Sciences, Deutschland
TA017 14:45-15:00	LLM-Powered Reading Aid for Visually Impaired Online Learners Zilin Li, Shaofei Shen, Zhilong Xie Presenter: Zhilong Xie, Southwestern University of Finance and Economics, China
TA318 15:00-15:15	Holt-Winters Additive model to forecasting academic performance. A case of middle school Axel Zevallos Aquije, Rosa Salas Bolaños, Alvaro Maravi Cardenas and Anneliese Zevallos Aquije Presenter: Axel Zevallos Aquije, César Vallejo University, Perú
TA047 15:15-15:30	AI-Based Student Emotion and Engagement Level Detection Framework Chinar Amit Deshpande Presenter: Chinar Amit Deshpande, Aditya English Medium School, Pune, India
TA098 15:30-15:45	Natural Language Processing In Higher Education Institutions: a bibliometric analysis using Scopus database AIT OUFKIR Abdellah, MOHIB Zineb, ADRDOUR Mohamed Presenter: AIT OUFKIR Abdellah, Ecole Nationale de Commerce et de Gestion Université Ibn Zohr, Morocco
TA019 15:45-16:00	Interactive Online Education Using LLMs: Foundations and Applications Zhilong Xie, Zilin Li, Jiwen Huang, Rong Xing, Qing Li Presenter: Qing Li, Southwestern University of Finance and Economics, China





PARALLEL ONSITE SESSION 2

Topic: “Educational Metaverse and Virtual Reality in Education”

Time: 16:20-17:50 | July 30 | Tuesday

Session Chair: Assoc. Prof. Samuel Antonio Rosas Melendez, Tecnológico de Monterrey, Mexico

Session Chair: Assoc. Prof. Osama Taani, Higher Colleges of Technology, UAE

Onsite Meeting Room: Room 1

For each presenter, please copy your presentation PPT to the conference laptop before the session start, and stay onsite for the whole session.

TA101-A 16:20-16:35	SEM Evaluation and Future Development of Satisfaction of Learning Centers in Chinese University Libraries in the Context of Metaverse Li Chen, Daoke Liu, Ling Kai Presenter: Li Chen, Anhui Jianzhu University, China
TA032-A 16:35-16:50	The Upsurge of the Metaverse in Educational Settings: an Innovative Meta-analysis Study Ahmed A. Al Khateeb Presenter: Ahmed Al Khateeb, King Faisal University, Saudi Arabia
TA114-A 16:50-17:05	Assessing Metaverse Platforms for Educational Use: Benefits, Challenges, and Practical Implications Jaehong Kim, Joung-Huem Kwon, Jiseob Park Presenter: Jaehong Kim, Korea University of Technology and Education, South Korea
TA099 17:05-17:20	Using Virtual Reality (VR) to Enhance Student Learning of Construction Systems in Civil Engineering Education Fredy Alonso Diaz Duran Presenter: Fredy A. Díaz-Durán, Tecnológico de Monterrey, México
TA052-A 17:20-17:35	Engaging Students in Learning Version Control Systems: GITainment - A Serious Game Approach to Bridging Theory and Practice Tzu-Yuan Chen, Hsi-Min Chen, Yen-Tse Hsueh Presenter: Hsi-Min Chen, Feng Chia University, Taiwan
TA119 17:35-17:50	An Interdisciplinary Approach to Enhancing AI Literacy in K-12 Science Education: Curriculum Integration and Pedagogical Framework Yao Shi, Rongkeng Liang, Yong Xu Presenter: Yao Shi, South China University of Technology, China





PARALLEL ONSITE SESSION 3

Topic: “Generative Artificial Intelligence in Education”

Time: 18:10-19:40 | July 30 | Tuesday

Session Chair: Prof. Hartwig Hochmair, Florida International University, United States

Onsite Meeting Room: Room 1

For each presenter, please copy your presentation PPT to the conference laptop before the session start, and stay onsite for the whole session.

<p>TA041 18:10-18:25</p>	<p>The Evolution of Learning: Assessing the Transformative Impact of Generative AI on Higher Education Stefanie Krause, Nikhil Ubhe, Bhumi Hitesh Panchal</p> <p>Presenter: Stefanie Krause, Harz University of Applied Sciences, Germany</p>
<p>TA067 18:25-18:40</p>	<p>On Implementing an Effective Intelligent Tutor and Its Impact on Teaching and Learning Experiences Jialin Yang, Michael Cooper-Stachowsky, Zille Huma Kamal</p> <p>Presenter: Zille Huma Kamal, University of Waterloo, Canada</p>
<p>TA084 18:40-18:55</p>	<p>Transforming Perceptions: Pedagogical Efficacy of Generative Artificial Intelligence in Art-Tech Education Mario Alberto Caudillo Melgoza</p> <p>Presenter: Mario Alberto Caudillo Melgoza, Tecnologico de Monterrey, Mexico</p>
<p>TA102-A 18:55-19:10</p>	<p>A Phenomenological Study of Southeast Asian Instructors’ Use of AI Technologies on their Academic Practices in Higher Education Nee Nee Chan</p> <p>Presenter: Nee Nee Chan, UCSI University, Malaysia</p>
<p>TA122 19:10-19:25</p>	<p>A Framework for Writing Effective Prompts: Leveraging Generative Artificial Intelligence for Teaching Excellence Mohammad AL-Smadi, Rawand ALFUGAHA</p> <p>Presenter: Rawand ALFUGAHA, Lusail University, Qatar</p>
<p>TA094 19:25-19:40</p>	<p>TeacherTec: The Potentials and Limitations of AI in Educational Chatbots from Mexican Undergraduates' Perspective Samuel Antonio Rosas-Meléndez, Guillermo Manuel Chans, Paola Marián López-Velázquez, Felipe Miguel Álvarez-Siordia, Claudia Camacho-Zuñiga</p> <p>Presenter: Samuel Antonio Rosas Melendez, Tecnologico de Monterrey, Mexico</p>





PARALLEL ONSITE SESSION 4

Topic: “AI Chatbots and Intelligent Tutoring Systems”

Time: 14:30-16:00 | July 30 | Tuesday

Session Chair: Prof. Yukari Shirota, Gakushuin University, Japan

Onsite Meeting Room: Room 2

For each presenter, please copy your presentation PPT to the conference laptop before the session start, and stay onsite for the whole session.

TA021 14:30-14:45	Chatbots - new opportunities for digitalizing the learning processes in universities Luben Boyanov, Tsvetana Stoyanova, Daniel Parushev Presenter: Tsvetana Stoyanova, University of National and World Economy -Sofia, Bulgaria
TA040 14:45-15:00	Which Chatbot is the Most Empathic Teacher? Timo Kühbacher, Tim Schlippe, Kristina Schaaff Presenter: Kristina Schaaff, IU International University of Applied Sciences, Germany
TA088-A 15:00-15:15	The Effect of an Interactive Chatbot on Receptive and Productive Vocabulary Knowledge Ali Mohammad Al-ghaithi Presenter: Ali Al-ghaithi, Sohar University, Oman
TA053 15:15-15:30	On the Helpfulness of a Zero-Shot Socratic Tutor Kevin Gold, Shuang Geng Presenter: Kevin Gold, Boston University, USA
TA012-A 15:30-15:45	Chatbots in the Classroom: A Study on AI-Assisted Learning in a Digital Mapping Course Hartwig Hochmair, Zhaohui Fu Presenter: Hartwig Hochmair, Florida International University, United States Presenter: Zhaohui Fu, Florida International University, United States
TA027 15:45-16:00	Generic Architecture of Digital Assistant for Freshman Onboarding Process Rostislav Yavorskiy, Oleg Lavrov, Nikolai Tatarovskii Presenter: Rostislav Yavorskiy, Cifrium, Spain





PARALLEL ONSITE SESSION 5

Topic: “AI-Driven Image Processing and Educational Innovation”

Time: 16:20-17:50 | July 30 | Tuesday

Session Chair: Prof. Alberto Montesor, University of Trento, Italy

Onsite Meeting Room: Room 2

For each presenter, please copy your presentation PPT to the conference laptop before the session start, and stay onsite for the whole session.

<p>TA101 16:20-16:35</p>	<p>Revolutionizing Creativity: Unleashing the Power of AI in Upper Elementary Art Education Jane Brumfield Montero</p> <p>Presenter: Jane B. Montero, Dexter Community Schools, Michigan, United States</p>
<p>TA020 16:35-16:50</p>	<p>Development of User-Customized Online Teaching Technology based on GPT, Enhanced by Generative AI-based Motion Recognition Taek-Gwon Nam, Kyoung-Geun Cho, Zahra-Batool Jaffrey, Dong-Sung Pae, Seo-Young Won, Tae-Koo Kang</p> <p>Presenter: Tae-Koo Kang, Sangmyung University, Republic of Korea</p>
<p>TA001 16:50-17:05</p>	<p>Generative AI in financial mathematics problem-solving: Integration of linguistic and symbolic processing functions Yukari Shirota, Anna Kuwana, Basabi Chakraborty</p> <p>Presenter: Yukari Shirota, Gakushuin University, Japan</p>
<p>TA036 17:05-17:20</p>	<p>Exploring Artificial Intelligence for Topology Optimization in an Engineering Course HECTOR RAFAEL MORANO OKUNO, GUILLERMO SANDOVAL BENITEZ</p> <p>Presenter: HECTOR RAFAEL MORANO OKUNO, Tecnologico de Monterrey, School of Engineering and Science, Mexico</p>
<p>TA044 17:20-17:35</p>	<p>Guiding Art Education with AI: Predicting Subjective Evaluations and Generating Feedback for Pencil Still-life Drawing Yoshiko FURUSHO, Kazunori KOTANI, Prarinya SIRITANAWAN</p> <p>Presenter: Yoshiko FURUSHO, Yokohama University of Art and Design, Japan</p>
<p>TA120-A 17:35-17:50</p>	<p>Drone Photogrammetry and AI for Analyzing Sociocultural Contexts and Segregated Areas JORDI RÁBAGO</p> <p>Presenter: Jordi Rábago, ITESM, Mexico</p>





PARALLEL ONSITE SESSION 6

Topic: “Artificial Intelligence Enhanced Learning and AI Education”

Time: 18:10-19:40 | July 30 | Tuesday

Session Chair: Associate Prof. Kevin Gold, Boston University, USA

Onsite Meeting Room: Room 2

For each presenter, please copy your presentation PPT to the conference laptop before the session start, and stay onsite for the whole session.

<p>TA060 18:10-18:25</p>	<p>Re-imagining Education Through AI: Students Insights from DigiEduHack Giulia Paludo, Carlotta Vielmo, Francesca Fiore, Agnese Del Zozzo, Gisella Decarli, Alberto Montresor, Milena Bigatto</p> <p>Presenter: Giulia Paludo, University of Trento, Italy</p>
<p>TA061 18:25-18:40</p>	<p>Application of Artificial Intelligence (AI) in Higher Education (HE) for Enhanced Learning and Employability Rachel John Robinson</p> <p>Presenter: Rachel John Robinson, IU University of Applied Sciences, Germany</p>
<p>TA097-A 18:40-18:55</p>	<p>Enhancing Inclusive Education through AI: Insights and Outcomes from the IA-ME Project in Spain Anna Trifonova, Mariela Destefano, Mario Barajas</p> <p>Presenter: Anna Trifonova, CreaTIC Academy, España</p>
<p>TA042-A 18:55-19:10</p>	<p>AI for Acclimation: Assisting Displaced Students in Refugee Facilities through Activity-Driven Lessons Shuhan Li, Amalia Toutziaridi, Erica Hooshi, Eryka Wilson, Roozbeh Aliabadi</p> <p>Presenter: Amalia Toutziardidi, Massachusetts Institute of Technology, United States</p>
<p>TA082 19:10-19:25</p>	<p>Undergraduate University AI Education: A Survey Ioannis Pitas, Zografia Sotireli, Christos Papaioannidis, Alexandros Zamioudis</p> <p>Presenter: Alexandros Zamioudis, Aristotle University of Thessaloniki, Greece</p>
<p>TA303-A 19:25-19:40</p>	<p>Obstacles of Applying Total Quality Management to Public Education Schools in the State of Kuwait Maryam AbdulMusalab</p> <p>Presenter: Maryam AbdulMusalab, Ministry of Educatuin, Kuwait</p>





ONLINE SESSION 1

Topic: “Modern Educational Technology and Educational Innovation”

Time: 10:00-12:00 | July 31 | Wednesday | GMT+2

Session Chair: Associate Prof. M. Nedim Alpdemir, Intelitics Ltd. And Ankara Bilim University, Turkey

Online Meeting Room ID: 840 8371 5995

For each presenter, please enter the meeting room 10 minutes before session start, and stay online during the session.

TA050-A 10:00-10:15	<p>Integrating Krashen's Theories and Emerging Technologies in ESL Learning: A Pathway to Innovation</p> <p>Vincent Hai Lin, Julius Yls</p> <p>Presenter: Vincent Hai Lin, Academy EX, Auckland, New Zealand Presenter: Julius Yls , MetaAi Project, Auckland, New Zealand</p>
TA062 10:15-10:30	<p>An Educational Mode for Big Data Management and Application Major Development and the Evaluation based on AHP</p> <p>Rui Liu, Yongjian Ma, He Liu</p> <p>Presenter: Yongjian Ma, Central University of Finance and Economics, China</p>
TA066 10:30-10:45	<p>Introducing Collective Computing in K-12 through an Ambient Intelligence Activity</p> <p>Sara Guerreiro-Santalla, Alejandro Romero, Francisco Bellas</p> <p>Presenter: Sara Guerreiro-Santalla, Universidade da Coruña, Spain</p>
TA315 10:45-11:00	<p>Assessing the Quality Factors affecting E-Learning: A Comparative Study of South African Universities and Saudi Higher Education</p> <p>Arwa Bamaga, Bassam Zafar, Sotirios Terzis</p> <p>Presenter: Arwa Khamis Ali Bamaga, King Abdulaziz University; University of Strathclyde, Saudi Arabia</p>
TA321-A 11:00-11:15	<p>Examining the Contradictions in Beginning Teacher Identity Development from the Perspective of Activity Theory</p> <p>Xinyi Shen, Xuan Wang</p> <p>Presenter: Xinyi Shen, Northwestern Polytechnical University, China</p>
TA046 11:15-11:30	<p>Unveiling the Relationship across Students' feedback, Video Viewing Logs and Achievement in Video-Based Learning</p> <p>Giacomo Cassano, Nicoletta Di Blas, Marco ver Verzeni</p> <p>Presenter: Giacomo Cassano, Politecnico di Milano, Italy</p>
TA076 11:30-11:45	<p>Exploring Factors Influencing the Integration of AI Drawing Tools in Art and Design Education</p> <p>Hongbo GE, Xiaolong CHEN</p> <p>Presenter: Hongbo GE, Faculty of Humanities and Social Sciences, Macao Polytechnic University, Macao, China</p>
TA116 11:45-12:00	<p>Evaluation of ChatGPT4's Effectiveness in its Client role-play for Counselling Education</p> <p>Raja Kannusamy, Christy Collis</p> <p>Presenter: Raja Kannusamy, Australian Institute of Professional Counsellors, Australia</p>





PARALLEL ONLINE SESSION 2

Topic: “Educational Data Mining and Large Language Models”

Time: 14:00-15:45 | July 31 | Wednesday | GMT+2

Session Chair: Session Chair: Dr. Alexandre St-Vincent Villeneuve, Université du Québec à Montréal (UQAM), Canada

Online Meeting Room ID: 840 8371 5995

For each presenter, please enter the meeting room 10 minutes before session start, and stay online during the session.

TA055 14:00-14:15	KNIGHT: Machine Learning Methods to Enhance Individualized Learning Muddsair Sharif, Dieter Uckelmann Presenter: Muddsair Sharif, University of Applied Sciences Stuttgart, Germany
TA086 14:15-14:30	AI-enabled Classroom Conversation Analysis: Intelligent Positioning of Teacher and Student Roles Xuan Liu, Zhong Sun Presenter: Xuan Liu, College of Information Engineering, Capital Normal University, China
TA007 14:30-14:45	Predicting Grades in the “Introduction to Clinical Databases” Course: Dataset Creation, Pipeline Design, and Model Evaluation Inês Domingues Presenter: Inês Domingues, Polytechnic Institute of Coimbra, Portugal
TA023 14:45-15:00	Abstractive Summarization of Lectures and Lecture Segments Transcripts with BART Yaser Haitham Alesh, Meriem Aoudia, Osama Mohamed Abdulghani, Omar Ibrahim Alali, Manar Abu Talib Presenter: Yaser Haitham Alesh, University of Sharjah, United Arab Emirates
TA011 15:00-15:15	Enhancing Career Guidance through Intent Mining with Large Language Models MOHIT BHATNAGAR Presenter: Mohit Bhatnagar, O.P. Jindal Global University, India
TA026 15:15-15:30	An Automated Hybrid Exam Evaluation Framework for Textual Courses Using AI M. Nedim Alpdemir, Yusuf Alpdemir, Sakup Doğan Presenter: M. Nedim Alpdemir, Intelitics Ltd. And Ankara Bilim University, Turkey
TA091 15:30-15:45	Comparing the Performance of LLMs in RAG-based Question-Answering: A Case Study in Computer Science Literature Ranul Navojith Dayarathne, Uvini Ayathma Ranaweera, Upeksha Ganegoda Presenter: Ranul Navojith Dayarathne, University of Moratuwa, Sri Lanka
TA096-A 15:45-16:00	From Challenges to Success: AI-driven Strategies for Student Empowerment in Special Education Programs Alexandre St-Vincent Villeneuve, Maud Remy Presenter: Alexandre St-Vincent Villeneuve, Université du Québec à Montréal (UQAM), Canada





PARALLEL ONLINE SESSION 3

Topic: “Artificial Intelligence and Intelligent Virtual Tutors in Education”

Time: 14:00-16:00 | July 31 | Wednesday | GMT+2

Session Chair: Lecturer. Aditi Singh, Cleveland State University, United States

Online Meeting Room ID: 833 3575 4447

For each presenter, please enter the meeting room 10 minutes before session start, and stay online during the session.

TA030 14:00-14:15	Learner's Permit: Accessible Artificial Intelligence through an Educational Game Joyce Yuan, Henry Lieberman Presenter: Joyce Yuan, Massachusetts Institute of Technology, United States
TA121-A 14:15-14:30	Leveraging Artificial Intelligence in Healthcare Education: Strategic Objectives and Implementation Sang E. Park Presenter: Sang E. Park, Harvard School of Dental Medicine, United States
TA113 14:30-14:45	Encouraging Responsible Use of Generative AI in Education: A Reward-Based Learning Approach Aditi Singh, Abul Ehtesham, Saket Kumar, Gaurav Kumar Gupta, Tala Talaei Khoei Presenter: Aditi Singh, Cleveland State University, United States
TA305 14:45-15:00	Toward the Application of the Problem-based Learning Paradigm into the Instruction of Business Technology and Innovation Maikel Leon-Espinosa Presenter: Maikel Leon-Espinosa, University of Miami, United States
TA048 15:15-15:30	Empowering Cognitive Skills of Children with ASD throughout an Intelligent Virtual-Tutor: State of the Art Miriam Janet Cervantes López, Jaime Cruz Casados, Richard de Jesús Gil Herrera Presenter: Miriam Janet Cervantes López, Universidad Autónoma de Tamaulipas, México
TA018-A 15:30-15:45	Evaluating a Middle School Writing Tool through Continuous Impact Evaluation John Hutson, Amanda Jensen, Yiqiu Yan, Mandy Figueroa Presenter: John Hutson, ETS, United States
TA049 15:45-16:00	An Accurate Classification Method of Competitive Math Problems Yourui Shao Presenter: Yourui Shao, BASIS Independent Silicon Valley, United States



CONFERENCE DELEGATES

The following list of audience delegates is based on the order of registration time.

Evelyn Sjafii	United States
Miguel Acevedo	OpenCode Inc., United States
Madeleine Lundberg	Mälardalen University, Sverige
Alberto Montresor	University of Trento, Italy
Agnese Del Zozzo	University of Trento, Italy
Francesca Fiore	University of Trento, Italy
Ingrid Fawcett	SD61 Victoria BC, Canada
SHADRACH KASH-ABBEY	BANKS, GHANA
Carlotta Vielmo	University of Trento, Italy
Carmel Azzopardi	University of Malta Junior College, Malta
Marthese Azzopardi	University of Malta Junior College, Malta
Maher Ghalayini	St. Lawrence College, Canada
Sergio Araneda	Caveon, United States
Zineb MOHIB	Ibn Zohr University, Morocco
Mohamed ADRDOUR	Ibn Zohr University, Morocco
Houfa SHEN	Tsinghua University, China
Luis Daniel Ibáñez	University of Southampton, United Kingdom
Fabrizio Caciccia	Italian Air Force, Italy
Raffaele Capece	Italian Air Force, Italy
Fredrik Jeanson	Mälardalen University, Sweden
Ingemar Haglund	Mälardalen University, Sweden
Luis Medina-Gual	Universidad Iberoamericana, Mexico
Ayse Ulgen	Nottingham Trent University, United Kingdom
Zhang Kan	Naval Engineering University, China
Jungang Du	Naval Engineering University, China



