CONFERENCE PROGRAM

23rd International Conference on

Cognition and Exploratory Learning in Digital Age (CELDA 2026)

Saturday 24th, October 2026

08:30-18:45 Welcome Desk (closes for lunch – 13:00-14:15)
(Room: Eduardo Viana IV)

09:40-10:00 Session O – Opening Session
(Room: Eduardo Viana III)

OPENING SESSION
Profs. Demetrios G. Sampson and Pedro Isaias

10:00-11:00 Session KL – Keynote Presentation
(Room: Eduardo Viana III)

"BEYOND AUTOMATION AND OFFLOADING: RETHINKING HUMAN–AI COLLABORATION FOR LEARNING"
Professor Michail Giannakos, Co-Director of AI LEARN, Norwegian University of Science and Technology (NTNU), Norway

11:00-11:30 Coffee Break

11:30-13:00 Session 24.1
Technology and Mental Models
(Room: Eduardo Viana II)
Chair: Andrea Guidi

MINING REASONING PROCESSES IN COMPUTER-BASED CAUSAL MAPPING: EFFECTS ON MAP QUALITY AND LOGICAL FALLACIES (F070)
Allan C. Jeong and Hyoung-Seok Shin
USING MACHINE LEARNING TO MEASURE SELF-EFFICACY BELIEF THROUGH LEARNERS' INTERACTION TRACES IN TECHNOLOGY-ENHANCED LEARNING (F091)
Maeva Somny, Linda Chouatia and Marie Lefevre
FORMATIVE EVALUATION OF A JAVASCRIPT EXECUTION VISUALIZER WITH MULTI-GRANULARITY STEP CONTROL AND MULTIPLE COGNITIVE-MODEL VIEWS (F199)
Tetsuo Tanaka and Mari Ueda

11:30-12:50 Session 24.2
Technology, Learning and Expertise // Other
(Room:Almada Negreiros I)
Chair: Patrick Jost

IMMERSIVE TECHNOLOGIES AND FUTURE COMPETENCIES: EDUCATORS' PERCEIVED OPPORTUNITIES AND GAPS IN VR/AR-SUPPORTED LEARNING (F141)
Merle Laurits, Triin Muulmann and Kai Pata
WILLING BUT UNDEREQUIPPED: THE ATTITUDE-BEHAVIOR GAP AND DESIGN REQUIREMENT FOR PARENT-AI-LEARNER COLLABORATION (F101)
Yi Shang, Xiaofei Qi and Jingyun Wang
FROM TOOL TO DESIGN PARTNER: GENERATIVE AI AND DIGITAL LEARNING TOOLS IN EMERGENCY REMOTE MULTICULTURAL TEACHER EDUCATION (S183)
Fazilet Karakuş, Fikriye Kanatlı-Öztürk and Ahmet Durgungöz

13:00-14:15 Lunch Break

14:15-16:15 Session 24.3
Cognition in Education
(Room: Eduardo Viana II)
Chair: Allan Jeong

AI IN HIGHER EDUCATION: COGNITIVE SHIFT VS. COGNITIVE DECLINE (R235)
Ljiljana Brankovic and Olga Timcenko
MAPPING CULTURAL DYNAMICS IN ARTISTIC RESEARCH COMMUNITIES (F023)
Alberto Giretti, Andrea Guidi and Franco Ripa di Meana
ENHANCING LEARNING BY REDUCING COGNITIVE LOAD IN REAL-TIME DIGITAL SIGNAL PROCESSING PROBLEM SOLVING (F074)
David Berla and Gabriel (Gabi) Shafat
AVAILABLE MENTAL RESOURCES AND LONG-TERM RETENTION IN ADAPTIVE WORKSHEET CREATION: COGNITIVE OFFLOADING COSTS OF USING GEN-AI FOR NON-TEACHING TASKS (F173)
Kensuke Akao and Tobias Tempel
HARMONIZING PHYSICS EDUCATION: A MULTIDISCIPLINARY FRAMEWORK ON BACKGROUND MUSIC ACROSS CLASSROOM AND DIGITAL NARRATIVE ENVIRONMENTS (R037)
Konstantinos Patronas

14:15-15:50 Session 24.4
Assessment of Exploratory Learning Approaches
(Room:Almada Negreiros I)
Chair: Fabio Roman

EXPLORING BEHAVIOURAL PATTERNS IN STEM EDUCATIONAL ESCAPE ROOMS: A JOINT ANALYSIS OF GAMEPLAY, KNOWLEDGE AND EXPERIENCE (F146)
Chiara Fante, Giovanni Paolo Caruso, Andrea Ceregini, Fabrizio Ravicchio and Flavio Manganello
FOSTERING COMPUTATIONAL THINKING ACROSS EMBODIED, UNPLUGGED AND SCRATCH-BASED INSTRUCTIONAL APPROACHES (F186)
Charoula Angeli, Maria Nicolaou and Vaso Anastasiou
GENERATIVE AI AND UNDERGRADUATE STUDENTS' CRITICAL THINKING: EVIDENCE FROM AI-ASSISTED CRITIQUES OF ONLINE NEWS ARTICLES (S197)
Eleni A. Kyza
AI-SUPPORTED DEBATE EXAMS: FAIR ASSESSMENT, INDEPENDENT INQUIRY AND STUDENT–AI COLLABORATION (R192)
Wojciech Baluch

16:15-16:45 Coffee Break

16:45-18:35 Session 24.5
Assessment of Exploratory Technologies // Other
(Room: Eduardo Viana II)
Chair: Hafsteinn Einarsson

ADOPTION AND NON-ADOPTION OF AI IN HIGHER EDUCATION ASSESSMENT: REPORTED PATTERNS, BARRIERS AND IMPLICATIONS (F203)
Pedro Isaias and Paula Miranda
DESIGNING AGENT-BASED AI ROLE SIMULATIONS FOR PROFESSIONAL CONVERSATIONAL COMPETENCE: AN EVIDENCE-INFORMED FRAMEWORK FOR TRAINING AND FEEDBACK (F047)
Niklas Eulitz and Sabine Seufert
STUDENTS' PERCEPTIONS OF IN SITU AUGMENTED REALITY GUIDANCE IN A PHYSICS LABORATORY ACTIVITY (F077)
Doaa Saad, Guy Tsabary and Boris Ivinder
STRUCTURAL RESISTANCE IN AI-SUPPORTED CONCEPT MAPPING: A PRIMARY-SCHOOL CASE STUDY OF ITERATIVE PROMPTING AND THE WITHHOLDING OF AN AVAILABLE FORM (S096)
Flavio Manganello and Anna Deambrosi

16:45-18:35 Session 24.6
Student-Centered Learning
(Room:Almada Negreiros I)
Chair: Susan Yoon

SEMI-IMMERSIVE HIGH-DOSAGE TUTORING FOR STUDENTS WITH LEARNING DISABILITIES: EFFECTS ON MOTIVATION, ENGAGEMENT AND ACHIEVEMENT (F033)
Shantanu Tilak, Joshua Basta and John D. Ball
UNDERSTANDING ORAL PRESENTATIONS THROUGH AUDIENCE GAZE: AN EXPLAINABLE LEARNING ANALYTICS APPROACH (F215)
Pablo Villegas, Alvaro Becerra, Ruth Cobos and Xavier Ochoa
VIRTUAL LEARNING ENVIRONMENTS: ADVANCING EDUCATIONAL INNOVATION AND PRACTICE (S045)
Marisa Alena Holzapfel, Nicolas Arndt, Silke Bakenhus and Maja Brückmann
COMPUTATIONAL THINKING THROUGH PRIMARY EDUCATIONAL ROBOTICS: OUTCOMES AND LEARNING PROCESSES ACROSS GUIDED AND EXPLORATORY APPROACHES (F191)
Vaso Anastasiou and Charoula Angeli

Sunday 25th, October 2026

08:30-15:30 Welcome Desk (closes for lunch – 13:05-14:15)
(Room: Eduardo Viana IV)

08:50-11:00 Session 25.1
Exploratory Technologies // Technology, Learning and Expertise
(Room: Eduardo Viana II)
Chair: Demetrios G. Sampson

EXPLORING HOW PRE-SERVICE TEACHERS ENGAGE IN AI-SUPPORTED CO-DESIGN ACTIVITIES IN AN EDUCATIONAL ROBOTICS SIMULATOR (F059)
Nafsika Pappa, Kyparisia Papanikolaou, Georgios Fesakis and Cleo Sgouropoulou
WHEN GROUPS ASK: ON-DEMAND AI IN THE RESEARCHER ROLE IN SERIOUS-GAME CO-DESIGN (F162)
Patrick Jost and Jonas Mair
AI-GENERATED EDUCATIONAL MATERIALS FOR TEACHING ALGORITHMS: THE ADA LOVELACE CASE STUDY IN THE CONTEXT OF ITALY'S NEW NATIONAL CURRICULUM (F081)
Fabio Sartori and Marco Brusadelli
AUTOMATED GENERATION OF 3D EDUCATIONAL RESOURCES USING AI FOR IMMERSIVE LEARNING ENVIRONMENTS (S098)
Inmaculada Remolar, Águeda Gómez-Cambronero, Anna Tonda and Linda García-Rytman
INTRODUCING HOUSECALL: AN AUTOMATED TOOL TO INVESTIGATE CHILD-CAREGIVER INTERACTION (S194)
Silvia Ferrando, Nora Drogo, Laura Traverso, Sabrina Panesi, Gualtiero Volpe and Eleonora Ceccaldi

08:50-11:00 Session 25.2
Assessing Progress of Learning in Complex Domains
(Room: Almada Negreiros I)
Chair: Mari Ueda

VALIDATING LLM-GENERATED EXAM QUESTIONS AGAINST STUDENT PERFORMANCE (F204)
Hafsteinn Einarsson and Sigrún Helga Lund
USING ARTIFICIAL INTELLIGENCE TO SUPPORT CONSISTENT GRADING IN INTERNATIONAL UNIVERSITY EXAMS (F216)
Guðrún Rútsdóttir, Jens G. Hjörleifsson, Anna Margrét Kristinsdóttir, Ásgeir Örn Arnþórsson, Hafsteinn Einarsson and Sigrún Helga Lund
SELF-ASSIGNED BLOOM LEVELS AND DIFFICULTY LABELS OF LLM-GENERATED EXAM ITEMS: AGREEMENT WITH HUMAN RATERS, COLD MODEL RATINGS AND STUDENT PERFORMANCE (F221)
Hafsteinn Einarsson, Ragna María Sverrisdóttir, Guðmundur Einarsson, Steinn Guðmundsson and Sigrún Helga Lund
PRINCIPLES FOR ALTERNATIVE ASSESSMENT IN STEM SUBJECTS IN THE AGE OF GENERATIVE AI: A DESIGN-BASED RESEARCH STUDY (S106)
Liat Eyal
INQUIRY ADAPTATION IN GENAI DIALOGUES AND IMPLICATIONS FOR SELF-REGULATED LEARNING (S206)
Michael Pin-Chuan Lin, Daniel Chang and Jeeho Ryoo

11:00-11:30 Coffee Break

11:30-13:05 Session 25.3
Pedagogical Issues Related with Learning Objects // Learner Communities and Peer-Support
(Room: Eduardo Viana II)
Chair: Kyparissia Papanikolaou

EVALUATING THE PEDAGOGIC VALUE OF AN ONLINE UNIVERSITY PHYSICAL EDUCATION COURSE. A FIVE-YEAR STUDY (F126)
Katalin Kovács and Ágnes Dömötör
TEACHING PYTHON TO NON-TECHNICAL NOVICES: EDUCATOR PERSPECTIVES ON MEDIALIB (F231)
Adam Wynn and Jingyun Wang
!NOW-YOU-KNOW: LEARNING ABOUT INCLUSION CHALLENGES IN AI-DRIVEN DIGITAL TRANSFORMATION (S142)
Miriam F. B. Sarpong and Monica Divitini
DISCIPLINARY JUNCTIONS FOR TEACHER LEARNING TO ENACT STEM-INTEGRATED INSTRUCTION (R214)
Susan A. Yoon and Sakshi G. Singh

11:30-13:00 Session 25.4
Life-Long Learning
(Room: Almada Negreiros I)
Chair: Florian Sense

TRACING THE EVOLUTION OF STUDENTS' DEVELOPMENTAL PRIORITIES THROUGH LEARNING ANALYTICS: A SIX-YEAR STUDY IN A UNIVERSITY DIGITAL ECOSYSTEM (F153)
Daniela Olea-Ibarra and María Teresa Nicolás-Gavilán
FROM IMAGES TO MEANING: COMPARING INTERPRETATIONS OF PHOTOVOICE-BASED LIFELOGGING DATA BY MULTIMODAL AI, RESEARCHERS AND LEARNERS (F177)
Hyunsub So, Jiyoung Lim, Dongsim Kim, Doyun Kim and Meehyun Yoon
DECONSTRUCTING 'LEARNING TO LEARN' IN HIGHER EDUCATION: A SYSTEMATIC LITERATURE REVIEW OF ITS MULTIDIMENSIONAL STRUCTURE (F202)
Julia Spuck, Joana Heil and Dirk Ifenthaler

13:00-14:15 Lunch Break

14:15-15:15 Session 25.5
Learning Paradigms in Academia
(Room: Eduardo Viana II)
Chair: Guðrún Rútsdótti

SCENARIO-BASED LEARNING AS A FRAMEWORK FOR COMBINING ADVANCED COMPUTING ENVIRONMENTS AND GENERATIVE AI IN MATHEMATICS EDUCATION FOR SECURITY AND DEFENCE (F188)
Alice Barana, Giulia Boetti, Cecilia Fissore, Marina Marchisio Conte and Fabio Roman
FROM ETHICAL DILEMMAS TO GAME DECISION GRAPHS: INTERDISCIPLINARY EXPLORATORY LEARNING WITH A SERIOUS MORAL GAME (F223)
Leon Freudenthaler and Andrea Horvath

14:15-15:15 Session 25.6
Educational Psychology
(Room: Almada Negreiros I)
Chair: Fazilet Karakuş

BREAKING OUT IN A COLD SWEAT: EXPLORING THE LINK BETWEEN ELECTRODERMAL ACTIVITY AND ACADEMIC PERFORMANCE USING MACHINE LEARNING (F051)
Aya Tounsi, Guilherme Medeiros Machado, François Bouchet, Aakash Soni, Faiza Belbachir and Thibault Carron
ANALYSIS OF ELEMENTARY SCHOOL STUDENTS' FACIAL EXPRESSIONS IN MATHEMATICS LEARNING USING VARIATIONS OF YOLO AND RESNET18 (F057)
Andi Hutami Endang, Amil Ahmad Ilham and Amiqatun Nasyati Yusri

15:30 – Social Event (meeting point at the hotel lobby)

Monday 26th, October 2026

09:00-13:15 Welcome Desk
(Room: Eduardo Viana IV)

09:30-11:00 Session 26.1
Cognition in Education
(Room: Eduardo Viana II)
Chair: Marisa Alena Holzapfel

BEYOND ROTE MEMORIZATION: SCALABLE VOICE-INTERACTIVE ORAL ASSESSMENT POWERED BY GENERATIVE AI IN ACOUSTICS EDUCATION (F226)
Mari Ueda, Shogo Kiryu, Masasumi Yoshizawa, Yasuhiro Iida and Tetsuo Tanaka
BEYOND LOCALIZATION: AN EDUCATIONAL ADAPTATION FRAMEWORK FOR PROGRAMMING LEARNING PLATFORMS (F228)
Tania Fernanda Ugarte Guzmán and Tom Schrijvers
PROMOTING CURIOSITY MAY MITIGATE THE IMPACT OF ANXIETY AND TECHNOSTRESS ON STUDENTS' QUANTITATIVE REASONING AND SELF-EFFICACY (F234)
Andra Geana, Juliette A. Bonchonsky, Julia Boydell and Sophia M. Maddaline

11:00-11:30 Coffee Break

11:30-13:00 Session 26.2
Technology, Learning and Expertise
(Room: Eduardo Viana II)
Chair: Tetsuo Tanaka

DESIGNING A TASK-BASED AI LITERACY LEARNING ENVIRONMENT WITH AI TOOLS (F041)
Sabine Seufert and Philipp Hartmann
SEMI-AUTOMATED CURRICULUM ALIGNMENT AUDITING VIA LLM TAGGING (F049)
Florian Sense, Sara A. Smith, Ian Dye, Michael Collins, Garrett Swan, Michael Krusmark, Tiffany Jastrzembski Myers and Leah Graham
STRUCTURAL CHALLENGES IN CROSS-PLATFORM STUDENT MODELING: EVIDENCE FROM DUTCH PRIMARY SCHOOL MATHEMATICS (F170)
Aysu Ismayilova, Johan Jeuring and Onuralp Ulusoy

13:00 Best Paper Awards Ceremony and Closing Session
(Room: Eduardo Viana II)

Profs. Demetrios G. Sampson and Pedro Isaias

You are invited to check the virtual presentations below.

Video Presentations
Online: Youtube

DESIGN THINKING IN ONLINE HIGHER EDUCATION OUTSIDE DESIGN DISCIPLINES: A SCOPING REVIEW OF PEDAGOGY, ASSESSMENT AND STUDENT COMPETENCIES (F026)
Zhwan Dalshad Abdullah, Bukhari Abdullah Rasool and Sardar Q. Othman
EXPLORATORY TECHNOLOGY AND CLINICAL EXPERTISE: DEVELOPING A VETERAN-CENTERED MOBILE APP REVIEW TOOL IN GRADUATE OCCUPATIONAL THERAPY EDUCATION (S054)
Lola Halperin, Shanshan Wang and Michael Frechette
FROM TECHNOLOGY TO EXPERTISE: PEDAGOGICAL GAPS IN BLOCKCHAIN EDUCATION (S117)
Ibolya Tomory and László Kelemen
BEYOND ACCESS: LEARNER-CENTRED PEDAGOGY, TEACHER EDUCATION AND HUMAN CAPITAL DEVELOPMENT IN EAST AFRICAN HIGHER EDUCATION (S124)
Ibolya Tomory
UNDERSTANDING RESPONSIBLE AI USE AMONG UNIVERSITY STUDENTS: AN EXTENDED TECHNOLOGY ACCEPTANCE MODEL INTEGRATING TRUST, EXPLAINABILITY AND FAIRNESS (F171)
Mónica Martínez-Gómez, Elena de la Poza Plaza and Elena Caballlero Romero
DESIGNING EXPLORATORY LEARNING WITH GENERATIVE AI: HUMAN–AI CO-CONSTRUCTION IN PRIMARY LITERACY (S179)
Panayiota H. Diakou and Charoula Angeli
DESIGN, IMPLEMENTATION AND EVALUATION OF A MATHEMATICS TEACHING SCENARIO USING WEB 2.0 TOOLS AND EDUCATIONAL ROBOTICS (F219)
Aikaterini Goltsiou and Chryssa Sofianopoulou
TEACHING ADAPTATIONS FOR STUDENTS WITH DISABILITIES IN HIGHER EDUCATION: AN ANALYSIS OF CURRENT PRACTICES AND RECOMMENDATIONS (F229)
Robertina Zdjelar, Violeta Vidaček-Hainš and Dijana Plantak Vukovac