

**16th International Conference on
Cognition and Exploratory Learning in Digital Age
CELDA 2019
Cagliari, Italy**

CONFERENCE PROGRAM

Thursday 7th, November 2019

08:15-19:40 Welcome Desk (closes for lunch – 13:10 to 14:20)

09:30-09:50 Session O – Opening Session
(Room: Aula Magna)

OPENING SESSION

Profs. Dirk Ifenthaler, Hans Weghorn, Maria Pietronilla Penna and Maria Lidia Mascia

10:00-11:00 Session KL – Keynote Presentation
(Room: Aula Magna)

“GAME LEARNING ANALYTICS FOR EVIDENCE-BASED SERIOUS GAMES”

Dr. Baltasar Fernández Manjón, Director of the e-learning Research Group e-UCM, Complutense University of Madrid (UCM), Spain

11:00-11:30 Coffee Break

11:30-13:00 Session FP 7.1

Collaborative Learning

(Room: Aula Magna)

Chair: Laura Francesca Scalas

USING COOPERATIVE TEACHING TECHNIQUES IN ENGINEERING COURSES. THE JIGSAW CASE (F182)

Maria-Cristina Marinescu and Jose L. Marzo

CYBERNETICS AND PRECURSORS OF PROMOTING CRITICAL THINKING - A WAY TO CHANGE THE SCHOOL (F198)

Teodora Surubaru and Dorin Isoc

EXAMINING LANGUAGE-AGNOSTIC METHODS OF AUTOMATIC CODING IN THE COMMUNITY OF INQUIRY FRAMEWORK (F234)

Yuta Taniguchi, Shin'ichi Konomi and Yoshiko Goda

11:30-13:20 Session FSP 7.2

Learning Communities & Web Service Technologies // Pedagogical Issues Related with Learning Objects

(Room: I)

Chair: Dirk Tempelaar

ADAPTIVE SMART TV AS A SOCIAL LANGUAGE LEARNING PLATFORM (F089)

María José Naranjo Sánchez, M^a Mercedes Rico García, Héctor Sánchez Santamaría and Jesús Salguero Serrat

UNIVERSITY TUTORING ACTIONS USING AN INTEGRATED ONLINE PLATFORM (F081)

Cecilia Fissore, Francesco Floris, Marina Marchisio and Sergio Rabellino

THE DEVELOPMENT OF STUDENTS' ALGORITHMIC COMPETENCE BY MEANS OF ELECTRONIC LEARNING RESOURCES (F069)

Evgenia V. Baranova, Irina V. Simonova, Mikhail I. Bocharov and Victoria V. Zabolotnaia

AN EXPLORATORY STUDY OF TRIAL AND ERROR IN THE DESIGN AND PRACTICE OF UNDERGRADUATE SEMINARS IN JAPAN (S181)

Wakako Fushikida

13:10-14:20 Lunch Break

14:30-16:20 Session FSP 7.3

Assessment of Exploratory Technologies

(Room: Aula Magna)

Chair: Jodie Freeman

TOWARDS GENERATING EXERCISE QUESTIONS WITH LOD FOR WEB-BASED INVESTIGATIVE LEARNING (F115)

Rei Saito, Yoshiki Sato, Miki Hagiwara, Koichi Ota and Akihiro Kashihara

EXPLORING THE TEACHING EXPERIENCES OF TEACHERS USING COMPUTER-BASED ASSESSMENTS WHEN TEACHING INTERACTIVE MULTIMEDIA CLASSES (F146)

Nafeth Al Hashlamoun and Lina Daouk

USING ACTOR NETWORK THEORY FOR DATA ANALYSIS (F152)

Suna Ryu

DESIGN OF WEB BASED DYNAMIC ASSESSMENT SYSTEM FOR SOLVING TWO SIGMA PROBLEM (S073)

Arif Tuluk, Muhittin Şahin and Halil Yurdugül

14:30-16:30 Session FP 7.4

Exploratory Technologies

(Room: I)

Chair: Patricia Brockmann

INVESTIGATING K-2 STUDENTS' COMPUTATIONAL THINKING SKILLS DURING A PROBLEM-SOLVING ACTIVITY ABOUT THE WATER CYCLE USING EDUCATIONAL ROBOTICS (F030)

Charoula Angeli, Eftychia Xerou and Maria Nicolaou

DEVELOPING PRESCHOOL CHILDREN'S COMPUTATIONAL THINKING WITH EDUCATIONAL ROBOTICS: THE ROLE OF COGNITIVE DIFFERENCES AND SCAFFOLDING (F059)

Kyriakoula Georgiou and Charoula Angeli

STUDENT PERCEPTIONS OF VIRTUAL REALITY IN HIGHER EDUCATION (F220)

Tebogo John Matome and Mmaki E. Jantjies

REGION-WISE PAGE DIFFICULTY ANALYSIS USING EYE MOVEMENTS (F178)

Tsubasa Minematsu

16:30-17:00 Coffee Break

17:00-19:30 Session FSP 7.5

Student-centered Learning

(Room: Aula Magna)

Chair: Josef Guggemos

PRESERVICE TEACHERS' ADOPTION OF A MAKERSPACE (F019)

Junko Yamamoto

DIGITIZATION OF THE STUDENT LIFE CYCLE TO PROMOTE UNDER-REPRESENTED GROUPS IN STEM SUBJECTS (F223)

Heidi Schuhbauer and Patricia Brockmann

INTEGRATED CONTEXTUAL LEARNING ENVIRONMENTS WITH SENSOR NETWORK FOR CROP CULTIVATION EDUCATION: CONCEPT AND DESIGN (F217)

Rin-Ichiro Taniguchi, Daisaku Arita, Atsushi Shimada, Masanori Yamada, Yoshiko Goda, Ryota Yamamoto and Takashi Okayasu

EVALUATION OF A MOBILE PEER-EVALUATION SYSTEM FOR IN-CLASS PRESENTATIONS (S032)

Peter Gobel and Makimi Kano

COMPLEX GAMIFICATION PLATFORM BASED ON MOODLE SYSTEM (S124)

Balázs Barna and Szabina Fodor

GOAL TREES AS STRUCTURING ELEMENT IN A DIGITAL DATA-DRIVEN STUDY ASSISTANT (S170)

Felix Weber

17:00-19:05 Session FSRP 7.6

Technology, Learning and Expertise // Life-long Learning

(Room: I)

Chair: Gail Drennan

USING DIGITAL STORIES TO EXPLORE FOUR FINAL-YEAR STUDENT'S COLLIDING WORLDVIEWS AND HOW THIS IMPACTED THEIR CLASSROOM PEDAGOGY (F102)

Janet Condy, Heather Phillips and Chantyclaire Tiba

DIVERSITY AS AN ADVANTAGE: AN ANALYSIS OF CAREER COMPETENCIES FOR IT STUDENTS (F226)

Patricia Brockmann, Heidi Schuhbauer and Annika Hinze

DIGITAL STORYTELLING: STUDENT VULNERABILITY DURING THE PROCESS AND ITS IMPACT ON TEACHING AND LEARNING ONE YEAR LATER (F103)

Heather N. Phillips, Janet Condy and Chantyclaire Tiba

LIFELONG SELF-DIRECTED LEARNING IN THE DIGITAL AGE: AN ORIENTATION OF CURRENT SOFTWARE TOOLS SUPPORTING EXPERTS IN MAINTAINING AND UPDATING THEIR KNOWLEDGE (S105)

Jodie Freeman, Andreas Raabe, Felix Schmitz and Sissel Guttormsen

EMBEDDING VIRTUAL REALITY INTO COMPETENCE RECOGNITION (R195)

Merja Drake

Friday 8th, November 2019

08:15-15:45 Welcome Desk (closes for lunch – 13:00 to 14:10)

08:50-11:00 Session FSP 8.1

Technology, Learning and Expertise // Other

(Room: Aula Magna)

Chair: Janet Condy

THE LEARNING DESIGN FOR MEDIATION TRAINING THROUGH ONLINE ENVIRONMENTS: GETTING TO THE FIFTH LANGUAGE SKILL (F091)

M^a Mercedes Rico Garcia, Laura V. Fielden Burns and María José Naranjo Sánchez

GOING BEYOND TECHNOLOGICAL AFFORDANCES - ASSESSING ORGANIZATIONAL AND SOCIO-INTERACTIONAL AFFORDANCES (F130)

Kirsi Lainema, Timo Lainema, Raija Hämäläinen and Kirsi Heinonen

AUTOMATIC ASSESSMENT TO ENHANCE ONLINE DICTIONARIES CONSULTATION SKILLS (F229)

Carla Marelllo, Marina Marchisio, Marta Pulvirenti and Cecilia Fissore

EDUCATION SYSTEM FOR ELECTRONIC CIRCUIT CONSTRUCTION INVOLVING SOLDERING ON A CIRCUIT BOARD (S215)

Atsushi Takemura

BENEFITS AND RISKS OF ICTS AND THEIR APPLICATIONS: AN ATTEMPT TO ANALYZE FREE DESCRIPTIVE ANSWERS (S157)

Yukiko Maruyama

08:50-11:00 Session FSP 8.2

Educational Psychology // Other

(Room: Room I)

Chair: Kazuhisa Miwa

THE WEIGHT OF EXPECTANCY-VALUE AND ACHIEVEMENT GOALS ON SCIENTIFIC CAREER INTEREST AND MATH ACHIEVEMENT (F037)

Laura Francesca Scalas and Daniela Fadda

THE RELATION BETWEEN SELF-DISCLOSURE OF STUDENTS TO THEIR PARENTS AND MATHEMATICS SCORE IN COMPUTER-BASED NATIONAL EXAM (UNBK) (F126)

Moch Abduh, Bagus Hary Prakoso, Dian Rahdiani and Jaka Warsihna

SOFTWARE FACTORY PROJECT FOR ENHANCEMENT OF STUDENT EXPERIENTIAL LEARNING (F093)

Muhammad Ovais Ahmad and Kari Liukkunen

NUMERACY SKILLS EMPOWERMENT FROM PRESCHOOL (S192)

Maria Lidia Mascia, Maria Chiara Fastame, Mirian Agus and Maria Pietronilla Penna

MENTORING: A FOCUS ON ETHNIC IDENTITY DEVELOPMENT AMONG AFRICAN AMERICAN MALE COLLEGE FRESHMEN IN THE DIGITAL AGE (S209)

John W. Hatcher III

11:00-11:30 Coffee Break

11:30-13:00 Session FP 8.3

Assessment of Exploratory Learning Approaches

(Room: Aula Magna)

Chair: Merja Drake

EXPLORING THE EFFECTS OF STRUCTURAL TRANSPARENCY AND EXPLORATORY GUIDANCE IN SIMULATION-BASED LEARNING ENVIRONMENTS (F017)

Carlos Capelo and Ana Lorga

USING KAHOOT TO IMPROVE STUDENTS' ACHIEVEMENT AND CRITICAL THINKING IN UNDERGRADUATE OF PSYCHOLOGY STUDENTS (F113)

Jaka Warsihna, Zulmi Ramdani and Bagus Hary Prakoso

BECOMING STORYTELLERS: IMPROVING ESL STUDENTS' ACADEMIC ENGAGEMENT AND 21ST CENTURY SKILLS THROUGH INTERACTIVE DIGITAL STORYTELLING (F173)

Annalisa Raffone and Johanna Monti

11:30-13:10 Session FSP 8.4
Technology and Mental Models
(Room: Room I)
Chair: Bagus Hary Prakoso

LEARNING ENGAGEMENT, LEARNING OUTCOMES AND LEARNING GAINS: LESSONS FROM LA (F022)
Dirk Tempelaar, Bart Rienties and Quan Nguyen
VISUAL MODELING FOR EXPLORATORY PROBLEM SOLVING ON COMPUTER SCIENCE LESSONS (F046)
Sergei A. Kostousov and Irina V. Simonova
DIGITAL ETHNICITY – EMERGING PROFILES (S132)
Nan B. Adams and Thomas A. DeVaney
MIRELE: A MIXED-REALITY SYSTEM FOR LEARNING A TASK DOMAIN (S149)
Zardosht Hodaie, Sajjad Taheri and Bernd Brügge

13:00-14:10 Lunch Break

14:30-15:20 Session 8.5
Educational Psychology // Cognition In Education
(Room: Aula Magna)
Chair: Nan Adams

INTERACTION EFFECTS OF TEACHERS' EDUCATIONAL POLICY AND STUDENTS' LEARNING GOAL ORIENTATION ON STUDENTS' LEARNING-AS-DUTY CONCEPTION (F158)
Mai Yokoyama and Kazuhisa Miwa
EXAMINING THE IMPACT OF ONLINE CASE-BASED DISCUSSIONS ON STUDENTS' PERCEIVED COGNITIVE PRESENCE, LEARNING AND SATISFACTION (S078)
Ayesha Sadaf and Stella Kim

15:45 – Social Event - Conference Tour and Dinner

Saturday 9th, November 2019

08:10-13:15 Welcome Desk

08:40-11:00 Session FSP 9.1
Technology, Learning and Expertise
(Room: Aula Capitini)
Chair: Timo Lainema

VALUE ADDED TEACHERS: THE LEGACY OF EDUCATIONAL TECHNOLOGY COACHES (F072)
Gail Drennan
A SMARTPHONE GAME TO PROMOTE SELF-LEARNING IN CHEMISTRY (F236)
Krittiya Saksrisathaporn and Patcharaphon Sribunthankul
K-TIPS: KNOWLEDGE EXTENSION BASED ON TAILOR-MADE INFORMATION PROVISION SYSTEM (F159)
Keita Nakayama, Atsushi Shimada, Tsubasa Minematsu, Yuta Taniguchi and Rin-Ichiro Taniguchi
CLUSTERING OF LEARNERS BASED ON KNOWLEDGE MAPS (F179)
Akira Onoue, Atsushi Shimada, Tsubasa Minematsu and Rin-ichiro Taniguchi
A DISTRIBUTED CONTENT ADDRESSABLE NETWORK FOR OPEN EDUCATIONAL RESOURCES (S175)
Stephen Downes

09:15-11:00 Session FP 9.2

Collaborative Learning

(Room: 8A)

Chair: John Hatcher III

OPEN DISTANCE LEARNING AND IMMERSIVE TECHNOLOGIES: A LITERATURE ANALYSIS (F221)

Afika Ntaba and Mmaki Jantjies

WHAT PREDICTS CHEATING AMONG STUDENTS? A CROSS CULTURAL COMPARISON BETWEEN ONLINE AND FACE-TO-FACE COURSES (F067)

Yovav Eshet, Yehuda Peled, Keren Grinautski and Casimir Barczyk

COLLABORATIVE LEARNING: COLLEGIATE PEDAGOGY UTILIZING WEB CONFERENCING (F085)

Joan Ann Swanson, Susan L. Renes and Anthony T. Strange

NETWORK ANALYTICS OF COLLABORATIVE PROBLEM-SOLVING (F142)

Simon Kerrigan, Shihui Feng, Rupa Vuthaluru, Dirk Ifenthaler and David Gibson

11:00-11:30 Coffee Break

11:30-12:50 Session FSP 9.3

Cognition in Education

(Room: Aula Capitini)

Chair: Carlos Capelo

CHESS TRAINING EFFECT ON META-COGNITIVE PROCESSES AND ACADEMIC PERFORMANCE (F099)

Carla Meloni and Rachele Fanari

A UNIPOLAR CONCENTRATION OF ENGLISH AND THE MULTILINGUAL-SEMILINGUAL PARADOX (F123)

Fusa Katada

CASE STUDY OF TEACHER'S ON GOING COGNITION USING VR (S035)

Takashi Ikuta, Yasushi Gotoh and Wataru Uchiyama

11:30-13:00 Session FP 9.4

Assessing Progress of Learning in Complex Domains

(Room: 8A)

Chair: Maria Chiara Fastame

MEASURING COMPUTATIONAL THINKING – ADAPTING A PERFORMANCE TEST AND A SELF-ASSESSMENT INSTRUMENT FOR GERMAN-SPEAKING COUNTRIES (F063)

Josef Guggemos, Sabine Seufert and Marcos Román-González

VISUALIZATION OF LEARNING LOG OF WEB-BASED APPLICATION FOR UNDERSTANDING THE STRUCTURE OF GEOMETRIC PROOFS (F107)

Satomi Hamada and Masanori Yamada

DESIGN OF LEARNING ANALYTICS DASHBOARD SUPPORTING METACOGNITION (F110)

Li Chen, Min Lu, Yoshiko Goda and Masanori Yamada

13:00 Best Paper Awards Ceremony and Closing Session

(Room: 8A)

Profs. Dirk Ifenthaler, Maria Pietronilla Penna and Maria Lidia Mascia