

# 18th INTERNATIONAL CONFERENCE ON New Challenges for ITS During and After COVID



DAY 1  
29  
JUNE



10.00 – 10.30

## OPENING CEREMONY

10.30 – 12.15

### Session 1

#### Tools and Methods for Learning Sciences and Practices (I)

*Session Chair: Maiga Chang*

#### Comparative Evaluation of EduClust and its Transfer to a Virtual Reality Environment

*Johannes Fuchs and Matthias Kraus (F)*

#### Function Execution Log based Judgment System for Arduino Learning Practice

*Kangbok Seo and Woojin Lee (P)*

#### Cross-Cutting Support of Making and Explaining Decisions in Intelligent Tutoring Systems Using Cognitive Maps of Knowledge Diagnosis

*Uglev Viktor, Oleg Sychev and Tatiana Gavrilova (F)*

#### Covering Possible Reasoning Errors for Intelligent Tutoring Systems: Order of Expression Evaluation Case

*Yaroslav Kamennov, Oleg Sychev and Yulia Orlova (S)*

#### LORD: A Moodle Plug-in Helps to Find the Relations among Learning Objects

*Rita Kuo, Radomir Wasowski, Ted Krahn and Maiga Chang (S)*

12.15 – 12.30

## COFFEE BREAK

12.30 – 13.30

### Keynote 1

#### Data and Language-centric AI – Acad. Dan Tufis (Institute for Artificial Intelligence “Mihai Draganescu”, Romania)

*Session Chair: Stefan Trausan Matu*

13.30 – 14.30

## LUNCH

# 18th INTERNATIONAL CONFERENCE ON New Challenges for ITS During and After COVID



DAY 1  
29  
JUNE



14.30 - 17.00

## Session 2

### **Tutoring and Learning Systems: New Approaches, Frameworks, and Theories (I)**

*Session Chair: Christos Troussas*

#### **"See the Image in Different Contexts": Using Reverse Image Search to Support the Identification of Fake News in Instagram-like Social Media**

*Farbod Aprin, H. Ulrich Hoppe and Irene-Angelica Chounta (F)*

#### **Investigating Clues for Estimating Near-Future Collaborative Work Execution State based on Learners' Behavioural Data during Collaborative Learning**

*Yoshimasa Ohmoto, Shigen Shimojo, Junya Morita and Yugo Hayashi (P)*

#### **Equitable Access to Intelligent Tutoring Systems Through Paper-Digital Integration**

*Nirmal Patel, Mithilesh Thakkar, Bansri Rabadiya, Darshan Patel, Shrey Malvi, Aditya Sharma and Derek Lomas (S)*

#### **A Theory based Adaptive Pedagogical Agent in a Reading App for Primary Students - A User Study**

*Anna Riedmann, Philipp Schaper, Benedikt Jakob and Birgit Lugin (F)*

#### **Intelligent Tutor for Designing Function Interface in a Programming Language**

*Dmitrii Litovkin, Anton Anikin, Kirill Kulyukin and Oleg Sychev (S)*

#### **MEMORABLE: a Multi-playEr custoMisable seriOus game fRAMework cyBer-security Learning**

*Jingyun Wang, Ryan T. Hodgson and Alexandra Cristea (S)*

#### **Selfit v2 - Challenges Encountered in Building a Psychomotor Intelligent Tutoring System**

*Laurentiu-Marian Neagu, Eric Rigaud, Vincent Guarnieri, Mihai Dascalu and Sebastien Travadel (F)*

17.00 - 17.15

COFFEE BREAK

17.15 - 18.15

## Demo Session

*Session Chair: Mihai Dascalu*

18.30 - 20.00

RECEPTION



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# 18th INTERNATIONAL CONFERENCE ON New Challenges for ITS During and After COVID



DAY 2  
30  
JUNE



10.00 – 11.30

## Session 3

### **Algorithms for Prediction, Recommendation and Classification in Learning Systems (I)**

*Session Chair: Sabine Graf*

#### **Not Another Hardcoded Solution to the Student Dropout Prediction Problem: A Novel Approach using Genetic Algorithms for Feature Selection**

*Yixin Cheng, Bernardo Pereira Nunes and Rubén Manrique (F)*

#### **A Learning Analytics Approach to Build Learner Profiles within the Educational Game OMEGA+**

*Deepak C, Maiga Chang and Sabine Graf (S)*

#### **Design and Evaluation of a Competency-based Recommendation Process**

*Louis Sablayrolles, Marie Lefevre, Nathalie Guin and Julien Broisin (F)*

#### **A Classification Approach to Recognize On-Task Student's Behaviour for Context Aware Recommendations**

*Lisa Roux, Thierry Nodenot, Patrick Etcheverry, Pantxika Dagorret, Christophe Marquesuzaa and Philippe Lopisteguy (S)*

11.30 – 11.45

COFFEE BREAK

11.45 – 13.00

## Session 4

### **Algorithms for Prediction, Recommendation and Classification in Learning Systems (II)**

*Session Chair: Elvira Popescu*

#### **Identifying metacognitive processes using trace data in an open-ended problem-solving learning environment**

*Rumana Pathan, Daevesh Singh, Sahana Murthy and Ramkumar Rajendran (F)*

#### **Evaluating the Effect of Imperfect Data in Voice Emotion Recognition**

*Mahsa Aghajani, Hamdi Ben Abdessalem and Claude Frasson (P)*

#### **Application of 3D Human Pose Estimation for Behavioral Reproduction**

*Kodjine Dare, Hamdi Ben Abdessalem and Claude Frasson (P)*

#### **Double-layer controller for detecting learners' erroneous knowledge in database programming.**

*Christos Troussas, Akrivi Krouska and Cleo Sgouropoulou (S)*

13.00 – 14.00

LUNCH

# 18th INTERNATIONAL CONFERENCE ON New Challenges for ITS During and After COVID



DAY 2  
30 JUNE



14.00 – 16.10

## Session 5

### Tools and Methods for Learning Sciences and Practices (II)

*Session Chair: Tomasz Kapuscinski*

#### **DeepCode: An Annotated Set of Instructional Code Examples to Foster Deep Code Comprehension and Learning**

*Vasile Rus, Peter Brusilovsky, Lasang Jimba Tamang, Kamil Akhuseyinoglu and Scott Fleming (F)*

#### **A Hybrid Approach for Mitigating Learners' Rogue Review Behavior in Peer Assessment**

*Gabriel Badea and Elvira Popescu (F)*

#### **Comparing Alternative Approaches to Debriefing in a Tool to Support Peer-led Simulation-based Training**

*Sandra Katz, Patricia Albacete, John Gallagher, Pamela Jordan, Thomas Platt, Scott Silliman and Tiffany Yang (P)*

#### **Ontological Reference Model for Piloting Procedures**

*Marc-Antoine Courtemanche, Ange Tato and Roger Nkambou (S)*

#### **Towards Adaptive Coaching in Piloting Tasks: Learning pilots' behavioral profiles from flight data**

*Ange Tato, Roger Nkambou and Gabrielle Joyce Nana Tato (S)*

#### **Deep Knowledge Tracing on Skills with Small Datasets**

*Ange Tato and Roger Nkambou (F)*

16.10 – 16.25

COFFEE BREAK

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DAY 2  
30 JUNE



16.25 - 18.00

## Session 6

### **Tutoring and Learning Systems: New Approaches, Frameworks, and Theories (II)**

*Session Chair: Roger Nkambou*

#### **Effects of Guidance on Learning about Ill-defined Problems**

*Sungeun An, Emily Weigel and Ashok Goel (S)*

#### **Improving Program Matching to Automatically Repair Introductory Programs**

*Maheen Riaz Contractor and Carlos R. Rivero (F)*

#### **Gamification, User-Centered Design and Learning Objectives as the Basis for a Minigame-Based Cardiovascular Anatomy ITS**

*Reva Freedman, Virginia Naples, Ian Sullivan, Lucas Edwards and Dean LaBarbera (P)*

#### **iSTART-Early: Interactive Strategy Training for Early Readers**

*Panayiota Kendeou, Elly Orcutt, Tracy Arner, Tong Li, Renu Balyan, Reese Butterfuss, Micah Watanabe and Danielle McNamara (P)*

#### **Integrating Speech Technology into the iSTART-Early Intelligent Tutoring System**

*Renu Balyan, Tracy Arner, Tong Li, Ellen Orcutt, Reese Butterfuss, Panayiota Kendeou and Danielle McNamara (S)*

18.00 - 19.00

## Keynote 2

### **The Multiple Facets of Developing Intelligent Tutoring Systems – Prof. Danielle McNamara (Arizona State University, US)**

*Session Chair: Mihai Dascalu*

20.00 - 22.00

BANQUET



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# 18th INTERNATIONAL CONFERENCE ON New Challenges for ITS During and After COVID



DAY 3  
1 JULY



10.00 – 11.00

## Keynote 3

**Human-Centered Learning Analytics: Designing for balanced human and computational agency**  
**– Prof. Yannis Dimitriadis (University of Valladolid, Spain)**

*Session Chair: Claude Frasson*

11.00 – 11.15

COFFEE BREAK

11.15 – 12.40

## Session 7

**Algorithms for Prediction, Recommendation and Classification in Learning Systems (III)**

*Session Chair: Scott Crossley*

**Automated Classification of Argumentative Components in Students' Essays**

*Qian Wan, Scott Crossley and Yu Tian (F)*

**Handshape Recognition in an Educational Game for Finger Alphabet Practicing**

*Tomasz Kapuscinski (F)*

**Intervention Prediction in MOOCs based on Learners' Comments: A Temporal Multi-Input Approach Using Deep Learning and Transformer Models**

*Laila Alrajhi, Ahmed Alamri and Alexandra Cristea (S)*

**Evaluation Test Generation Model using Degrees of Difficulty and Keywords**

*Doru Anastasiu Popescu and Mariana Madalina Nastase (P)*

12.40 – 13.00

CLOSING CEREMONY



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