

ICL2025

Innovation via Collaborative Learning in Engineering Education

28th International Conference on Interactive Collaborative Learning

54th IGIP International Conference on Engineering Pedagogy

01-03 October 2025, Budapest, Hungary



Session Overview

Date: Tuesday, 30/Sept/2025

9:00am	Registration opens	
	Location: Conference Lobby (by the hall) - Budapest, Műgyetem rkp. 3 (Main entrance to the building, from the Danube side)	+
9:00am	Workshop 1	+
-	Location: WS Room A - 1st floor, Room No. 41 (Library)	
11:00am	Chair: Attila Buzási , Budapest University of Technology and Economics	
	Challenges and Opportunities in Teaching Sustainability Competencies	
	Attila Buzási Budapest University of Technology and Economics, Hungary	
1:00pm	Workshop 2	+
-	Location: WS Room A - 1st floor, Room No. 41 (Library)	
3:00pm	Enhancing Your Engineering Curriculum for Problem-Based Offerings Using AI	
	Seyedeh Marjan Alavi McMaster University, Canada	
3:00pm	Coffee/Tea Break	+
-	Location: Coffee Room - 1st floor, corridor	
3:30pm		
3:30pm	Workshop 3	+
-	Location: WS Room A - 1st floor, Room No. 41 (Library)	
6:00pm	Artificial Intelligence in Education – From Digital Assistants to Human-Centred Innovations	
	Eszter Bükki, Marcell Sebestyén, Helena Manojlovic Budapest University of Technology and Economics, Hungary	
	Generative AI in Education: Joint Course Design, Collaboration, and Mobility	
	Anne Uukkivi, Oksana Labanova TTK University of Applied Sciences, Estonia	
7:00pm	Welcome Reception	+
-	Location: Welcome Rec. Room (Main Hall) - Budapest, Műgyetem rkp. 3 (Main entrance to the building, from the Danube side)	
8:00pm	Welcome speech: János Levendovszky, Vice-Rector for Research and Innovation, Budapest University of Technology and Economics	

Date: Wednesday, 01/Oct/2025

9:00am	Registration opens	
	Location: Conference Lobby (by the hall) - Budapest, Műgyetem rkp. 3 (Main entrance to the building, from the Danube side)	+
10:30am	P 1A: Entrepreneurship in Engineering Education	
12:00pm	Location: Parallel A - 1st floor, Room No. 41 (Library)	+
	Chair: Jürgen Jantschgi , Madritsch, FH Kärnten	
	P 1B: Virtual Laboratories and Makerspaces	+
	Location: Parallel B - 1st floor, Room No. 97 (Academic staff's club)	
	Chair: Christian	
	P 1C: To the Roots of Engineering Pedagogy I	+
	Location: Parallel C - 1st floor, Room No. 95 (Eszter Pecsí room)	
	Chair: Katalin Kanczné Nagy , Hungary	
	P 1E: AI and its Use in Education and Training II	+
	Location: Remote E - in Teams and in Room No. 96 (1st floor)	
	External Resource for This Session	
	P 1F: AI and its Use in Education and Training III	+
	Location: Remote F - in Teams and Room No. 2. (Library; Ground floor)	
	External Resource for This Session	
	Teaching Chemistry to	

HTL Wolfsberg

Fostering An Entrepreneurial Mindset Early-on in Biomedical Engineering Students through CAD Project Activities

Rucha Joshi¹, Sujoy Ghosh², Grace Jeng², Saivageethi Nuthikattu², Jacob Roshgadol², Alexander Simileysky², Nhi Trinh², Ridhima Jain³, Divya Monga¹
1: Plaksha University, Punjab, India; 2: University of California Davis CA, USA; 3: KPMG, New Delhi, India

Engineering Excellence for the Mobility Value Chain: A Competence-based Approach to Foster the Engineering Education of the Future

Manuel Woschank¹, Corina Pacher¹, Bernd M. Zunk², **Jürgen Jantschgi³**, Nadine Olipp¹, Volker Koch²
1: Montanuniversität Leoben, Austria; 2: Graz University of Technology, Austria; 3: Higher Technical College Wolfseberg, Austria

Building a Small-Scale Innovation Ecosystem in Higher Education based on Social Entrepreneurship in Rural Communities

Sara Blanc, Maria del Rosario Perelló, Lorena Bort, JoséLuis Poza
UNIVERSITAT POLITÈCNICA DE VALÈNCIA, Spain

Supporting Teaching and Learning in Green Entrepreneurship with Generative Artificial Intelligence

Adina Cocu, Catalin Anghel, **Emilia Pecheanu**, Ioan Susnea, Adrian Istrate
University "Dunarea de Jos" of Galati - Romania, Romania

Innovative Opportunities and Solutions for Developing Core Skills and STEM Competencies in Higher Education

György Molnár¹, Enikő Nagy¹, Beáta Orosz¹, Éva Karl²
1: Óbuda University; 2: Széchenyi University

Designing a Training of Trainers Framework for Female University Makerspaces using the ADDIE Model

Marwa Ben Ali, Erwin Rauch
Free University of Bozen - Bolzano, Italy

Integration of Interactive and Collaborative Elements with Focus on AI in Learning Processes Using Robotics and Cyber-Physical Systems

Andrea Dederichs-Koch¹, **Natali Becker²**, **Sophie Charlotte Keunecke³**
1: FOM University of Applied Sciences, Herkulesstraße 32, 45127, Essen, Germany; 2: University of Siegen, Chair for Technical Vocational Didactics, Breite Str. 11, 57076, Siegen, Germany; 3: RWTH Aachen University, Institute of Mechanism Theory, Machine Dynamics and Robotics, Eilfschornsteinstraße 18, 52062, Aachen, Germany

Development And Implementation Of A Digital Twin For Engineering Education

Pierre Hohenberger, **Christian Madritsch**, **Alexander Berndt**
Carinthia University of Applied Sciences, Austria

Ethiopian-Djibouti – Females At Makerspaces – Overview Of Challenges For Female Makers In Thematic Makerspaces

Alexander Berndt¹, **Hana Getachew²**, **Ubah Adem²**, **Pierre Hohenberger¹**, **Bezawit Lema⁴**, **Abdulwahab Abe⁵**, **Mohammed Habtamu⁶**, **Ayantu Mekonnen⁷**, **Amina Said Chire⁸**, **Marwa Ben Ali³**, **Christian Madritsch¹**
1: FH Kärnten gemeinnützige Gesellschaft mbH, Austria; 2: Dire Dawa University; 3: Freie Universität Bozen; 4: Arsi University; 5: Samara University; 6: Wollo University; 7: Wollega University; 8: University of Djibouti

University Students by Using an Unconventional Method

Tünde Tóth
Budapest University of Technology and Economics, Hungary

Challenges and Opportunities for Modern ICT-Based Pedagogical Communication Between Teachers and Students in Vocational Secondary Schools

Petr Adamec¹, **Bronislava Beránková²**, **Roman Hrmo³**, **Lucia Křištofiková³**
1: Mendel University in Brno, Czech Republic; 2: DTI University, Slovakia; 3: Czech University of Life Sciences Prague, Czech Republic

Development of Key Competences Of Pupils In The Subject Of Work Activities In Basic Schools In Czech Republic

István Szóköl¹, **Daniel Kučerka²**, **Čestmír Serafin²**, **Michal Mrazek²**, **Norbert Beták³**
1: Trnava University, Faculty of Education, Slovak Republic; 2: Palacky University Olomouc, Czech Republic; 3: Constantine the Philosopher University in Nitra

Institutional Change And Learning Culture - Methodological Analysis Of Life Skills Pedagogical Programs In Europe

Beatrix Faragó¹, **Beáta Dobay²**, **István Szóköl³**
1: University of Sopron Alexandre Lamfalussy Faculty of Economics Research Centre, Sopron, Hungary; 2: University of Sopron Benedek Elek Faculty of Pedagogy Institute of Art and Sport Sciences, Sopron, Hungary; 3: Trnava University in Trnava, Faculty of Education, Slovak Republic

Correlations Of Physical Fitness And Physical Endowments Among 14–18-Year-Old Youngsters

Szuzsa Nagy¹, **Szilvia Szőke²**, **Sándor Kovács²**, **Éva Bába Bácsné³**, **Kinga Ráthonyi-Odor³**, **Ráthonyi Gergely Gábor³**, **Anetta Müller³**, **Elena Bendiková⁴**
1: Doctoral School of Humanities, University of Debrecen, Debrecen, Hungary; 2: Institute of Research Methodology and

Chair: **Helena Manojlovic**, Budapest University of Technology and Economics (BME)

Using Machine Learning and Non-Intellectual Factors to Predict Academic Performance of Engineering Students

Barend Jacobus Van Wyk, Henry Mason
Tshwane University of Technology, South Africa

Enhancing Learning Management Systems With AI: A Student-Centered Evaluation

Ibrahim Nezir, **Agon Memeti**, **Naser Ramadani**
University of Tetova, North Macedonia, Republic of North Macedonia

Predicting Performance, Risking Fairness: The Ethical Dilemma of Educational Analytics

Prerna Thapliyal, **Dr. Ing. Stefania Zourlidou**, **Prof. Dr. Frank Hopfgartner**
University of Koblenz, Germany

Integrating a Chatbot in a Collaborative Learning Scenario: A Pedagogical Approach in Hybrid Contexts

Hiba Gharbaoui^{1,2}, **Soudah Ahriz¹**, **Khalifa Mansouri¹**, **Franck Poirier²**

1: University Hassan II of Casablanca (ENSET Mohammedia), Casablanca, Morocco; 2: Brittany South University, Vannes, France

From Internship to Innovation: University-Industry Collaboration and Makerspace Integration in Arsi University, Ethiopia

Bezawit Lema Abera³, **Hana Getachew Addis²**, **Marwa Ben Ali⁴**, **Pierre Hohenberger¹**, **Christian Madritsch¹**
1: Carinthia University of Applied Sciences, Austria; 2: Dire Dawa University ET, Ethiopia; 3: Arsi University ET, Ethiopia; 4: Free University of Bolzano, Bolzano, Italy

School Gardens as a Background for Project Education

Chair: **James Wolfer**, Indiana University South Bend

Enhancing XR Platform Performance, Security, and Scalability with a Microservices Architecture

Ionut Alexandru Oprea, **Vladut Gabriel Anghel**, **Bogdan Valentin Floricescu**, **Ioana Corina Bogdan**, **Gabriel Danciu**, **Rebecca Acheampong**, **Alexandre Rekeraho**, **George Stefan Ionescu**, **Cristian Nicolae Carcaleteanu**, **Andrei Parv**
Transilvania University of Brasov, Romania

Implementation of a Smart Location System using Wi-Fi Triangulation and ESP 8266 Microcontroller

Ioana Ciurescu, **Ioana Corina Bogdan**, **Alexandru Chis**, **Titus Balan**
Transilvania University of Brasov, Romania

AI Integration into Student-Centred E-Learning without Losing Subject Integrity

Tetyana Sergeyeva¹, **Sergiy Bronin²**
1: National Technical University "Kharkiv Polytechnic Institute"; 2: Taras Shevchenko National University of Kyiv, Ukraine

Learning Error Evolution Matrix (LEEM)

Simona Mihaela Bibic^{2,4}, **Ioana Corina Bogdan^{3,4}**, **Giulia Maria Gheorghiu^{1,4}**, **Ana-Maria Marin^{1,4}**
1: Faculty of Electrical Engineering, National University of Science and Technology POLITEHNICA Bucharest, Romania; 2: Department of Applied Mathematics, National University of Science and Technology POLITEHNICA Bucharest, Romania; 3: Faculty of Electrical Engineering and Computer Science Transilvania University of Brasov, Romania; 4: Center for Research and Training in Innovative Techniques of Applied Mathematics in Engineering, National University of Science and Technology POLITEHNICA Bucharest, Romania

**Technology
Entrepreneurship:
Getting Engineering
Students to Take a
Leap of Faith**

**Vivian Peuker-
Steinhäuser¹, Mario
Wolf², Detlef Gerhard²,
Stefanie Bröring¹**

1: Entrepreneurship and
Innovative Business
Models, Ruhr University
Bochum, Germany; 2:
Digital Engineering Chair,
Ruhr University Bochum,
Germany

Statistics, Faculty of
Economics and Business,
University of Debrecen,
Hungary; 3: Institute of
Sports Economics and
Management, Faculty of
Economics and Business,
University of Debrecen,
Debrecen, Hungary; 4:
Faculty of Education CU,
Ružomberok, Slovak
Republic, FIEPS, World
Leisure Organization

**Tünde Juriková,
Ladislav Szekeres, Eva
Lehotáková**
Constantine the
Philosopher University in
Nitra - Faculty of Central-
European Studies, Slovak
Republic

**An AI-Enhanced
Framework for
Learning through
Visualisation,
Narrative Context,
and Information
Literacy**

**Simona Mihaela
Bibic^{1,3}, Andrei-David
Ciocoiu^{2,3}, Radu-**

**Alexandru Păunescu^{2,3},
Claudiu-Andrei Dîrvă^{2,3}**

1: Department of Applied
Mathematics, National
University of Science and
Technology Politehnica
Bucharest, Romania; 2:
Faculty of Electrical
Engineering, National
University of Science and
Technology Politehnica
Bucharest, Romania; 3:
Center for Research and
Training in Innovative
Techniques of Applied
Mathematics in
Engineering, National
University of Science and
Technology Politehnica
Bucharest, Romania

12:00pm

Lunch Break

Location: **Lunch Room - 1st floor, corridor**



1:00pm

1:00pm

PS I: Opening Plenary Session I

Location: **Plenary Room - Ceremonial Hall**

Chair: **Michael E. Auer**, ICL Founder & General Chair



3:00pm

Opening Speeches

- **Tiia Rüttnann**, IGIP President
- **János Levendovszky**, Vice-rector for Research and Innovation, BME, Hungary
- **Peter Toth**, ICL2025 Chair

Greeting Addresses

- **Christi Patton Luks**, ASEE President
- **Balázs Nagy**, SEFI President
- **David Guralnick**, IELA President

Keynotes

Denis Gillet, Associate Professor at EPFL, Lausanne, Switzerland

- **From Learning to Thinking: Techno-Pedagogical Design and Open Educational Resources at the Age of AI**

3:00pm

-

4:30pm

**P 2A: AI and its Use in
Education and
Training I**



Location: **Parallel A - 1st
floor, Room No. 41
(Library)**

Chair: **Moses Njenga**,
Machakos University

**Navigating News and
Novels: TextMinR's
Visual AI for Austrian
Students**

**Alexandra Posekany¹,
Dominik Dolezal^{1,2},
Melissa Wallpach¹,
Simon Gao¹**

1: TGM, Austria; 2:
University of Vienna

**Work-in-Progress: AI
for Academic
Purposes at a
Kenyan University**

Moses Njenga
Machakos University,
Kenya

**Pedagogical
Integration of**

**P 2B: Games in
Engineering
Education**



Location: **Parallel B - 1st
floor, Room No. 97
(Academic staff's club)**

Chair: **Uriel Ruben
Cukierman**, UTN

**Advancing Game-
Based Learning in
Engineering
Education:
Integrating
Dashboards, AI-
Coaching, and
Competition**

**Caroline Dick, Vanessa
Mai, Valerie Varney, Anja
Richert**
TH Köln/University of
Applied Sciences,
Germany

**Immersion and
Motivation in Games:
Linking Immersion
Tendency
Questionnaire
Factors with Bartle's
Player Types**

**P 2C: Real-World
Experiences I**



Location: **Parallel C - 1st
floor, Room No. 95 (Eszter
Pecsi room)**

Chair: **Doru Ursutiu**,
"TRANSILVANIA" University
- AOSR

**Blended Learning and
Mixed Reality for
Cross-Company
Apprentice Training in
Scaffolding
Construction**

**Mario Wolf¹, Benjamin
Weber², Detlef Gerhard¹**

1: Digital Engineering Chair,
Ruhr University Bochum,
Germany; 2: XRbit gUG,
Dortmund, Germany

**Energy Harvesting
Systems for Indoor
Applications**

Doru Ursutiu^{1,2}, Mohamed

Khames¹, Cornel

Samoila^{1,3}, Horia

Alexandru Modran¹

1: Transilvania University,

**P 2D: Engineering
Pedagogy Education I**



Location: **Parallel D - 1st
Plenary room,
Ceremonial Hall**

Chair: **Andreas Probst**,
HTL Wels

**Benefits of Informed
Decision-Makings
About Competencies
and Competence
Systems**

Tiia Rüttnann¹, Urve

Läänemets², Kadi Kaja²
1: Tallinn University of
Technology, Estonia; 2:
Estonian Academy of
Music and Theatre

**Teaching
Entrepreneurial
Competencies with
Planning for the
Implementation of
the Learning Process
in Engineering
Curricula at Tallinn
University of Applied
Sciences**

Kati Kukk, Sigrid Ruul,

**P 2E: Collaborative
Learning I**



Location: **Remote E - in
Teams and in Room No.
96 (1st floor)**

Chair: **External Resource for
This Session**

Tatiana Polyakova,
Moscow Automobile and
Road Construction State
Technical University
(MADI)

**Agile Co-
Development of
Learning Resources
in Open Communities
of Practice**

**Chowdhury Abida
Anjum Era¹, Syed**

**Muhammad Haider Ali
Sherazi¹, Tazeen Zahra**

**Kazmi¹, Maria Saleem¹,
Nargiza Mikhridinova^{1,2}**

1: Fachhochschule
Dortmund, Otto-Hahn-Str.
23, 44227 Dortmund,
Germany; 2: KU Leuven,
Belgium

**P 2F: Digital
Transition in
Education I**



Location: **Remote F - in
Teams and Room No. 2.
(Library; Ground floor)**

Chair: **External Resource for
This Session**

**Oleksandr
Kupriyanov**, V. N. Karazin
Kharkiv National University

**Exploring Barriers
and Bridges: Insights
into Student Success
in the Science and
Engineering
Education Transition**

Sherif Welsen
The University Of
Nottingham Ningbo
China, China, People's
Republic of

**Towards a Universal
Design of Learning:
ICT as a path to
inclusive education**
**Mounia Machkour,
Latifa Lamalif, Sophia**

Artificial Intelligence (AI) in Higher Education: Teaching Practices and Challenges, a Case Study for Mexico and Latin America

Genny Villa¹, Cynthia Lizeth González-Trevizo², Zahira Gabriela Cruz-Netro², Mayela García-Rodríguez², Patricia Vázquez Villegas²
1: Université de Montreal;
2: Tecnológico de Monterrey, Mexico

AI-Tools AI tools Integration in ESP: A Comparative Study of Adoption at Universities in Visegrad Group (V4)
Olga Kissova, Jiri Tengler
University Zilina, Univerzitna 8215/1, Slovakia

Evaluation of Translation Errors with Generative Artificial Intelligence in a Low-Resource Language
Lucia Benkova, Lubomir Benko
Constantine the Philosopher University in Nitra, Slovak Republic

Ján Skalka, Matúš Valko, Mária Pappová
Constantine the Philosopher University in Nitra, Slovak Republic

Beyond the Wow Effect: Prior Experience as a Predictor of VR User Acceptance
Ján Skalka, Matúš Valko
Constantine the Philosopher University in Nitra, Slovak Republic

Integrating Gamification in LMS-Based STEM Education: An Adaptive Implementation Approach

Adina Cocu¹, Emilia Pecheanu¹, Ioan Susnea¹, Ramon Vilanova Arbos², Maria João Varanda Pereira³, Sandra Dingli⁴, Sándor Mihalache⁵
1: University "Dunarea de Jos" of Galati, Romania; 2: Universitat Autònoma de Barcelona, Bellaterra, Spain; 3: Instituto Politécnico de Bragança, Portugal; 4: University of Malta; 5: Petroleum-Gas University of Ploiești, Romania

Teaching Software Engineering Complex Concepts through Agile Iterative, Game-Based Activity
Alejandro Adorjan
Universidad ORT Uruguay, Uruguay

Brasov, B-dul Eroilor 29, Romania; 2: Romanian Academy of Scientists AOSR, Bucharest, Str. Ilfov 3, Romania; 3: Technical Sciences Academy ASTR, Bucharest, B-dul Dacia 23, Romania

From Workplace Experience to Reflective Recognition: Higher Apprenticeship Students' Professional Competence Development

Souâd Zaouani-Denoux¹, Klara Kövesi²
1: Université Paul Valéry Montpellier 3, France; 2: ENSTA - Institut Polytechnique de Paris, France

Detection and Prevention of Inappropriate User Behaviour in Virtual Environments
Matúš Valko
Constantine the Philosopher University in Nitra, Slovak Republic

Hellika Semjonov
Tallinn University of Applied Sciences, Estonia

What Do We Actually Learn When We Learn? – A SoTL Approach To Capturing Future Skills In An Engineering Group Project Course
Alexandra Reher, Leona Brust, Doerthe Vieten, Iris Groß
University of Applied Sciences Bonn-Rhein-Sieg, Germany

Enhancing Postgraduate Engineering Students' Research Communication Skills in EAP Through Collaborative Practices
Tatjana Sinkus, Inese Ozola
Latvia University of Life Sciences and Technologies, Latvia

Young Austrian Engineers Contest - A Competition To Promote Students
Andreas Probst¹, Reinhard Bernsteiner², Wolfgang Pachatz³
1: HTL Wels, 4600 Wels, Austria; 2: MCI | The Entrepreneurial School, 6020 Innsbruck, Austria; 3: Federal Ministry of Education, 1010 Vienna, Austria

Exploring the Role of GitHub in Supporting Active Learning in Programming Teaching
Joaquín Cañadas, Antonio Becerra-Terón, Julio Barón, Francisco Guil-Reyes, Mercedes Martínez
Informatics Department, University of Almería, Spain

Design, Manufacturing and Testing a Torque Stand for Electric Motors in Power and Regenerative Modes
Lucian Balan, George Apostol, Dan Centea
McMaster University, Canada

Teaching English to Future Engineers: Tailoring English Course to Students Needs in EMI Environment
Irina Rednikova, Ruslan Saduov
Innopolis University, Russian Federation

Foreign Language Training for PhD Students: the Evaluation of Changes
Tatiana Polyakova
Moscow Automobile and Road Construction State Technical University (MADI), Russian Federation

Learning Style of Students in Vocational Education and Training
Peter Toth
Budapest University of Technology and Economics, Hungary

Faris, Khalifa Mansouri
ENEST MOHAMMEDIA, Maroc, Morocco

Development of Emotional Intelligence as an Important Component of Training Specialists in Higher Education Institutions in the Context of Digital Learning
Sofia Dembitska¹, Svitlana Nagornyak², Natalya Stavnychuk², Mariana Kovtoniuk², Natalia Vasazhenko³, Oksana Stoliarenko¹
1: Vinnytsia National Technical University, Ukraine; 2: Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine; 3: Vinnytsia Educational and Scientific Institute of Economics of the Western Ukrainian National University, Ukraine

Refactoring the Department's Website for Barrier-Free Education
Vitalii Ivaniuk¹, Maryna Miashtkovska², Sofia Dembitska³, Olha Kuzmenko⁴, Olena Smalko⁵, Olha Pinaieva⁶
1: Kamianets-Podilskyi Ivan Ohiienko National University, Ukraine; 2: Kamianets-Podilskyi Ivan Ohiienko National University, Ukraine; 3: Vinnytsia National Technical University, Ukraine; 4: Donetsk State University of Internal Affairs, Ukraine; 5: Kamianets-Podilskyi Ivan Ohiienko National University, Ukraine; 6: Vinnitsa State Pedagogical University named after Mikhail Kotsiubynsky, Ukraine

Empowering EFL Learners: Integrating Self-Regulated Learning and AI Tools to Boost Speaking Skills
Ximena Alexandra Calero Sánchez, Aslint Paulette Sarango Reyes, Lorena Parra-Gaviláñez, Lorena Monserrath Meléndez Escobar
Universidad Técnica de Ambato, Ecuador

How Unique and Accurate Is GenAI Generated Code In Introductory Programming?
Yehezkiel David Setiawan, Oscar Karnalim, Mewati Ayub Maranatha Christian



4:30pm
-
4:50pm
4:50pm
-
6:00pm

Coffee/Tea Break

Location: **Coffee Room - 1st floor, corridor**

P 3A: AI and Learning Analytics in Engineering Education I

Location: **Parallel A - 1st floor, Room No. 41 (Library)**

Chair: **Dr. Juergen Koeberlein-Kerler, PhD**, IBK Ingenieurbüro
Köberlein GmbH & Co KG

Different levels of Access to Artificial Intelligence (AI) – A Deep Dive into OpenAI and Deepseek

Juergen Koeberlein-Kerler¹, Tetiana

Bondarenko², Iryna

Shtemiller², Marina

Rostoka³, Yuliia

Fedorova⁴

1: IBK Ingenieurbüro Köberlein GmbH & Co KG, Germany; 2: V. N. Karazin Kharkiv National University, Ukraine; 3: V. Sukhomlynskyi State Scientific and Educational Library of Ukraine, National Academy of Educational Sciences of Ukraine; 4: Comenius University, Bratislava, Slovakia

Using Machine Learning Classification Algorithms and an Explainable AI Technique to Predict Student Learning Outcomes

Mohamed Samir Abou

El-Seoud¹, Hosam F. El-

Sofany², Abd Elrahman

H. El-Sofany¹

1: The British University in Egypt (BUE), Egypt; 2: King Khalid University, College of Computer Science, Abha, Kingdom of Saudi Arabia

Enhancing Synchronous Collaborative Learning with AI-Supported Audience Response Systems: The echoQuiz Approach

Benedikt Brünner, Martin Ebner

Graz University of Technology, Austria

The Emergence of Artificial Intelligence in Higher Education: A Catalyst for Shifting the Status Quo

Uriel Ruben Cukierman,

P 3B: Adaptive and Intuitive Environments

Location: **Parallel B - 1st floor, Room No. 97 (Academic staff's club)**

Chair: **Peter Pšenák**, Faculty of Management, Comenius University Bratislava

Supporting Tutors in Assessing Student Software Project Ideas with LLM-Based Pre-Assessments

Sebastian Gürtl¹,

Jonathan Maier¹, Daniel

Scharf¹, Marcus

Gugacs¹, Christian

Güttl¹, Alexander

Steinmaurer²

1: Graz University of Technology, Austria; 2: IT:U Interdisciplinary Transformation University Austria

Digital Transformation of Slovak Schools: The Role of Artificial Intelligence in Education from the Teachers' Perspective

Róbert Osad'án², Mária

Belešová², Ján

Záhorec¹, Ivan

Čavojský², Kamil

Kopecný³

1: Comenius University in Bratislava, Faculty of Education, Department of Didactics of Mathematics and Natural Sciences, Slovak Republic; 2: Comenius University in Bratislava, Faculty of Education, Department of Pre-Primary and Primary Education, Slovak Republic; 3: Palacký University Olomouc, Faculty of Education, Department of Czech Language and Literature

Optimization of a Teacher's Time Management Using Artificial Intelligence

Peter Pšenák¹, Ildikó

Pšenáková²

1: Comenius University Bratislava, Slovak Republic; 2: Trnava University, Slovak Republic

Gamification in Employer Branding: A New Era of Digital Candidate Engagement

Ana Kazaishvili¹, Nana

P 3C: Reimagining Engineering and Applied Curriculum for Transformation in Africa

Location: **Parallel C - 1st floor, Room No. 95 (Eszter Pecsí room)**

Chair: **Margareth Gfrerer**, Dire Dawa University
Chair: **Marwa Ben Ali**, Free University of Bozen · Bolzano

Exploring the Application of Virtual Reality through Agile Learning Approaches to Foster Sustainability in Building Design Education

Hana Getachew Addis¹,

Marwa Ben Ali², Nicole

Ondrusch³, Erwin Rauch²

1: Dire Dawa University, Dire Dawa, Ethiopia; 2: Free University of Bozen · Bolzano, Italy; 3: Heilbronn University, Heilbronn, Germany

Bloom's Taxonomy to Innovate Learning Objectives at Ethiopian University of Applied Sciences Study Programmes

Margareth Gfrerer

Kotebe University of Education, Ethiopia

Mapping Challenges and Pedagogical Practices in African Engineering Education: Findings from an Online Survey

Marwa Ben Ali¹, Margareth

Gfrerer², Erwin Rauch¹

1: Free University of Bozen · Bolzano, Italy; 2: Dire Dawa University, Dire Dawa, Ethiopia

Particularities in the Change of Education 4.0 to 5.0 in Engineering Study Programs at Universities of Applied Sciences

Ephrem Ephrem Tekle¹,

Margareth Gfrerer²

1: Kotebe University of Education, Ethiopia; 2: Dire Dawa University, Dire Dawa, Ethiopia

Extending the Pedagogical Lens: From Research-Based Learning to Hybrid Innovation Models

Maria Teresa Restivo¹,

Margareth Gfrerer², Susan

Zvacek³

P 3E: Engineering Pedagogy Education II

Location: **Remote E - in Teams and in Room No. 96 (1st floor)**

External Resource for This Session

Chair: **Olha Kuzmenko**, Donetsk State University of Internal Affairs

Experiment-based Learning and Teaching of Wind Turbine Electricity Generation for Electrical Engineering Education

Somsak Akatimagoor,

Nutchanat Chumchuen

King Mongkut's University of Technology North Bangkok, Thailand

Synergy of STEM Education and Digital Technologies: Creating an Intelligent ECO environment

Olha Kuzmenko¹, Sofia

Dembitska², Maryna

Miastkovska³, Iryna

Savchenko⁴, Valentyna

Demianenko⁵

1: Donetsk State University of Internal Affairs, Ukraine; 2: Vinnytsia National Technical University, Ukraine; 3: Kamianets-Podilskyi Ivan Ohienko National University, Ukraine; 4: National Centre «Junior Academy of Sciences of Ukraine», Ukraine; 5: National Centre «Junior Academy of Sciences of Ukraine», Ukraine

Management of Educational and Cognitive Activities in Distance Learning

Halyna Sazhko, Vitalii

Lukashov, Hanna

Mosiienko, Anatolii

Tarasenko

V.N. Karazin Kharkiv

National University,

Ukraine

Interactive Approaches to Applied Mathematical Education

Alexandru-Valentin

Avram¹, Ruxandra-

Mihaela Ceausu¹, Elena

Corina Cipu², Antonela

Toma³

1: Universitatea Națională de Știință și Tehnologie POLITEHNICA București,

Juan Maria Palmieri
UTN, Argentine Republic

An AI-supported Approach Model for Personalizing Learning Processes

Sebastian Junghans, Lukas Möller, Martin Trommer, Maximilian Schlachte, Tim Neumann
Westfälische Hochschule Zwickau, Germany

Gadeliya², Lia Khmiadashvili³

1: Caucasus International University, Georgia; 2: Caucasus International University, Georgia; 3: Georgian National University SEU, Georgia

Best Practices for Fostering Student Engagement in Online Higher Education: Strategies for Transformative Teaching

Dina Moloja, Elisha Markus
Central University of Technology, South Africa

1: University of Porto, Portugal; 2: MaDE for UASs Project, Kotebe University of Education, Ethiopia; 3: CollegeTeachingCoach.com, USA

Romania; 2: Applied Mathematics Department, (FSA & CITI) UPB; 3: Methods and Mathematical Models department, (FSA & CITI) UPB

Forming Fundraising Skills of Future Engineers-Teachers Computer Profile

Halyna Sazhko¹, Victoriya Shekhovtsova³, Hanna Mosiienko¹, Vitalii Lukashov¹, Eugen Sazhko⁴, Lina Fatieieva²
1: V.N. Karazin Kharkiv National University, Ukraine; 2: National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute», Ukraine; 3: Kharkiv National University of Radio Electronics; 4: Center of Foreign Languages

6:00pm **AGM: IGIP Annual General Meeting**
- Location: **Parallel B - 1st floor, Room No. 97 (Academic staff's club)**
7:00pm For IGIP members only.

Date: Thursday, 02/Oct/2025

8:00am	Registration opens Location: Conference Lobby (by the hall) - Budapest, Műegyetem rkp. 3 (Main entrance to the building, from the Danube side)					
8:30am - 10:00am	P 4A: AI in HE from a Pedagogical Perspective Location: Parallel A - 1st floor, Room No. 41 (Library) Chair: Peter Toth , Budapest University of Technology and Economics Artificial Intelligence as Teacher Assistant - Empowering VET Teachers with AI Helena Manojlovic¹, Eszter Bükki² 1: Budapest University of Technology and Economics (BME), Hungary; 2: Budapest University of Technology and Economics (BME), Hungary The Future of Intelligent Engineering and How AI Shapes the Profession Monika Pogátsnik Óbudai University, Hungary Artificial Intelligence as a Support for Social Science Research Katalin Kanczné Nagy², František	P 4B: Interactive and Collaborative Learning with focus on Artificial Intelligence and Innovative Technologies in Engineering Education Location: Parallel B - 1st floor, Room No. 97 (Academic staff's club) Chair: Ralph Dreher , University of Siegen Two Digital Games in One Platform for Collaborative Game-Based Learning in Engineering Mathematics Szilvia Szilágyi, Attila Körei, Zsuzsanna Török University of Miskolc, Hungary Systematic Introduction of Augmented Reality in Teaching: Development of an Implementation Model Daniel Winkler¹, Fabian Lindner^{1,2}, Kazimierz Przybysz¹, Sophia Keil¹	P 4C: Engineering Pedagogy Education III Location: Parallel C - 1st floor, Room No. 95 (Eszter Pecsí room) Chair: Rita Kattein-Pornói , Budapesti Műszaki és Gazdaságtudományi Egyetem Investigating the Effectiveness of Agile Scrum Teaching in Engineering E-courses Based on Student Satisfaction Vasiliki Karampa, Foteini Paraskeva University of Piraeus, Greece Preparation for a Teaching Career and the Teaching Career Profile of Graduate Students Zsófia-Irén Horváth, Erzsébet Szentes Sapientia Hungarian University of Transylvania, Romania Curricular and Content Shifts in Engineering Teacher Education at BME	P 4D: From Chalkboards to Chatbots: AI in Austrian Engineering Classrooms Location: Parallel D - Plenary room, Ceremonial Hall Chair: Alexandra Posekany , TGM Transformative Collaborative Learning in Engineering Education: An AI-Enhanced 2CG® Methodology Christina Merl TalkShop/2CG®, Poetry in Business, Austria The Helikon Engine: Driving Adaptive, Industry-Connected STEM Education with CLIL Alexandra Posekany¹, Claudia Bruckschwaiger², William Sprague² 1: TGM, Austria; 2: HTL Salzburg SustAInable Education: Student-Centered and AI-Enhanced Learning About Sustainability Dominik Dolezal^{1,2}, Benjamin Edlinger¹, Leo Mühlböck¹, Leander List¹, Kacper Bohaczky¹, Alexandra Posekany¹ 1: TGM - Vienna Institute of Technology, Austria; 2:	P 4E: Remote and Virtual Laboratories Location: Remote E - in Teams and in Room No. 96 (1st floor) External Resource for This Session Chair: Panarit Sethakul , KING MONGKUT'S UNIVERSITY OF TECHNOLOGY NORTH BANGKOK Training of Food Industry Engineering Teachers through the Principles of the Theory of Inventive Problem Solving Mykola Lazariev, Nataliia Ruban, Yuliia Bilotserkivska, Nataliia Korolova V. N. Karazin Kharkiv National University, Kharkiv, Ukraine Formation of Professionally Oriented Content of the Electrical Engineering Course for Students of Mechanical Engineering Specialties Hanna Mosiienko, Anatolii Tarasenko,	P 4F: Project Based Learning Location: Remote F - in Teams and Room No. 2. (Library; Ground floor) External Resource for This Session Chair: Peter Pšenák , Faculty of Management, Comenius University Bratislava Proposal for an Introductory Programming Module based on Project-Based Learning (PBL) Diego Gormaz-Lobos¹, Claudia Galarce-Miranda², Thomas Köhler³ 1: Universidad Autónoma de Chile, Santiago-Talca-Temuco, Chile; 2: Technische Universität Dresden, TUD FaCE, Dresden, Germany; 3: Technische Universität Dresden, CODIP Center, Dresden, Germany Introducing Object-Oriented Programming With BBC Micro:bit And Python: Designing And Evaluating A

Ribni¹ 1: ELTE Eötvös Lóránd University, Hungary; 2: Budapest University of Technology and Economics	1: University of Applied Sciences Zittau/Görlitz, Germany; 2: HTWD - University of Applied Sciences Dresden, Germany	in the Context of the Bologna Process (2005–2025) Rita Kattein-Pornói, Emese Berzsényi Budapesti Műszaki és Gazdaságtudományi Egyetem, Hungary	University of Vienna, Austria	Halyna Sazhko, Vitalii Lukashov V. N. Karazin Kharkiv National University, Ukraine	Hands-On Intervention For High School Students Aristidis Paliouras¹, Stavroula Misthou² 1: 3rd Laboratory Center Of East Attica, Greece; 2: GreekCodersK12 Coding Club, Athens, Greece
Integrating Artificial Intelligence in Technical Pedagogy: Teachers' Perspectives Timea Bekk¹, Monika Pogátsnik² 1: Óbuda University, Hungary; 2: Óbuda University, Hungary	Serious Game for Reading Assessment Ana Sucena^{1,2}, Ana Filipa Silva², Eliana Andrade², Catarina S. Marques², Cátia Marques² 1: Health School, Polytechnic Institute of Porto, Portugal; 2: Center for Research and Intervention in Reading, Polytechnic Institute of Porto, Portugal	Technology-Driven Pedagogy For Gifted Education: A Creative Problem Solving Approach To Training Future Engineering Educators Eleni Neofotistou, Foteini Paraskeva University of Piraeus, Greece	Projekt Helikon: Austria's AI-Enhanced CLIL Approach William Sprague HTBLuVA Salzburg, Austria	Design and Development of the Management Model and the Quality Training Manual of the IGIP Accredited Training Centre (IGIP-KMUTNB) of Thailand in Accordance with the International Standard. Panarit Sethakul¹, Somsak Akatimagool², Pichet Sriyanyong³, Sukanjana Lekapat⁴ 1: KING MONGKUT'S UNIVERSITY OF TECHNOLOGY NORTH BANGKOK, Thailand; 2: KING MONGKUT'S UNIVERSITY OF TECHNOLOGY NORTH BANGKOK, Thailand; 3: KING MONGKUT'S UNIVERSITY OF TECHNOLOGY NORTH BANGKOK, Thailand; 4: WELDING INSTITUTE OF THAILAND, KING MONGKUT'S UNIVERSITY OF TECHNOLOGY NORTH BANGKOK, Thailand	Fostering Collaborative Learning through Project-Based Experiences: Real-World Applications in Architectural Education Claudia Maria Taracena Parada Universidad San Pablo de Guatemala, Guatemala
Examining Technological Readiness among Engineering Students Peter Toth^{1,2}, Kinga Horvath² 1: Budapest University of Technology and Economics, Hungary; 2: J. Selye University, Slovakia	Can AI Create Learning Situations That Enable Holistic Competence Development? Ralph Dreher, Tiana Christin Hoogstraten Universität Siegen, Germany	Enhancing Engineering Education Through Experimental Mechanics: A Wheatstone Bridge-Based Teaching Tool András Kakucs, Katalin Harangus Sapientia Hungarian University of Transylvania, Romania	Prompting.School: A Design-Based Research Approach to Teaching AI Literacy through Guided Prompt Engineering Practice Benedikt Brünner, Irfan Jahic, Martin Ebner Graz University of Technology, Austria	Gamification for Learning at the Intersection of Subject Areas Anzhelika Parkhomenko^{1,2}, Artem Tulenkov¹, Mykyta Verkhovetskyi¹, Carsten Wolff², Illia Gladkova¹, Andriy Parkhomenko¹ 1: National University "Zaporizhzhia Polytechnic", Ukraine; 2: Dortmund University of Applied Sciences and Arts, Germany	
Interactive Learning Processes Supported by a Digital Collaboration Environment Andrea Dederichs-Koch¹, Natali Becker², Michael Spitzhirm³ 1: FOM University of Applied Sciences, Germany; 2: University of Siegen, Germany; 3: imk Industrial Intelligence GmbH, Germany	Equality, Diversity and Inclusion in Engineering Education – Intercultural Competence for Engineering Students K. Kathy Meyer-Ross¹, Andreas Franze¹, Daniel Winkler² 1: HTWD – University of Applied Sciences; 2: University of Applied Sciences Zittau/Görlitz, Germany		Integrating Ambidextrous Innovation Management and Virtual Learning Factories in Manufacturing SMEs: A Structured Literature Review Jan-Philipp Rammo¹, Chiara Nezzi², Caroline Colsman¹, Erwin Rauch² 1: Technical University of Munich, Germany; 2: Free University of Bozen-Bolzano	Combining Real-Time and Ultra-Concurrent Remote Labs: A Hybrid, Multi-Activity Remote Lab for Street Lighting Boris Pedraza, Alex Villazón, Omar Ormachea, Alfredo Meneses Universidad Privada Boliviana, Bolivia, Plurinational State of	Toward the Design of Mathematics Courses for Computer Game Developers Olga Maksimenkova, Sergey Lebedev, Denis Pozdnyakov HSE, Russian Federation

Assistant:
Intelligent
Tutoring Systems
and Adaptive
Feedback
Mechanisms in
Engineering
Education
Santosh Kumar
HCLTech, USA,
United States of
America

10:00am -	Coffee/Tea Break Location: Coffee Room - 1st floor, corridor						+
10:30am -	PS II: Plenary Session II Location: Plenary Room - Ceremonial Hall Chair: Tiia Rütümann , Tallinn University of Technology Keynotes <u>Michael K. J. Milligan</u> , ABET Executive Director and CEO, USA Continuous Pursuit of Knowledge and Skills in Engineering Education <u>Balázs Vince Nagy</u> , President of SEFI, BME, Budapest, Hungary SEFI – The European platform for engineering education, current challenges and opportunities Presentation and Invitation to ICL2026 in Cologne, Germany						+
12:00pm -	Lunch Break Location: Lunch Room - 1st floor, corridor						+
1:00pm -	P 5A: Collaborative Learning in Digital Environments + Location: Parallel A - 1st floor, Room No. 41 (Library) Chair: Vanessa Tudor , University of Vienna A Research Agenda for Learner Models for Adaptive Educational Digital Learning Environments <u>Felix Böck</u> Coburg University of Applied Sciences and Arts, Germany Practicing Modern STEM Teaching Techniques in College and in High School – a Comparison <u>Eran Gur</u> Azrieli College of Engineering, Israel Coach-Guided Retrospectives to Foster Feedback Culture, Communication, and Reflective Practice in Undergraduate Computer Science Student Teams <u>Vanessa Tudor</u> ¹ , <u>Sakhi Aggrawal</u> ² , <u>Renate Motschnig</u> ³ 1: Faculty of Computer Science, Doctoral School of Computer Science	P 5B: New Generation of Engineering Students I + Location: Parallel B - 1st floor, Room No. 97 (Academic staff's club) Chair: Tetiana Bondarenko , V. N. Karazin Kharkiv National University, Ukraine Guide On The Implementation Of Additive Manufacturing Methods In Engineering Education <u>Fabian Hois</u> ¹ , <u>Markus Exler</u> ² , <u>Andreas Probst</u> ³ 1: TU Wien, Austria; 2: JKU Linz, Austria; 3: HTL Wels, Austria Integrating 3D-Printed Badges and Readiness Quizzes to Enhance Engagement in a Flipped Learning Manufacturing Technology Course <u>Alpha Pernia-Espinoza</u> ¹ , <u>Daniel Lopez-Fernandez</u> ² , <u>Andres Sanz-Garcia</u> ³ , <u>Francisco Javier Martinez-Pison-Ascacibar</u> ¹ 1: Universidad de La Rioja; 2: Universidad Politécnica de Madrid; 3: University of	P 5C: To the Roots of Engineering Pedagogy II + Location: Parallel C - 1st floor, Room No. 95 (Eszter Pecsí room) Chair: Lucia Krištofiaková , Vysoká škola DTI, s.r.o. Developing 21st century transversal skills in Engineering Basics education <u>Peter Ferencz</u> Budapest University of Technology and Economics, Hungary Identifying the Challenges of Integrating AI and AR into Engineering Education <u>Jakub Hrinak</u> Trnava University in Trnava, Slovak Republic Desired Literacies For Teachers In The 21st Century <u>István Szököi</u> ¹ , <u>Roman Hrmó</u> ² , <u>Lucia Krištofiaková</u> ² 1: Trnava University, Faculty of Education, Slovak Republic; 2: DTI University, Dubnica nad Váhom, Slovakia Analysis of the Current State of Children's Technical and	P 5D: AI and its Use in Education and Training IV + Location: Parallel D - Plenary room, Ceremonial Hall Chair: Jorge Membrillo-Hernández , Instituto Tecnológico y de Estudios Superiores de Monterrey Generative AI in Higher Education in Teaching and Learning: A Comparative Study of University Instructors and Student Perspectives at the University of Applied Sciences in Dresden <u>Kathy Meyer-Ross</u> , <u>Hong-Ly Nguyen</u> , <u>Emily Jeschke</u> , <u>Sven Günther</u> HTW Dresden, Germany Designing a Generative AI Solution for Creating Summative Assessments in Higher Education <u>Sonia Sahli</u> ¹ , <u>Denis Gillet</u> ² 1: University of Tunis, ENSIT, Labo SIME, Tunis, Tunisia; 2: École Polytechnique Fédérale de Lausanne (EPFL), Switzerland Integrating Generative AI in Challenge-Based Learning: Comparative Impacts on Sustainable Competency Development <u>Jorge Membrillo-</u>	P 5E: Real-World experiences II + Location: Remote E - in Teams and in Room No. 96 (1st floor) External Resource for This Session ➔ Chair: Katarina Szarka , J. Selye University, Faculty of Education Burnout Syndrome Analysis and Implementation of Multidisciplinary Skills Model for Strategic Enhancement of Digital Media Entrepreneurs' Competitiveness: A Case Study of a Digital Media Enterprise in Thailand <u>Adisorn Ode-sri</u> ¹ , <u>Sompop Phatchat</u> ¹ , <u>Bupha Ravirot</u> ¹ , <u>Peeratham Techapalokul</u> ¹ , <u>Thomas Köhler</u> ² , <u>Panom Kaewphadee</u> ¹ , <u>Tammany Phommachak</u> ³ 1: Rajamangala University of Technology Lanna, Thailand; 2: Technische Universität Dresden, Germany; 3: Vocational Education Development Institute, Ministry of Education and Sports, Lao PDR.	P 5F: Research in Engineering Pedagogy + Location: Remote F - in Teams and Room No. 2. (Library; Ground floor) External Resource for This Session ➔ Chair: Oksana Zhirosh , Innopolis University The BAAS Model for Hybrid Courses: Identifying Minimum Viable Elements from Engineering Logic to Design <u>Sara B. Ibarra-Vargas</u> ¹ , <u>Elisabeth Herreño Tellez</u> ² 1: Pontificia Universidad Javeriana Cali, Cali, Colombia; 2: Universidad de San Buenaventura, Medellín, Colombia Adaptive System for Developing Educational Programs Through Multilevel Educational Data Analysis <u>Gevorg Margarov</u> , <u>Marine Usepyan</u> , <u>Kristine Hambardzumyan</u> , <u>Ella Hovhannisyan</u> National Polytechnic University of Armenia, Armenia Faculty	P 5G: BME InnoLab spinoff visit (Meeting point: Registration desk) + Location: Registration desk Chair: Peter Toth , Budapest University of Technology and Economics There will be a 45-minute visit to the BME InnoLab spinoff company, where they will give an insight into research related to self-driving vehicles. Meeting point at the registration desk on 2 October at 1:00pm About the research areas of BME InnoLab: https://icl-conference.org/current/assets/downloads/DriveByCloud.zip

University of Vienna;
2: Purdue University
West Lafayette
Indiana, USA; 3:
Faculty of Computer
Science, University of
Vienna

Multidisciplinary Synergy: Enhancing Entrepreneurial Skills Through a Collaborative Challenge-Based Project

Linda Elizabeth Ruiz¹, Claudia Lizette Garay-Rondero², Elda Barron³

1: Tecnológico de Monterrey, Business School; 2: Tecnológico de Monterrey, School of Engineering and Sciences; 3: Universidad de Monterrey

Active Learning Strategies in Calculus Education: A Comparative Study Between French and Brazilian Engineering Students

Micheli Cristina Starosky Roloff¹, Luis Mauricio Resende¹, Christian Mercat²

1: Federal University of Technology – Parana, Brazil; 2: Université Claude Bernard – Lyon 1, France

Salamanca-Bejar

MOOC as an Innovative Approach to Educational Interaction in the Training of Future Specialists

Tetiana Bondarenko¹, Cengiz Hakan Aydin², Oleksandr Kupriyanov¹, Valentyna Svystun³, Pavlo Vasiuchenko¹

1: V. N. Karazin Kharkiv National University, Ukraine; 2: Ozyegin University, Istanbul, Turkey; 3: The National Defence University of Ukraine, Kyiv, Ukraine

Evaluating the Impact of the Sync Magic® Platform on Satisfaction, Engagement, and Learning Outcomes among First-Year STEM Students

Mayela del Rosario García Rodríguez, Alejandra Ruiz-Ramírez, Luis F. Morán-Mirabal, Patricia Vázquez Villegas

Tecnológico de Monterrey, Mexico

Computational Thinking in Kindergartens

Nikoleta Krížáková, Peter Brečka, Monika Valentová

Constantine the Philosopher University in Nitra, Slovak Republic

Analysis Of The Views Of Trainee Teachers And Students Of Teacher Education Programmes On The Implementation Of Teaching Practice

Eva Tóblová, Vladimíra Zemančíková, Štefánia Ferková

Comenius University, Faculty of Education, Slovak Republic

Hernández^{1,2}, Juan de Dios Torralba-Pérez¹, Rebeca María García-García¹, Vianney Lara-Prieto^{1,2}, Maria Ileana Ruiz-Cantisani², Mariana E. Elizondo-García³, Mariajulia Martinez-Acosta⁴

1: Institute for the Future of Education, Tecnológico de Monterrey, Mexico; 2: School of Engineering and Sciences, Tecnológico de Monterrey, Mexico; 3: Directorate of Educational Innovation and Digital Learning, Tecnológico de Monterrey, Mexico; 4: Office of Sustainable Development and Engagement, Tecnológico de Monterrey, Mexico

Integrating Artificial Intelligence and Project-Based Learning in Engineering Education: A Systematic Review of Scopus-Indexed Research

Kevin Mejía Rivera, Mirna Rivera García, Luis Reyes

Universidad Tecnológica Centroamericana, Honduras

Russian Language Cancellation in Eastern Ukraine: Psycholinguistic, Sociolinguistic and Educational Perspectives

Hanna Viacheslavivna Kornilush, Olena Volodymyrivna Shaparenko

V. N. Karazin Kharkiv National University

System of Professional Training of Future Lawyers in Institutions of Higher and Pre-higher Education

Sofia Dembitska¹, Natalya Stavnycha², Svitlana Nagornyak², Olena Stoliarenko², Iryna Shakhina², Iryna Kobylianska¹

1: Vinnytsia National Technical University, Ukraine; 2: 2Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Integration of Companies' Electronic Resources into Engineering Educational Programs of Universities

Svetlana G. Karstina

Karagandy University of the name of academician E.A. Buketov, Kazakhstan

Exploring And Assessing The Selected Aspects Of Chemistry Learning Attitudes Of Hungarian Native-speaker Pupils In Slovakia

Katarína Szarka, Alexandra Hengerics Szabó, Andrea Vargová

J. Selye University, Faculty of Education, Slovak Republic

Main Trends in Use of AI in Chemistry and Physics Education in Upper Primary and Secondary Schools: Literature Review

Katarína Szarka¹, Zoltán Fehér², Ladislav Jaruska¹, Attila Mészáros¹

1: J. Selye University, Faculty of Education,

Instructional Skills Development Program: a Comparative Examination of a Technical and a Business School Implementations

Oksana Zhirosh¹, Tanya Stanko², Pavel Sharakhin², Ekaterina Permyakova²

1: Innopolis University, Russian Federation; 2: Graduate School of Management at Saint-Petersburg State University

The Development of Inductive Reasoning Among Hungarian Minority Students in Slovakia

Róbert Madarász

J. Selye University, Slovak Republic

Empowering Education and Training with Advanced AI and Affective Facial Analysis

Alexandru Stefan Negrea, Ioana Corina Bogdan, Horia Alexandru Modran, Nicolaie Alin Marin

Universitatea Transilvania din Braşov, Romania

Automated Integration of EDA Circuit Designs for Scalable Remote Labs in Embedded Systems Education

Jakob Czekansky, Justin Sauer, Onur Melik Sen, Diethelm Bienhaus

University of Applied Sciences Mittelhessen, Germany

2:30pm - 4:00pm	P 6A: Teaching best practices I Location: Parallel A - 1st floor, Room No. 41 (Library) Chair: Andreas Pester, The British University in Egypt Insights into Teachers' Use of Generative AI and the Influence of Contextual Factors on Fostering Self-Regulated Learning in Secondary Education Gerald Geier¹, Martin Ebner², Harald Burgsteiner¹ 1: University College of Teacher Education Styria, Austria; 2: Graz University of Technology, Austria Vocational Teachers' Understanding of Differentiated Instruction Through Their Experiences Meidi Sirk, Reeli Liivik, Sirje Rekkor Tallinn University, Estonia Two Methodological Experiments InTeaching Mathematics To Electrical Engineering Students Csilla Sörös Óbuda University, Hungary Comparative Analysis of STEM Education Systems in the United Kingdom and Kazakhstan Nurman Zhumabay^{1,3}, Alma Abylkassymova¹, Tannur Bakytkaży^{2,3} 1: Abai Kazakh National Pedagogical University, Almaty, Kazakhstan; 2: Al-Farabi Kazakh National University, Almaty, Kazakhstan; 3: School-Gymnasium N202, Almaty, Kazakhstan	P 6B: Self-efficacy, motivation and engagement in education Location: Parallel B - 1st floor, Room No. 97 (Academic staff's club) Chair: Eleonore Lickl, PHSt Towards a Learning Analytics Framework for an Asynchronous Mathematics Course in Engineering Education Elena Safiulina, Oksana Labanova TTK UAS, Estonia Study of the Self-Efficacy of Teachers in Slovak Schools with Hungarian as the Language of Instruction Katalin Sýkora Hernády J. Selye University, Slovak Republic Participant Profiles, Motivations, and Engagement in a Laboratory Physics MOOC T.P. Nantsou¹, V. Callea², G.S. Tombras¹, H.E. Nistazakis¹ 1: National and Kapodistrian University of Athens, Department of Physics, Greece; 2: SAPIENZA University of Rome, Faculty of Civil and Industrial Engineering, Italy Developing and Testing a Peer-Review Process for Content Quality Assurance in MOOCs: A Case Study on an E-Assessment Course Jan Loitzenbauer, Martin Ebner, Sandra Schön, Benedikt Brünner Technische Universität Graz, Austria Elective Learning at EuroTeQ Engineering	P 6C: To the Roots of Engineering Pedagogy III Location: Parallel C - 1st floor, Room No. 95 (Eszter Peci room) Chair: Elena Bendíková, Faculty of Education CU, Ružomberok From Ada Lovelace to the Present: Historical Legacies and Contemporary Student Perceptions of Women in Information Technology Juraj Miština University of Ss. Cyril and Methodius in Trnava, Slovakia, Slovak Republic Digital Literacy of Primary Education Teachers in Terms of Their Self-reflection Ján Záhorec¹, Alena Hašková² 1: Comenius University in Bratislava, Slovak Republic; 2: Constantine the Philosopher University in Nitra, Slovak Republic Abstract Quality and Cross-linguistic Interference: A Comparative Study of Technically Oriented Student Writing Jana Bérešová Trnava University, Slovak Republic Active School Promoting Correct Posture In Female Students With Incorrect Posture Elena Bendíková¹, Anetta Müller², Ricardo Ricci Uvinha³ 1: Faculty of Education CU, Ružomberok, Slovak Republic, FIEPS, World Leisure Organization; 2: Institute of Sports Economics and Management, Faculty of Economics and Business, University of Debrecen,	P 6D: AI and its Use in Education and Training Location: Parallel D - Plenary room, Ceremonial Hall Chair: Eduardo Vendrell Vidal, Universitat Politècnica de València Artificial Intelligence in the Flipped Classroom: Development of a Specialized AI-Based Learning Environment Model József Udvaros¹, Ildikó Pšenáková¹, Peter Pšenák², Tibor Szabó³ 1: Trnava University, Slovakia; 2: Comenius University Bratislava, Slovakia; 3: Constantine the Philosopher University in Nitra, Slovak Republic Pedagogical Strategies to Promote the Adoption of AI Tools in the Classroom while Facilitating Their Adaptation to specific Teaching/Learning Environments. Genny Villa¹, Natalia Rodriguez² 1: Université de Montréal, Canada; 2: CUAS University, Austria The Integration of Generative Ai Models in the (social) Media Curriculum: Best Practices Paola Monachesi Utrecht University, Netherlands, The Integrating ChatGPT for unlocking threshold concepts in Engineering Education at a South African University of Technology Elisha Markus CUT, South Africa Fostering Critical Thinking and Authentic Learning with AI-Powered Applications in Engineering Education Elena Mäkiö¹, Juho Mäkiö², Freeha Azmat³ 1: Furtwangen University, Germany; 2: University of Applied Sciences Emden/Leer, Germany; 3: University of Warwick	P 6E: New generation of engineering students II Location: Remote E - in Teams and in Room No. 96 (1st floor) External Resource for This Session Chair: Katalin Kanczné Nagy, Hungary Gamification in STEAM Education: Using Escape Rooms to Disseminate Offshore Renewable Energy Knowledge among High School Students Unai Villena¹, Marene Larruskain¹, Araitz Iturregi¹, Oihane Abarrategi¹, Pablo Eguia¹, Eider Robles^{1,2} 1: University of the Basque Country (UPV/EHU), Spain; 2: TECNALIA, Basque Research and Technology Alliance, Spain An Integrated Approach to Designing and Testing Digital Twins in Teaching IT Students Iryna Zeleneva^{1,2}, Anzhelika Parkhomenko^{1,2}, Carsten Wolff², Tetiana Holub¹, Svitlana Hrushko¹, Andrii Hrapko¹, Artem Tulenkov¹, Natalia Myronova¹ 1: National University "Zaporizhzhia Polytechnic", Ukraine; 2: Dortmund University of Applied Sciences and Arts, Germany Inclusiveness In STEM Education: WOME(S)N Project Case Makrina Agaoglou¹, Simona Bibic², Corina Cipu², Zsofia Palya³, Antonela Toma², Maria-Jesús Vázquez-Gallo¹ 1: Universidad Politécnica de Madrid, Spain; 2: National University of Science and Technology	P 6F: Evaluation and Public Policy in Education Location: Remote F - in Teams and Room No. 2. (Library; Ground floor) External Resource for This Session Chair: Maria Teresa Restivo, University of Porto Qualimetric Approaches to Assessing the Quality of Education by Fractal-Cluster Analysis Andrii Matsko, Hanna Hrinchenko V.N.Karazin Kharkiv National University, 4 Svobody Sq., 61022 Kharkiv, Ukraine Professional Development and Needs of Ukrainian Teachers in the Use of Digital Technologies: Survey Results Oksana Ovcharuk Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine Exploring The Knowledge Structure Of Primary School Students Using Word Association Boglárka Borovicza, Katárina Szarka J. Selye University, Faculty of Education, Slovak Republic Technology Aided Formative Assessment and Writing Skills Lorena Parra-Gaviláñez^{1,2}, Alisson Pamela Pilco Morales¹, Ximena Alexandra Calero Sánchez¹ 1: Universidad Técnica de Ambato, Ecuador; 2: Lancaster University, England Regional Sustainable Development Through Higher Education: Empirical Analysis of SDGs
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University: Achievements and Challenges

Valery Vodovozov, Zoja Raud

Tallinn University of Technology, Estonia

Debrecen, Hungary; 3: School of Arts, Sciences and Humanities, University of São Paulo, Brazil, FIEPS, World Leisure Organization

The TAPATE Model As An Example Of Teacher Development In Engineering Pedagogy

David Krystof, Petr Adamec

Mendel University in Brno, Czech Republic

A Qualitative Analysis of Technically Oriented Students' Competence in Promoting Their Research Work

Jana Bérešová

Trnava University, Slovak Republic

Comparative Study of Student and Faculty Experiences with Generative AI in Higher Education

Anne Uukkivi, Natalja Maksimova, Oksana

Labanova, Vitali Retšnoi, Elena Safiulina, Britt Petjärvi, Monica Vilms

TTK University of Applied Sciences, Estonia

Politehnica Bucharest, Romania; 3: Budapest University of Technology and Economics, Hungary

The S.T.E.M. Teaching Approach with an Emphasis on Inquiry-Based Learning: Development and Pedagogical Utilization of a Self-Built Robotic Model of the Earth's Orbit

Nikolaos Mitrakas¹, Charilaos

Tsihouridis¹, Marianthi Batsila²

1: University of Patras, Greece; 2: University of Thessaly, Greece

Using Mobile Inquiry-Based Learning as a V.E.H.I.C.L.E. to Enhance Understanding of Mechanical and Light Energy

Nikolaos Mitrakas¹, Charilaos

Tsihouridis¹, Antonios

Karavasilis¹, Marianthi Batsila²

1: University of Patras, Greece; 2: University of Thessaly, Greece

Differentiation in Higher Education: Balancing Differences in Programming Tools

Christina B. Class¹, Rouven Pankrath^{2,1}

1: Ernst-Abbe-Hochschule Jena, Germany; 2: Friedrich-Schiller-Universität Jena, Germany

1, 2, 6, 13, 15, and 17 Implementation Led by Rajamangala University of Technology Lanna

Adisorn Ode-sri¹, Paweeya Raknim¹, Rungkan

Leelasopawut¹, Uthen Kamnarn¹, Pisit

Wimonthanasit¹, Nopadon

Maneetien¹, Panom

Kaewphadee¹, Thomas Köhler², Peeratham

Techapalokul¹, Tammany

Phommachak³, Bupha Ravirot¹

1: Rajamangala University of Technology Lanna, Thailand; 2: Technische Universität Dresden, Germany; 3: Vocational Education Development Institute, Lao PDR.

4:00pm - 4:30pm	Coffee/Tea Break Location: Coffee Room - 1st floor, corridor					
4:30pm - 6:00pm	P 7A: Digital and Green Transition in Education Location: Parallel A - 1st floor, Room No. 41 (Library) Chair: Alexander Tillmann , Goethe-Universität Frankfurt Work-in-Progress: Integrating Digital and Green Competences in Education: The SUTEEComp Framework for Urban	P 7B: Teaching Best Practices II Location: Parallel B - 1st floor, Room No. 97 (Academic staff's club) Chair: Yordanka Boneva , Institute of Information and Communication Technologies, Bulgarian Academy of Sciences Bridging the Gender Gap in STEM Degree	P 7E: Teaching Best Practices and STEM Education Location: Remote E - in Teams and in Room No. 96 (1st floor) External Resource for This Session Chair: Genny Villa , Univerité de Montréal Teaching Approach on Primary Heat Concepts for Students with	P 7F: Collaborative and Computer Aided Learning Location: Remote F - in Teams and Room No. 2. (Library; Ground floor) External Resource for This Session Chair: Kati Kukk , Tallinn University of Allied Sciences Evaluating Large Language Models in Analyzing Student Sentiments: A Course Feedback Case Study Stefania Zourlidou, Akshay Sarda, Frank	P7D: Round Table Location: Parallel D - Plenary room, Ceremonial Hall Chair: Jessica Silwick , ABET, Inc. Panelists • Sarah Rajala – ABET President • Dénes Zarka - Director BME • Imre Kovacs - Siemens Hungary • Michael Milligan – ABET CEO Lifelong Learning and the Critical	

Environmental Challenges

Alexander Tillmann¹,
Michael Eichhorn¹,
Bernardo

Tabuenca²,
Wolfgang Greller³,
Sergio Martin⁴,
Monika Musilek³,
Sandra Puddu³
1: Goethe University
Frankfurt, Germany;
2: Universidad
Politecnica de Madrid;
3: Pädagogische
Hochschule Wien; 4:
Universidad Nacional
de Educacion a
Distancia

Development of Sustainability Competencies at University and Their Importance in Educating Engineers Committed to a Just Transition Toward More Sustainable Futures

Mariajulia Martinez-Acosta^{1,2}, Jorge
Membrillo-
Hernández^{2,3},
Sandra Reyes-
Vasquez¹, Kitzia
Rodríguez-Salgado¹,
Mariana Peña-
Laureano¹

1: Office of
Sustainable
Development and
Engagement,
Tecnologico de
Monterrey, Mexico; 2:
Institute for the Future
of Education,
Tecnologico de
Monterrey; 3: School
of Engineering and
Sciences, Tecnológico
de Monterrey, Mexico

Innovative Continuous Education for a Sustainable Future

Anna Truver¹,
Eduard
Shevtshenko^{1,2},
Tatjana Karaulova¹,
Rene Maas^{1,2},
Hendrik

Laanemets^{1,2}, Irina
Kuzmina-Merlino³,
Inna Gorislavskaja¹
1: Tallinn University of
Applied Sciences,
Estonia; 2: University
of Tartu, Estonia; 3:
Transport and
Telecommunication
institute, Latvia

Enhancing Emotional Intelligence for Entrepreneurship in Gen Z: Digital Perspective

Yuliia Fedorova^{1,2},

Programs: Universities' Challenges and Efforts to Attract and Retain Female Students

Sonja Christ-Brendemühl, Anna-
Lena Menn
Bonn-Rhein-Sieg
University of Applied
Science, Germany

STEM and Its Variants: Inclusive and Interdisciplinary Models in Education

Yordanka Boneva¹,
Yanina Popova¹,
Savina Slavcheva²
1: Institute of
Information and
Communication
Technologies,
Bulgarian Academy of
Sciences, Bulgaria; 2:
New Bulgarian
University, Sofia,
Bulgaria

Challenge-Based Learning as a Tool for Developing Communication Skills: Insights from an Experience Developed with Honduran Students

Kevin Mejía Rivera,
Andrea Velásquez,
Rixi Estrada
Universidad
Tecnológica
Centroamericana,
Honduras

Participation Of Diverse Social Subgroups In Developing An Inclusive Art Software

Annika Hensmann¹,
Seulki Lee², Mohr
Anja³
1: Ludwig-
Maximilians-
Universität München;
2: Ludwig-
Maximilians-
Universität München;
3: Ludwig-
Maximilians-
Universität München

Autism Spectrum Disorder (Level 1) Using Animated Interactive Videos

Antonios
Karavasilis¹,
Charilaos
Tsihouridis¹,
Nikolaos Mitrakas¹,
Marianthi Batsila²
1: University of
Patras, Greece; 2:
University of
Thessaly, Greece

Approaches to Course Development for Teaching Physics via STEM Education in Schools

Nurgaliyeva
Kuralay¹, Bakytказы
Tannur¹, Pinto
Ferreira Eduarda²,
Nicola Susana²
1: al-Farabi Kazakh
National University,
Kazakhstan; 2: ISEP,
Engineering of Porto,
Polytechnic of Porto

Design and Implementation of the Synergetic Educational Programs for the Sustainable Energy Sector in Ukraine

Maksym Karpash¹,
Liubomyr
Zhovtulia¹, Andriy
Yavorskiy², Vitalii
Tsykh², Nazarii-
Andrii Soroka¹
1: King Danylo
University, Ukraine; 2:
Ivano-Frankivsk
National Technical
University of Oil and
Gas

Adaptive Intelligence in Education: a New Era for STE(A)M E-learning Platforms

Simona Mihaela
Bibic^{1,3}, Alexandra-
Maria Bors^{2,3}
1: Department of
Applied Mathematics,
National University of
Science and
Technology
POLITEHNICA
Bucharest, Romania;
2: Faculty of Applied
Sciences, National
University of Science
and Technology
POLITEHNICA
Bucharest, Romania;
3: Center for
Research and
Training in Innovative
Techniques of Applied
Mathematics in
Engineering, National
University of Science
and Technology
POLITEHNICA

Hopfgartner
University of Koblenz,
Germany, Germany

Usage Of Information Technologies In The process Of Collaborative Training Of Health Professionals

Oleksandr Kobylanskyi¹,
Mariia Shostatska²,
Oksana Stoliarenko¹,
Iryna Kobylanska¹, Olha
Pinaieva³, Sofia
Dembitska¹
1: Vinnytsia National
Technical University,
Vinnytsia, Ukraine; 2:
Vinnytsia Academician D.K.
Zabolotnyi Professional
Medical College, Vinnytsia,
Ukraine; 3: Vinnytsia
Mykhailo Kotsiubynskyi
State Pedagogical
University, Vinnytsia,
Ukraine

Paraphrasing Tools to Assist Language Learning Written Production

Lorena Parra-Gaviláñez^{1,2}, Stefanny
Vanessa Cajamarca
Tipantuña¹, Santiago
Jácome-Guerrero³, Israel
Jácome-Parra⁴
1: Universidad Técnica de
Ambato, Ecuador; 2:
Lancaster University,
England; 3: Universidad de
las Fuerzas Armadas -
ESPE, Sangolquí, Ecuador;
4: Universidad de las
Américas, Ecuador

Collaborative Learning in a Digital Environment: Opportunities and Challenges

Sofia Dembitska¹, Iryna
Shakhina², Olena
Stoliarenko², Alla
Melnyk², Anatolii
Drabovskiy³, Iryna
Kobylanska¹
1: Vinnytsia National
Technical University,
Ukraine; 2: Vinnytsia
Mykhailo Kotsiubynskyi
State Pedagogical
University, Ukraine; 3:
Vinnytsia Cooperative
Institute, Ukraine

Digitalization of the Educational Environment as a Factor in Developing the Communicative Competence of Engineering and Pedagogical Staff

Olena Kovalenko, Nataliia
Briukhanova, Tetiana
Kalinichenko, Nataliia
Korolova, Svitlana
Lytvyntseva, Iryna Khotchenko
V. N. Karazin Kharkiv
National University,
Kharkiv, Ukraine

Role of Quality Assured Credential Educational Offerings

Jessica Silwick,
Michael Milligan
ABET, Inc., United
States of America

Kristina Babenko³,
Anna Pilková², Juraj
Mikuš², Tetiana
Bondarenko¹,
Marian Holienka²
1: V. N. Karazin
Kharkiv National
University, Ukraine; 2:
Comenius University
Bratislava, Slovakia;
3: Newcastle
University Business
School, UK

Bucharest, Romania

Formation Of Readiness For Work In The Digital Society Of Healthcare Professionals

Oleksandr
Kobylianskyi¹, Alla
Melnyk², Iryna
Kobylianska¹, Mariia
Shostatska³, Sofiia
Dembitska¹, Bohdan
Pinaiev¹

1: Vinnytsia National
Technical University,
Vinnytsia, Ukraine; 2:
Vinnytsia Mykhailo
Kotsiubynskyi State
Pedagogical
University, Vinnytsia,
Ukraine; 3: Vinnytsia
Academician D.K.
Zabolotnyi
Professional Medical
College, Vinnytsia,
Ukraine

"How Important is to be There? Synchronous Participation in a Virtual Course and Academic Outcomes"

Gabriela Espinola,
Daniel Hernandez
Tecnologico de
Monterrey, Mexico

7:30pm

Award Session

Location: **Danube River Cruise - Batthyányi tér, Budapest boat (tram No. 19 or No. 41; 5 stops from Szent Gellért tér, BME)**

-

8:30pm

Chair: **Birgit Oberer**, IGIP General Secretary

IGIP Awards presented by Tiia Rüttnann, IGIP President

Lueny Morell Award presented by Uriel Cukierman, Director innovaHiEd Academy

International E-Learning Awards presented by David Guralnick, IELA President

8:30pm

Conference Dinner

Location: **Danube River Cruise - Batthyányi tér, Budapest boat (tram No. 19 or No. 41; 5 stops from Szent Gellért tér, BME)**

-

10:30pm

Date: Friday, 03/Oct/2025

8:00am

Registration opens

Location: **Conference Lobby (by the hall) - Budapest, Müegyetem rkp. 3 (Main entrance to the building, from the Danube side)**

8:30am

P 8A: Digital Transition in Education in Engineering

Location: **Parallel A - 1st floor, Room
No. 41 (Library)**

Chair: **Monika Pogátsnik**, Óbudai
University

**Transforming Assessment for
250+ Students per Year: From
Paper Exams to Secure, Scalable,
and Continuous Digital Evaluation**
Priit Ruberg, Harri Lensen, Elmet
Orasson

Tallinn University of Technology, Estonia

**Development of Cybersecurity
Awareness and Soft Skills in
Higher Education, Designing
Interactive eLearning Curricula**
Judit Módné Takács, **Tünde Máté**,
Nikoletta Tolner

Obuda University, Alba Regia Faculty,
Hungary

P 8B: Virtual and Augmented learning

Location: **Parallel B - 1st floor, Room
No. 97 (Academic staff's club)**

Chair: **Herwig Rehatschek**, Medical
University of Graz

**First Findings from a Pilot Study
on Teaching Medical
Undergraduate Students Using
Virtual Anatomy**

Herwig Rehatschek¹, Tanja Schrangl²,
Niels Hammer³

1: Unit for medical didactics, Medical
University of Graz, Austria; 2: Department
of Neurosurgery, Medical University of
Graz, Austria; 3: Division of Macroscopic
and Clinical Anatomy, Medical University
of Graz, Austria

**"The Enigma of Agnosias:
Experiences of University
Students Solving an Escape
Room for Learning in Psychology"**

Jesus Alfonso Beltran-Sanchez^{1,2},

P 8C: Accessibility, Learning and Technologies I

Location: **Parallel C - 1st floor, Room
No. 95 (Eszter Pecsí room)**

Chair: **Galina Bogdanova**, Institute of
Mathematics and Informatics at the
Bulgarian Academy of Sciences

**Technical Knowledge Is Not
Enough: Lack Of Pedagogically
Trained Technical Teachers In
East Africa**

Ibolya Tomory
Obuda University, Hungary

**Design Thinking and Accessibility
for Mathematical Formulas in Web
Tutorials**

Juliana Dochkova-Todorova¹, Galina
Bogdanova², Ivaylo Donchev¹, **Vesela
Georgieva²**

1: St. Cyril and St. Methodius University
of Veliko Tarnovo, Bulgaria; 2: Institute of
Mathematics and Informatics, Bulgarian
Academy of Sciences, 1113 Sofia,

P 8E: Digital Transition in Education II

Location: **Remote E - in Teams and
in Room No. 96 (1st floor)**

External Resource for This Session

Chair: **Diego Gormaz-Lobos**,
Universidad Autónoma de Chile

**A Semantic Model of
Knowledge Transfer**

Blanche Schöch^{1,2}, Thomas
Schlegel²

1: University of Education Karlsruhe,
Germany; 2: Institute for Intelligent
Interactive and Ubiquitous Systems
(IIUS), Furtwangen University,
Germany

**Digital Competences of
Engineering Students:
Analyzing Student
Perspectives from the
COVID-19 Pandemic to Today**
Diego Gormaz-Lobos^{1,2}, Claudia

The Impact of Formative Online Practice Quizzes on Undergraduate Engineering Students' Success in ESP Courses

Inese Ozola, Tatjana Sinkus
Latvia University of Life Sciences and Technologies, Latvia

The Predictive Power of Reflective Depth: A Quantitative Study in Final Project-Based Learning of Analog Circuits Course

Aziz Shekh-Abed, **Yinnon Stav-Satuby**
Ruppin Academic Center, Israel

Fresia Paloma Hernández Moreno¹, Josue Omar Nava¹, Marlene Alejandra Galicia Alvarado¹

1: Tecnológico de Monterrey, School of Medicine and Health Sciences; 2: Tecnológico de Monterrey, Institute for the Future of Education

Role of Universities to Support the Use of AR/MR in Engineering Education

Horst Orsolits, Juliane Probst, Andrea Contreras
FH Technikum Wien, Austria

Work-in-Progress: Let's Digitalize Hungarian Vocational High School Education Through Teacher-Community Collaboration

Virag Vasas
Vasas Virag, Hungary

Bulgaria

Technological Approaches For Adaptation And Personalization In Educational Video Games

Boyan Bontchev¹, Valentina Terzieva², Elena Paunova², Yavor Dankov¹, Dessislava Vassileva³

1: Faculty of Mathematics and Informatics, Sofia University "St. Kliment Ohridski", Bulgaria; 2: Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Bulgaria; 3: Scientific Research Centre, Sofia University "St. Kliment Ohridski", Bulgaria

Importance and Application of Modern Educational Approaches for Training People with Special Needs

Galina Bogdanova¹, Malinka Ivanova², Vesela Georgieva¹, Juliana Dochkova-Todorova³

1: Institute of Mathematics and Informatics at the Bulgarian Academy of Sciences, Bulgaria; 2: Technical University of Sofia, Bulgaria; 3: St. Cyril and St. Methodius University of Veliko Tarnovo, Faculty of Mathematics and Informatics, Bulgaria

Platforms And Tools For Creation Of Educational Video Games – A Literature Review

Yavor Dankov¹, Boyan Bontchev¹, Valentina Terzieva², Aleksandar Dimov¹

1: Faculty of Mathematics and Informatics, Sofia University "St. Kliment Ohridski", Bulgaria; 2: Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Bulgaria

An Inclusive Digital Learning Platform: Leveraging WordPress and Next.js in a Hybrid CMS Approach to Provide Accessibility and Enhanced User Experience

Plamenna Petrova, Ivaylo Donchev
St. Cyril and St. Methodius University of Veliko Tarnovo, Bulgaria

Galarce-Miranda², Thomas Koehler^{2,3}

1: Universidad Autónoma de Chile, Santiago-Talca-Temuco, Chile; 2: Technische Universität Dresden, TUD FaCE, Dresden, Germany; 3: Technische Universität Dresden, CODIP Center, Dresden, Germany

Digital Governance of the ICT Professionalism Standards Ecosystem

Olha Denisova, Nina Sytnyk, Iryna Zinovieva
Kyiv National Economic University named after Vadym Hetman, Ukraine

Development of Future Skills in Small and Medium-Sized Enterprises in Saxony: the ZuKo4Saxony Project

Claudia Galarce-Miranda¹, Diego Gormaz-Lobos^{1,2}, Carmen Neuburg³, Helge Fischer⁴, Thomas Köhler⁵

1: Technische Universität Dresden, TUD FaCE, Dresden, Germany; 2: Universidad Autónoma de Chile, Santiago-Talca-Temuco, Chile; 3: Technische Universität Dresden, Dresden, Deutschland; 4: IU Internationale Hochschule, Dresden, Deutschland; 5: Technische Universität Dresden, CODIP-Zentrum, Dresden, Deutschland

Ethics, Science and Technology: a Reflection from the Student's Perspective

Adriana Erika Martínez-Cantón
Tecnológico de Monterrey, Mexico

Using Artificial Intelligence in Attention Deficit and Hyperactivity Diagnosis : A State of Art

Dounia Abad, Sohaib Tamsamani
Mohammed V University in Rabat

10:00am -	Coffee/Tea Break Location: Coffee Room - 1st floor, corridor			⊕
10:30am				
10:30am -	PS III: Plenary Session III Location: Plenary Room - Ceremonial Hall			⊕
12:00pm				
	Chair: Peter Toth , Budapest University of Technology and Economics Keynotes Dana Dobrovská , Prof. em., Technical University of Prague, Czech Republic • Students' Attitudes Towards AI in Teaching and Learning Presentation of the Best Paper Awards			
12:00pm -	Lunch Break Location: Lunch Room - 1st floor, corridor			⊕
1:00pm				
1:00pm -	P 9A: Project Based Learning and AI ⊕ Location: Parallel A - 1st floor, Room No. 41 (Library) Chair: Axel Zafoschnig , IGIP Didactic Patterns for Digital Nomadism: Case-based Learning and Quality Assurance of its Outcomes Nargiza Mikhridinova^{1,2} , Jennifer	P 9C: Evaluation and Outcomes Assessment ⊕ Location: Parallel C - 1st floor, Room No. 95 (Eszter Pecsí room) Chair: Tünde Tóth , Budapest University of Technology and Economics Stress and Coping Before University Studies – Reflections from Five Years of Student Data Katalin Kanczné Nagy¹ , František	P 9E: Accessibility, Learning and Technologies II ⊕ Location: Remote E - in Teams and in Room No. 96 (1st floor) External Resource for This Session 📄 Chair: Malinka Ivanova , Technical University of Sofia Towards the Application of Robotic Technologies in STEM Education	
2:30pm				

Voßgerau¹, Iuliia Mende¹, Carsten Wolff¹, Carolina Cruz-Villazon³, Bassam Hussein⁴, Peter Arras²
1: Fachhochschule Dortmund; 2: KU Leuven; 3: University of the Basque Country; 4: Norwegian University of Science and Technology

Interdisciplinary Ideathons to Enhance the Post-Graduate Learning Experience

Jannik Marco Amon, Markus Leyser
TUD Dresden University of Technology, Germany

Loopbin Compost Concept – An EPS@ISEP 2025 Project

Clara Díaz Martín¹, Emile Amant¹, Lianne Hannah Maria Tibbe¹, Nathan Audy¹, Qi Xuan Tan¹, Simon Lünswilken¹, Abel Duarte¹, Jorge Justo^{1,2}, Maria Benedita Malheiro^{1,2}, Maria Cristina Ribeiro¹, Manuel F. Silva^{1,2}, Paulo Ferreira¹, Pedro Guedes^{1,2}
1: ISEP, Polytechnic of Porto; 2: INESC TEC, Portugal

Impact of AI in Education: A Case Study of Argumentation in Physics

Guillermina Ávila García¹, Mario Humberto Ramírez Díaz², Francisco Antonio Horta Rangel³
1: Instituto Politécnico Nacional, Centro de Estudios Científicos y Tecnológicos No. 11, Ciudad de México; 2: Instituto Politécnico Nacional, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada, Unidad Legaria; 3: Universidad de Guanajuato: Guanajuato, Guanajuato, MX

Poster: Collaborative Teaching Strategies in Calculus 1: An Analysis from the Perspective of Engineering Freshmen in Brazil and France

Edinéia Zarpelon¹, Luis Mauricio Resende¹, Christian Mercat²
1: Federal University of Technology of Paraná, Brazil; 2: Claude Bernard Lyon 1 University

Fostering Inclusion: Women in Engineering Leading Social Change through EduMakers

Griselda Esthela Oyervides-Ramírez, Lilia Gómez Flores, Cristina Gehibíé Reynaga-Peña
Tecnologico de Monterrey, Mexico

2:30pm
-
4:00pm

P 10A: AI and Learning Analytics in Engineering Education II 
Location: **Parallel A - 1st floor, Room No. 41 (Library)**
Chair: **Istvan Simonics**, Óbuda University

Exploring Generative AI Models for Constructive Feedback in Programming Tasks
Janka Pecuchová, Ľubomír Benko, Martin Drlik
Constantine the Philosopher University in Nitra, Slovak Republic

Evaluating of Generative Artificial Intelligence Models for Automated Categorization of Programming Errors
Ľubomír Benko, Janka Pecuchová

Ribni², Tünde Tóth³
1: Budapest University of Technology and Economics; 2: ELTE Eötvös Lóránd University; 3: Budapest University of Technology and Economics

Integration between Coaching and Engineering for building a New Behavioural Guidance tool COACH_ING

Viviana Callea¹, Isabel John², Tina Nantsou³, Mihai Ursache⁴, Apollonia Matrisciano¹
1: Sapienza University of Rome, Italy; 2: Technical University of Applied Sciences Würzburg-Schweinfurt, Germany; 3: National and Kapodistrian University of Athens, Department of Physics, Greece; 4: FLY FISH SRL, Italy

The Impact of Training Datasets on the Quality of Sentiment Analysis for Highly Inflected Languages: A Focus on Arabic

M. Samir Abou El-Seoud¹, Daoud M. Daoud²
1: The British University in Egypt (BUE), Egypt; 2: Higher Colleges for Technology, Sharjah, UAE

Accreditation of Micro-Qualification Programmes: Qualimetric Approaches to Quality Assessment

Hanna Hrinchenko, Andrii Lomakin, Oleksandr Kupriyanov, Nataliia Antonenko
V.N. Karazin Kharkiv National University, Kharkiv, Ukraine

P 10B: Diversity in Higher Education Research and Innovation II 
Location: **Parallel B - 1st floor, Room No. 97 (Academic staff's club)**
Chair: **Eszter Bükki**, Budapest University of Technology and Economics

Plagiarism Detection on Web Programming in Academia with Multimodal Sensitive Super-Bit
Oscar Karnalim, Meliana Christianti Johan, Erico Darmawan Handoyo, Sedy Ferdian Sujadi
Maranatha Christian University, Indonesia

Development of Social Responsibility of Vocational Education Institution Teachers as

Malinka Ivanova¹, Galina Bogdanova², Vesela Georgieva², Ivelina Stefanova³
1: Technical University of Sofia, Bulgaria; 2: Institute of Mathematics and Informatics at Bulgarian Academy of Sciences; 3: Secondary school "Neofit Rilski" - Dolna Banya

Personalised Learning: A Data-Driven Approach

Olga Ovtšarenko^{1,2}
1: Vilnius Gediminas Technical University, Vilnius, Lithuania; 2: TTK University of Applied Sciences, Tallinn, Estonia

Usability and Accessibility of Web Design Lessons Based on a Taxonomic Model

Juliana Dochkova-Todorova¹, Todor Todorov^{1,2}, Mirena Todorova-Ekmekeci³, Negoslav Sabev²
1: St. Cyril and St. Methodius University of Veliko Tarnovo, Faculty of Mathematics and Informatics, Bulgaria; 2: Institute of Mathematics and Informatics - Bulgarian Academy of Sciences, Sofia, Bulgaria; 3: Institute of Ethnology and Folklore Studies with Ethnographic Museum, Bulgarian Academy of Sciences, Sofia, Bulgaria

Using a Digital Twin to Create Adaptive Simulators in the Training of NPP Operators

Artem Cherniuk, Yuliia Oliinyk, Pavlo Vasiuchenko, Kostiantyn Brovko, Tetiana Bondarenko
V. N. Karazin Kharkiv National University

Electrical Engineering Students' Alternative Conceptions: Capacitance in Electronic Circuits

Aharon Gero, Wishah Zoabi
Technion - Israel Institute of Technology, Israel

From Learners To Creators: Building Digital Confidence Through A Summer Digital Skills Training For Teachers And Students In Nigeria

Itoro Emembolu, Charles Emembolu, Anita Agbakoba, Fanny Akhile, Olubanjo Adetunji, Bernard Nwabueze
TechQuest STEM Academy, Nigeria

P 10C: Collaborative Learning II 
Location: **Parallel C - 1st floor, Room No. 95 (Eszter Pecsí room)**
Chair: **András Benedek**, Budapest University of Technology and Economics

Teaching Future Engineers through Interdisciplinary Collaboration: A Case Study on Competence Development for Sustainable Innovation

Georg Jäggle¹, Lara Lammer²
1: PH Wien, Austria; 2: TU Wien, Austria

Connectivity Patterns of Online Interactive Learning Units in Open Systems

András Benedek¹, Előd Baranyai², Cz. János Horváth¹

Constantine the Philosopher University in Nitra, Slovak Republic

Readiness and Concerns in AI Integration: A Case Study of Engineering Students' Perceptions.

Zahira Gabriela Cruz-Netro, J.I. Hidalgo-Reyes, Jorge Alvarez
Tecnologico de Monterrey, Mexico

Use Data Analytics in Blackboard Ultra to Help Refine Online Assessments and Identify Student Learning Difficulties

Arthur James Swart¹, Mpho Mbele²
1: Central University Of Technology, South Africa; 2: Central University Of Technology, South Africa

Framework For Personalized Support In University Course Planning

Oliver Udvardi, Matej Baier, Ján Lang
Slovak University of Technology in Bratislava, Slovak Republic

a Global Competency

Maryna Vasylieva¹, Roman Nesterenko¹, Iryna Shteimiller¹, Oksana Kovtun²

1: V.N.Karazin Kharkiv National University; 2: Hryhorii Skovoroda University in Pereiaslav

Peace Built in Stone: Tolerant Cityscapes and Religious Diversity in Hungarian Market Towns in 18th–20th Century

Emese Berzsenyi, Rita Kattein-Pornói
Budapest University of Technology and Economics, Hungary

Smart Public Water Dispenser – An EPS@ISEP 2025 Project

Alexandre Ferreira¹, Kim Linthorst¹, Mikolaj Wojciechowski¹, Olivia van Staeyen¹, Panna Tarnai¹, Till Hanfeld¹, Abel J. Duarte^{1,2}, Benedita Malheiro^{1,3}, Cristina Ribeiro^{1,4}, Jorge Justo¹, Manuel F. Silva^{1,3}, Paulo Ferreira¹, Pedro Guedes^{1,3}

1: ISEP, Polytechnic of Porto, Rua Dr. António Bernardino de Almeida, 431, 4249-015 Porto, Portugal; 2: REQUIMTE/LAQV, ISEP, Polytechnic of Porto, Rua Dr. António Bernardino de Almeida, 4249-015 Porto, Portugal; 3: INESC TEC, Campus of Faculdade de Engenharia da Universidade do Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal; 4: INEB, Rua Alfredo Allen, 208, 4200-135 Porto, Portugal

1: Budapest University of Technology and Economics, Hungary; 2: Premontrei Szakgimnázium és Technikum

Connecting Design And Entrepreneurship Students To Solve Real Challenges

Juan Carlos Marquez Cañizares¹, Linda Elizabeth Ruiz²

1: Tecnológico de Monterrey, School of Architecture Art and Design, Ave. Eugenio Garza Sada 2501, Monterrey 64849, NL, Mexico; 2: Tecnológico de Monterrey, School of Business, Ave. Eugenio Garza Sada 2501, Monterrey 64849, NL, Mexico

Assessing Collaborative Writing through NLP: A Case Study on Monomodal Text Co-construction

Farida Said¹, Jeanne Villaneau², Silvia Araújo³, Radia Hannachi⁴

1: LMBA; 2: IRISA; 3: CEHUM; 4: ELLIAD

Designing and Implementing COIL in Engineering Education: A Process Model and Continuum for Practice

Nelli Ukhova¹, Ioseb Gabelaia², Mohamad Hasan Khajedehi³, Iryna Sukhodub⁴, Michele De Carli³

1: Dresden University of Technology; 2: Kauno Kolegija Higher Education Institution; 3: University of Padua; 4: Igor Sikorsky Kyiv Polytechnic Institute

4:00pm
-
4:30pm

Closing Session
Location: **Parallel D - Plenary room, Ceremonial Hall**

Final thoughts:
Péter Tóth, ICL2025 Conference chair
Tiia Rütütmann, IGIP president

