Conference Agenda

Session Overview

Date: Wednesday, 09/Apr/2025

8:30am - 4:00pm

Registration 1
Location: Duoc UC Campus Entrance

9:30am - 11:00am

EWA Forum 1
Location: Aula Magna
Chair: **Manuel Morales**, DUOC UC
10:00am - 10:30am
Mining access and track digitalization Solutions (SICAM-PDA)
Daniela Sarmiento - Sattel Chile
10:30am - 11:00am
The Future of Connected Measurement: How Endress+Hauser Drives Industrial Digitalization
Nicolás Cádiz - Endress + Hausser
Live streaming:
https://youtube.com/live/ZjvnqGx247E?feature=share

STE WS EDUNET: Workshops
Location: V 215 Classroom
09:00am - 09:30am
PLCnext Basics – Enhance your automation thinking
Michael Gulsch - Phoenix Contact
09:30am - 10:00am
PLCnext Control – Use of Node-RED
Stefan Brinkmann - Phoenix Contact
10:00am - 11:00am
Using TensorFlow Lite in PLCnext Controls for Image recognition
Pedro Armando Aguilar Conde - Phoenix Contact
Link Connection:
https://us06web.zoom.us/j/84941288776?pwd=DVuXDcF96nPEOZlm36ED2vnBCkqmbv.1

STE WS1: Usability Checklist: A Practical Tool to Increase the Usability of Cross Reality Laboratories
Location: Auditorio
Chair: **Louis Kobras**, NORDAKADEMIE gAG Hochschule der Wirtschaft
Kobras, Louis; Soll, Marcus; Herrmann, Franziska

Usability Checklist: A Practical Tool to Increase the Usability of Cross Reality Laboratories
Louis Kobras, Marcus Soll, Franziska Herrmann
NORDAKADEMIE gAG Hochschule der Wirtschaft, Germany

STE WS2: Features of Modern Engineering Education Alexander A. Kist, Catherine Hills (Australia)
Location: V 217 Classroom
Chair: **Alexander A Kist**, University of Southern Queensland
Kist, Alexander A; Hills, Catherine Mary

Features of Modern Engineering Education
Alexander A Kist, Catherine Mary Hills
University of Southern Queensland, Australia

STE WS3: Integrating Responsible AI into Blended Learning for a Sustainable Future in Higher Education Peter Yau (Australia)
Location: V213 Classroom
Chair: **Peter ChunYu Yau**, University of Glasgow
Yau, Peter ChunYu

Integrating Responsible AI into Blended Learning for a Sustainable Future in Higher Education
Peter ChunYu Yau
University of Glasgow, Singapore

11:00am - 11:30am

Coffee Break 1: All participants
Location: Central Courtyard

11:30am - 12:30pm

Opening STE 2025: All participants
Location: Aula Magna
Chair: **Michael E. Auer**, CTI Global Frankfurt
Carlos Díaz, Rector Duoc UC
Dominik May, President IAOE, University of Wuppertal, Germany
Reinhard Langmann, EWA, Germany
Cristian Jacobsen General Manager Phoenix Contact Chile
Macarena Gallardo Popp AHK Chile
Representative of the State of Chile
Live Streaming:
https://youtube.com/live/E-mDXTZD-5k?feature=share

12:30pm - 2:00pm

Lunch 1: All participants
Location: Central Courtyard

2:00pm - 3:30pm

Keynote Presentation 1 & 2: All participants
Location: Aula Magna
Chair: **Dominik May**, University of Wuppertal
02:00pm - 02:45pm
Technical education as a key factor for economic development & growth
Klaus Hengsbach - Phoenix Contact
***
02:45pm - 03:30pm
Recycling of electronic waste: a case of Urban Mining and Circular Economy
Romina Cayumil - Duoc UC
***
https://ste-conference.org/current/conference.php#keynotes
Live Streaming:
https://youtube.com/live/QgY67G2stlU?feature=share

3:30pm - 4:00pm

Coffee Break 2: All participants
Location: Central Courtyard

4:00pm - 6:00pm

EWA Forum 2: Industrial Projects
Location: Aula Magna
Chair: **Manuel Morales**, DUOC UC
04:00pm - 04:30pm
Innovating Learning for the Mobility of the Future in Smart Cities
Adriano Mones - Phoenix Contact
04:30pm - 05:00pm
La innovación tecnológica para mitigar corrientes armónicas homopolares
Luis Veloso - Dartel
05:00pm - 05:30pm
Technology and Employment for Electric Mobility
Pablo Arboleya - Director of the "Gijón Smart Cities" Chair
Live streaming
https://youtube.com/live/5hR78T9g_cU?feature=share

STE S1: AR, VR, Cloud, Cyber Physical Systems & Cyber Security
Location: Auditorio
Chair: **Maria Arcelina Marques**, ISEP

4:00pm - 4:24pm
The Impact Of Immersive Virtual Reality On Flood Preparedness: Enhancing Risk Perception And Self-Efficacy Through Scenario-Based Training
Anna Kristin Stüvermann, Nico Buck, Jan-Niklas Terschüren, Larissa Müller
Müller, Valérie Varney
Technische Hochschule Köln

4:24pm - 4:48pm
HoloLEIV 2.0 - Hybrid XR Environment For Training And Operation Of Robotic Systems
Benedikt Tobias Müller[1], Daniel Weck[2], Tobias R. Ortelt[1], Maik Gude[2]
1: TU Dortmund University, Germany; 2: TU Dresden, Germany

4:48pm - 5:12pm
Chasing the Efficient Distributed Leader Election for Edge Computing Networking From Pollution Measuring
Sergio Medina[1,5], Christian Fernandez-Capusano[1], Leonardo Espinosa-Leal[2], Michael Miranda-Sandoval[3], Claudia Durán[4]
1: Department of Electrical Engineering, University of Santiago of Chile (USACH); 2: Graduate School and Research, Arcada University of Applied Sciences, Helsinki; 3: Department of Mechanical Engineering, University of Santiago of Chile (USACH); 4: Departamento de Ingeniería Industrial, Universidad Tecnológica Metropolitana; 5: Duoc UC, Chile

5:12pm - 5:36pm
Cyber-physical Production System

STE S2: Digital Twins and Data Science
Location: V213 Classroom
Chair: **Reinhard Langmann**, Edunet World Association

4:00pm - 4:24pm
Heating System - Process Identification Using Physics-Based Neural Networks
Kim Roos[1], Leonardo Espinosa-Leal[1], Matias Waller[2]
1: Arcada University of Applied Sciences, Finland; 2: Åland University of Applied Sciences, Åland, Finland

4:24pm - 4:48pm
Real Time Weld Defect Detection and Analysis
Kalyan Ram Bhimavaram[1], Nitin Sharma[2], Abhishek S Joshi[1], Mohit Chikkadi[3], Neha Madi Sural[3], Sashwathi V[3], Yogishwar R[3]
1: Indxo AI PVT LTD, India; 2: Birla Institute of Technology and Science, K.K Birla Goa Campus, NH 17B, Bypass, Road, Zuarinagar, Sancoale, Goa 403726 India; 3: R.V. College of Engineering, Bangalore-560069

4:48pm - 5:12pm
Autonomous Simulation and Control via Digital Twins: A Scale Model Prototype for Backhoes
Oscar Loyola Valenzuela, Alejandro Escobedo De la Barra, Griselle Salazar
Universidad Autónoma de Chile, Chile

5:12pm - 5:36pm
Leveraging 5G for Intelligent Fleet Management: A Full-

STE S3: Virtual & Remote Labs I/II
Location: V 217 Classroom
Chair: **Fiorella Lizano-Sánchez**, Universidad Estatal a Distancia

4:00pm - 4:24pm
Have We Forgotten the Usability of Our Cross Reality Laboratories?
Franziska Herrmann, Marcus Soll, Louis Kobras
NORDAKADEMIE gAG Hochschule der Wirtschaft, Germany

4:24pm - 4:48pm
Building a Booking System for Federated Cross Reality Laboratories
Marcus Soll[1], Johannes Nau[2], Louis Kobras[1], Pierre Helbing[2]
1: NORDAKADEMIE gAG Hochschule der Wirtschaft, Germany; 2: Technische Universität Ilmenau

4:48pm - 5:12pm
Design and Development of an Ultra-concurrent Optical Microscope Laboratory for the Study of Cells
María Paula Obando-Víquez[1], Fiorella Lizano-Sánchez[1], Carlos Arguedas-Matarrita[1], Luis Rodríguez-Gil[2], Pablo Orduña[3]
1: Universidad Estatal a Distancia, Costa Rica; 2: LabsLand, Spain; 3: LabsLand, USA

5:12pm - 5:36pm
Redesigning and Evaluating the Usability and Onboarding for a Mixed-Reality Application: A Case Study with PEARL (Paderborn Electrical Engineering AR Laboratory) and Meta Quest 3

STE-R S1: Remote Presentations
Location: online
Chair: **Ludwig Lindermann**, DUOC UC
Link session
https://us06web.zoom.us/j/83424890416?pwd=CbAVTTUQH2d5gYc6Ow13VBcR5cdf5x.1
ID: 834 2489 0416

4:00pm - 4:24pm
Smart Detection Of Compressed Air Leakage
Vule Luka Reljić, Nikolina Dakić, Veselin Erdeljan, Slobodan Dudić, Ivana Milenković, Vladimir Jurošević, Jovan Šulc
University of Novi Sad; Faculty of Technical Sciences, Serbia

4:24pm - 4:48pm
Using Smart Complexes To Optimize The Pace Of Students' Vocational Training
Oleksandr Radkevych[1], Mykola Pryhodii[2], Valentyna Radkevych[2]
1: Institute of Pedagogy of the National Academy of Education Science of Ukraine, Ukraine; 2: Institute of Vocational Education of the NAES of Ukraine

4:48pm - 5:12pm
Using Smart Complexes To Optimize The Pace Of Students' Vocational Training
Oleksandr Radkevych[1], Mykola Pryhodii[2], Valentyna Radkevych[2]
1: Institute of Pedagogy of the National Academy of Education Science of Ukraine, Ukraine; 2: Institute of Vocational Education of the National Academy of Education Science of Ukraine

5:12pm - 5:36pm
Impact Of An Instructor's Disability On Students Learning Outcomes In A Problem-Based Remote Lab
Nils Kaufhold, Konrad Boettcher,

Demonstrator for Product-Individual Carbon Footprint Data
Oliver Vogt, Julian Rolf, Mario Wolf, Detlef Gerhard
Digital Engineering Chair, Ruhr University Bochum, Germany

5:36pm - 6:00pm
Work-in-Progress: Virtual Reality Challenge App to Generate Interest in Mechanical Engineering
Mario Wolf, Oliver Vogt, Detlef Gerhard
Digital Engineering Chair, Ruhr University Bochum, Germany

Stack Web Application for Predictive Maintenance and Performance Insights
Salam Traboulsi, Dieter Uckelmann, Bhavuk Arora
Stuttgart University of Applied Sciences, Germany

5:36pm - 6:00pm
Leveraging Digital Twin Strategies for Thermal Optimization of 228-230nm far-UVC Modules in HealthTech Innovation
Pablo Fredes[1,3,4,5], M. Ajmal Khan[2], Javier Gonzalez[3], José Pascal[4], Ernesto Gramsch[3], Hideki Hirayama[2]
1: Hydraluvx Spa, Chile; 2: RIKEN Cluster for Pioneering Research (CPR), Japan; 3: Optics and Semiconductors Laboratory, Department of Physics, Universidad de Santiago de Chile, Av. Victor Jara 3493, Santiago, Chile; 4: Department of Mechanical Engineering, Universidad de Santiago de Chile, Las Sophoras 175, Santiago, Chile; 5: School of Engineering and Natural Resources, Duoc UC, San Joaquin, Santiago, Chile

Mesut Alptekin, Daniel Münstermann, Katrin Temmen
Universität Paderborn, Germany

5:36pm - 6:00pm
Personalized Learning In Engineering: Validation Of An Intelligent Tutoring System
Reymi Then Luna[4], Edwin Marte[3], Jose Texier[1], Maria Larrondo-Petrie[2]
1: LACCEI; 2: Florida Atlantic University; 3: University of Florida - (US); 4: Universidad Tecnológica de Santiago, UTESA, Dominican Republic

Claudius Terkowsky
TU Dortmund University, Germany

| 6:00pm - 8:00pm | **Social event - Welcome cocktail: All participants**
 Location: Piso 15 Duoc UC HQ |

Date: Thursday, 10/Apr/2025

8:30am - 4:00pm	**Registration 2** Location: Duoc UC Campus Entrance		

| 9:00am - 10:30am | **EWA Forum 3: Industrial Projects**
Location: Aula Magna
Chair: **Manuel Morales**, DUOC UC

09:00am - 09:30am
Digital Factory NOW: Smart Utility Optimization
Markus Kick - Alvaro Ortega - Phoenix Contact
09:30am - 10:00am
Some experiences with ChatGPT for PLCnext Engineering
Prof.Dr. Langmann
10:00am - 10:30am
Digitization of pulp processes
Cristian Vasquez/Oscar Cifuentes - Empresas Arauco

Live streaming
https://youtube.com/live/QnfuQGDuReg?feature=share | **STE S4: Virtual & Remote Labs II/II**
Location: V213 Classroom
Chair: **Jakob Czekansky**, University of Applied Sciences Mittelhessen

9:00am - 9:18am
Student Perception of Remote Laboratories: A Descriptive Study
Fernando Gabriel Capuya[1], Fiorella Lizano-Sánchez[3], Narciso Verón-Rojas[1], Eric Montero-Miranda[3], Carlos Arguedas-Matarrita[3], Ignacio Julio Idoyaga[1,2]
1: Universidad de Buenos Aires, Facultad de Farmacia y Bioquimica, Centro de Investigacion y Apoyo a la Educación Cientifica, Argentine Republic; 2: CONICET, Republica Argentina; 3: Universidad Estatal a Distancia, Laboratorio de Experimentacion Remota, San José, Costa Rica

9:18am - 9:36am
Comparing The Test & Measurement Capabilities Of The VISIR And Hive Remote Laboratories
Gustavo R. Alves[1,2], Arcelina Marques[1,2], André V. Fidalgo[1,2], Frederico L. Jacob[1,2]
1: Polytechnic of Porto - School of Engineering, Portugal; 2: Center for Innovation in Engineering and Industrial Technology (CIETI), Portugal

9:36am - 9:54am
Edrys-Lite – Shareable Peer-to-Peer Remote Labs – Using Only Browser Technologies
André Dietrich, Sebastian Zug, Ines Aubel, Jihad Hyadi
TU Bergakademie Freiberg, Germany

9:54am - 10:12am
Development of an Alternative Remote Laboratory for Testing RLC Circuits in Engineering Education
Gastón Suarez, Federico Lerro
Facultad de Ciencias Exactas, Ingeniería y Agrimensura / Universidad Nacional de Rosario, Argentina

10:12am - 10:30am
Design And Implementation Of Scada System Under Iec 61850 Standard For Sep Laboratory At Universidad De Concepción
Vladimir Alfonso Esparza Henríquez[1], Diego Alberto Cabezas González[1], Luis Claudio García Santander[2], Daniel Reinaldo Quezada Muñoz[1], Jaime Addin Rohten Carrasco[1]
1: Universidad del Bío-Bío, Chile; 2: Universidad de Concepción, Chile | **STE S5: Industry 4.0 & Education**
Location: Auditorio
Chair: **Kalyan Ram Bhimavaram**, Indxo AI Pvt Ltd

9:00am - 9:18am
"Results and Projections of the Systematic Transformation of Technological Education: Transforming Education through Green Automation - The Experience of Ketran Agrobot and the methodology of transition from basic prototyping to industrial devices, integration in non-traditional sectors in Chile and South America"
Juan Mauricio Cabrera Chávez, Jeannete Carolina Ojeda Diaz
DUOC UC, Chile

9:18am - 9:36am
Iot Technologies for Research and Educational Experiments on Solid-State Lighting in the Ultraviolet Range: Applications in Biophotonics and HealthTech Innovations"
Pablo Fredes[1,2,3,4], Aaron Aedo[2], Jose Pascal[3], Ernesto Gramsch[2], Ulrich Raff[1], Cristian Soto[2]
1: Hydraluvx Spa, Chile; 2: Optics and Semiconductors Laboratory, Universidad de Santiago de Chile; 3: Department of Mechanical Engineering, Universidad de Santiago de Chile; 4: School of Engineering and Natural Resources, Duoc UC, San Joaquin

9:36am - 9:54am
Industry 4.0 Labs for Engineering Students: Online Collaborative Design and Laser Cutting of Art Tessellations
Moshe Greenholts, Igor Michael Verner, Alex Polishuk
Technion - Israel Institute of Technology, Israel

9:54am - 10:12am
Training 4.0 in PLC education
Reinhard Langmann
Edunet World Association, Germany

10:12am - 10:30am
Demand Response Scheduling for Photovoltaic Integration
Lester Marrero, Luis García-Santander, Daniel Sbárbaro
Universidad de Concepción, Chile |

| | **STE-R S2: Remote Presentations**
Location: online
Chair: **Diego Aguilera**, DuocUC

Link Sesion
https://us06web.zoom.us/j/85270452450?pwd=T6uxvdzbqTwE1o2CVrQSyLUiMI70Z8.1
ID: 852 7045 2450

9:00am - 9:18am
Educational Perspective and Recommendation on Generative Artificial Intelligence: Social Media, News, and Academic Literature
Oscar Karnalim, Sherly Santiadi, Della Natalia, Jessica Santosa Wijaya, Glory Emilisa Rupilu, Ivanayus Ivanayus, Anggarini Restiani Sarean, Gustiadhi Ariasenna Hassabian
Maranatha Christian University, Indonesia

9:18am - 9:36am
Generative Capabilities Of Artificial Intelligence: In Search Of Optimization
Denys Volodymyrovych Borysenko[1,2]
1: Simon Kuznets Kharkiv National University of Economics, Ukraine; 2: V. N. Karazin Kharkiv National University, Ukraine

9:36am - 9:54am
The Use of Artificial Intelligence Tools in Higher Education: An Exploratory Analysis
Álvaro Santos[1], Cristina Chuva[1,2], Anabela Gomes[1,2]
1: ISEC/IPC, Portugal; 2: CISUC, Portugal

9:54am - 10:12am
Improving Artificial Intelligence Tools in Education Towards Equity and Legality
Anna Milena Parland[1], Andrey Shcherbakov[2]
1: Åbo Akademi University, Finland; 2: Arcada University of Applied Sciences, Finland

10:12am - 10:30am
Integrating AI-Assisted Instruction with Remote Experimentation: Promoting Personalized Learning In STEM Education
Rania Hussein[1], Zhiyun Zhang[1], Fiorella Lizano-Sanchez[2], Carlos Arguedas-Matarrita[2], Miguel-Angel Cabeza-Rodriguez[3], Ignacio Idoyaga[4], Luis Rodriguez-Gil[5], Pablo Orduna[6]
1: University of Washington, Seattle, United States of America; 2: Universidad Estatal a Distancia, San José, Costa Rica; 3: Universidad Internacional de La Rioja (UNIR), Spain; 4: University of Buenos Aires, Buenos Aires, Argentina; 5: LabsLand, Spain; 6: LabsLand, United States | | |

| 10:30am - 11:00am | **Coffee Break 3: All participants**
Location: Central Courtyard | **EDUNET M&G: EduNet Meet & Greet**
Location: Central Courtyard
Chair: **Klaus Hengsbach**, Phoenix Contact GmbH & Co KG
Join us for a coffee break and connect with fellow EduNet members! Klaus | |

Hengsbach, the network's founder, will be on hand to address any inquiries. This event is open to all EduNet members and anyone interested in learning more about the network.

| 11:00am - 1:00pm | **Keynote Presentation 3 & 4: All participants**
Location: **Aula Magna**
Chair: **Michael E. Auer**, CTI Global Frankfurt
Chair: **Valerie Varney**, TH Cologne

11:00am - 11:30am
Award Session for the 2025 GOLC Award Winners
***

11:30am - 12:15pm
How do we transport clean solar and wind energy overseas?
Erwin Plett - Academia Patagonia SpA
***

12:15pm - 01:00pm
Are the Engineering Professors Prepared to Teach Engineering?
Uriel Cukiermann - Universidad Tecnologica Nacional (UTN)
***
https://ste-conference.org/current/conference.php#keynotes
Live streaming
https://youtube.com/live/00kC482OS3c?feature=share | | |
| 1:00pm - 2:30pm | **Lunch 2: All participants**
Location: **Central Courtyard** | | |

| 2:30pm - 4:30pm | **EWA Forum 4: Industrial Projects**
Location: **Aula Magna**
Chair: **Manuel Morales**, DUOC UC

02:30pm - 03:00pm
Rebooting Technical Education: A Firmware Update for Trainers
Jorge Bahamonde - Payelec

03:00pm - 03:30pm
Digital credentials as NFTs on the Blockchain
Roy Berman - POK

03:30pm - 04:00pm
Didactics in the world of automation
Jose Antonio González Fernández - Festo

Live streaming
https://youtube.com/live/qaq-airVmZI?feature=share | **STE S6: Engineering Education of the Future I/II**
Location: **Auditorio**
Chair: **Marcel Schade**, TU Dortmund University

2:30pm - 2:50pm
Effects of a STEM Study Orientation Programme for Females on Knowledge Structures
Marie Gillian Guerne, **Brit-Maren Block**
Leuphana University, Germany

2:50pm - 3:10pm
The Sky is the Limit - Make Laboratory Learning Objectives Greater Than Ever Before!
Marcel Schade[1], **Claudius Terkowsky**[1], **Konrad Boettcher**[1], **Alexander Behr**[1], **Dominik May**[2], **Uwe Wilkesmann**[1]
1: TU Dortmund University, Germany; 2: University of Wuppertal, Germany

3:10pm - 3:30pm
High-School Students' Engagement in Robotics Activities
Huberth Andres Perez Villalobos[1], **Igor Michael Verner**[2]
1: Universidad Nacional, Costa Rica; 2: Israel Institute of Technology - Technion

3:30pm - 3:50pm
Build and Test one IoT Monitoring System for Students Training
Doru Ursutiu[1,2], **Cornel Samoila**[1,3], **Elena-Cătălina Gherman-Dolhăscu**[1], **Corina Bogdan**[1], **Horia Modran**[1]
1: CVTC "Transilvania" University of Brasov - Romania; 2: AOSR – Academy of Romanian Scientists - Romania; 3: ASTR – Technical Sciences Academy - Romania

3:50pm - 4:10pm
Exploring Interconnections in Learning: Mathematics, Science and Technology
Tamara Diaz Chang
Universidad Austral de Chile, Chile

4:10pm - 4:30pm
Enhancing Higher Education with Multimodal Intelligent Agent using a RAG-Based Approach
Horia Alexandru Modran[1], **Ioana Corina Bogdan**[1], **Paul Livius Modran**[2]
1: Transilvania University of Brasov, Romania; 2: Bucharest University of Economic Studies, Bucharest, Romania | **STE Special 1: 2025 GOLC Award Winners**
Location: **V213 Classroom**
Chair: **Valerie Varney**, TH Cologne
Chair: **Unai Hernandez-Jayo**, University of Deusto

2:30pm - 3:00pm
MICRO – The Remote Lab for Embedded Systems
Jakob Czekansky, Diethelm Bienhaus, Justin Sauer, Leon Kraft, Tim-Niclas Ruppert, Jurij Schum, Lars Merke, Vivien Reuter, André Ehret, Kevin Klauser, Maximilian Djubajlo, Alexander Gockel, Tymoteusz Mucha, Luis Philipp Handschuh, Onur Melik Sen
University of Applied Sciences Mittelhessen, Germany

3:00pm - 3:30pm
Ultra-concurrent Microscopy Laboratory
María Paula Obando-Víquez[1], **Carlos Arguedas-Matarrita**[1], **Fiorella Lizano-Sánchez**[1], **Luis Rodríguez-Gil**[2], **Pablo Orduña**[3]
1: Universidad Estatal a Distancia, Costa Rica; 2: LabsLand, España; 3: LabsLand, EEUU

3:30pm - 4:00pm
PEARL – Paderborn Electrical Engineering AR Laboratory
Mesut Alptekin, Katrin Temmen
Universität Paderborn, Germany

4:00pm - 4:30pm
Virtual Reality for Digital Manufacturing & Specialized Process Equipment
Magesh Chandramouli
Purdue University NW, United States of America |
| | **STE Special 2: Highlight Publications 2024**
Location: **V 217 Classroom**
Chair: **Michael E. Auer**, CTI Global Frankfurt
Chair: **Dominik May**, University of Wuppertal

2:30pm - 2:50pm
Advanced Technologies and the University of the Future
Uriel Ruben Cukierman[1], **Eduardo Vendrell Vidal**[2], **Michael Auer**[3]
1: UTN, Argentine Republic; 2: UPV, Spain; 3: IGIP, Austria

2:50pm - 3:10pm
Book Title: "Research in Education. Writing, Strategies and Teaching Proposals" (Original Title: "Investigar en Educación. Escritura, Estrategias y Propuestas Didácticas")
María Isabel Pozzo (author & editor)[1,2,3]
1: National Technological University, Argentina; 2: National Scientific & Research Council, Argentina; 3: National University of Rosario, Argentina

3:10pm - 3:30pm
Online Laboratories In Engineering And Technology Education - State Of The Art And Trends For The Future
Dominik May[1], **Michael Auer**[2], **Alexander Kist**[3], **Claudius Terkowsky**[4], **Ian Grout**[5], **Uriel Cukierman**[6], **Valerie Varney**[7], **Doru Ursutiu**[8], **Cornel Samolia**[8], **Gustavo Alves**[9], **Arcelina Marques**[9], **Isabella Pozzo**[10]
1: University of Wuppertal, Germany; 2: CTI Frankfurt, Germany; 3: University of Southern Queensland, Toowoomba, Australia; 4: TU Dortmund University, Germany; 5: University of Limerick, Ireland; 6: National Technological University, Argentina; 7: TH Cologne, Germany; 8: Transylvania University Brasov, Romania; 9: Polytechnic of Porto, Portugal; 10: National Scientific and | **STE-R S3: Remote Presentations**
Location: **online**
Chair: **Pablo Fredes**, Duoc UC
Link sesion
https://us06web.zoom.us/j/84848025707?pwd=AahvRYiUb2aIOZbErBGajSS68xSKiI.1
ID: 848 4802 5707

2:30pm - 2:54pm
CrossLab Compatible Integrated Development Environment for Remote Laboratories
Pierre Helbing, Johannes Nau, Karsten Henke, Detlef Streitferdt
Technische Universität Ilmenau, Germany

2:54pm - 3:18pm
Turning Real-time Remote Labs into Ultra-Concurrent Remote Labs
Andrés Gamboa, Boris Pedraza, Alex Villazón, Omar Ormachea
Universidad Privada Boliviana, Bolivia, Plurinational State of

3:18pm - 3:42pm
REDTAIL: Leveraging Remote Experimentation and Digital Twins to Promote Engineering Learning Experiences
Zhiyun Zhang[1], **Rania Hussein**[1], **Pablo Orduna**[2]
1: University of Washington, Seattle, United States of America; 2: LabsLand, United States of America

3:42pm - 4:06pm
SmartEnvi: Improving the Quality of Life Through Innovative Technologies
Alexandra-Maria Borş[1,3], **Simona-Mihaela Bibic**[2,3]
1: Faculty of Applied Sciences, National University of Science and Technology POLITEHNICA Bucharest, Romania; 2: Department of | **STE-R S4: Remote Presentations**
Location: **online**
Chair: **Cristian Robles**, DUOC UC
Link sesion
https://us06web.zoom.us/j/82249455476?pwd=IMG0HLEALQtDH2ea2u8j8u6sQgP6Y7.1
ID: 822 4945 5476

2:30pm - 2:54pm
Work-in-Progress: Unveiling the Relationship among Chinese Pre-service Foreign Language Teachers' AIGC Literacy Beliefs, Practices, and Emotions
Yang Gao, **Mengmeng Xu**
Xi'an Jiaotong Universty, China, People's Republic of

2:54pm - 3:18pm
Using Computer Vision And Open Data To Improve Sign Language Proficiency In An Inclusive Communication Environment
Hlib Stupak[1], **Hanna Telychko**[1], **Daria Lytvyn**[2], **Mykyta Telychko**[2]
1: Donetsk National Technical University, Ukraine; 2: Secondary School # 9 Pokrovsk City Council, Ukraine

3:18pm - 3:42pm
Evaluation of Exergame Adaptation of Computer Games from the Open Visual Programming Language Scratch Repository for Balance Board Gamification
Oleksandr Blazhko[1], **Lyudmyla Vovkochyn**[2], **Asan Volkov**[1]
1: Odesa Polytechnic National University, Ukraine; 2: Cherkasy State Technological University, Ukraine

3:42pm - 4:06pm
Emotion Recognition and Identity Protection System with AI-Driven Spoofing Prevention |

Technical Research Council, Argentina

Applied Mathematics, 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

Alexandru Stefan Negrea, Nicolaie-Alin Marin, Horia-Daniel Oprea, Ioana Corina Bogdan, Horia Alexandru Modran
Transilvania University of Brasov, Romania

3:30pm - 3:50pm

The Art of Teaching, the Magic of Learning A Guide for Innovative University Teachers

Uriel Ruben Cukierman
UTN, Argentine Republic

3:50pm - 4:10pm

VISIR Handbook Analog Electronics with the VISIR Remote Lab: Real Online Experiments

Unai Hernandez-Jayo[1], Javier García-zubia[1], Gustavo Alves[2]
1: University of Deusto, Spain; 2: ISEP, Portugal

4:10pm - 4:30pm

Scientific Journals published by IAOE

Michael E. Auer
CTI Global Frankfurt, Germany

4:06pm - 4:30pm

An M-IoT-Based System for Atmospheric Emission GIS Mapping: A Case Study in downtown San Salvador.

Omar Otoniel Flores -Cortez[1], Carlos Osmin Pocasangre[3], Fernando Arevalo[2]
1: Universidad Tecnologica de El Salvador, El Salvador; 2: Ruhr-Universitat Bochum; 3: Universidad de El Salvador, El Salvador

4:06pm - 4:30pm

FLOSSA: An Application for Improving the Interaction between Patient and a Humanoid Robot in a Dental Care Scenario

Kristoffer Kuvaja Adolfsson, Dennis Biström, Leonardo Espinosa-Leal
Arcada University of Applied Sciences, Finland

4:30pm - 5:00pm	**Coffee Break 4: All participants** Location: **Central Courtyard**		

| 5:00pm - 6:30pm | **STE WS4: Creating Web-based and Serverless RemoteLabs with Edrys-lite – A Path to OER in Lab Education?**
Location: **Auditorio**
Chair: **Ines Aubel**, TU Bergakademie Freiberg
Aubel, Ines; Dietrich, Andre; Zug, Sebastian

Creating Web-based and Serverless RemoteLabs with Edrys-lite - a Path to OER in Lab Education?
Ines Aubel, Andre Dietrich, Sebastian Zug
TU Bergakademie Freiberg, Germany | **STE WS5: Global Remote Lab Initiative**
Location: **Aula Magna**
Chair: **Michael E. Auer**, CTI Global Frankfurt
Chair: **Dominik May**, University of Wuppertal
Join Zoom Meeting
https://uni-wuppertal.zoom-x.de/j/65135589802?pwd=w1cfKuyLIkOVyUOsqUp1aSkMHTca0L.1

Meeting ID: 651 3558 9802
Passcode: eVnbjnd1

Global Remote Lab Initiative
Michael E. Auer[1], Dominik May[2], Reinhard Langmann[3], Klaus Hengsbach[4]
1: CTI Global Frankfurt, Germany; 2: University of Wuppertal; 3: Edunet World Association; 4: Phoenix Contact GmbH & Co KG | |

| 8:00pm - 10:30pm | **Conference Dinner: Pre-registered Participants**
Location: **Ocean Pacific's Restaurant**
Calle Huerfanos 2286, Santiago Centro
A bus will depart from Duoc UC to the restaurant at 19:15 and will return from the restaurant to Duoc UC at 22:30. | | |

Date: Friday, 11/Apr/2025

| 8:30am - 4:00pm | **Registration 3**
Location: Duoc UC Campus Entrance | | | | |

9:00am - 10:30am

EWA: Annual general meeting: Closed
Location: **V213 Classroom**
Chair: **Reinhard Langmann**, Edunet World Association
Microsoft Teams Benötigen Sie Hilfe?
Jetzt an der Besprechung teilnehmen
Besprechungs-ID: 322 230 993 386
Kennung: P6vT9jn6

IAOE: Annual general meeting: Closed
Location: **V 217 Classroom**
Chair: **Dominik May**, University of Wuppertal
Join Zoom Meeting
https://uni-wuppertal.zoom-x.de/j/65803582263?pwd=C4AwFWLwuFGUacPUU3vbz0hMTGE7nf.1

Meeting ID: 658 0358 2263
Passcode: BAS0D4Lw

STE S7: Artificial Intelligence
Location: **Aula Magna**
Chair: **Manuel Morales**, DUOC UC

9:00am - 9:18am
Artificial Intelligence in Argentine Engineering Education: Perceptions and Concerns Among Faculties
Uriel Ruben Cukierman, Juan Maria Palmieri, Diego Grasselli de Lima, Andrea Fleischman
UTN, Argentine Republic

9:18am - 9:36am
Students' experience using an Artificial Intelligence tool integrated into a Remote Chemistry Laboratory
Fiorella Lizano-Sánchez[1], Ignacio Idoyaga[2], Fernando Capuya[2], Pablo Orduña[3], Luis Rodriguez-Gil[4], Carlos Arguedas-Matarrita[1]
1: Universidad Estatal a Distancia, Costa Rica; 2: Universidad de Buenos Aires, Argentina; 3: LabsLand, USA; 4: LabsLand, Spain

9:36am - 9:54am
Work-In-Progress: KICK 4.0 - Increasing "AI Chatting Skills in the Engineering Laboratory" And Reducing Reservations
Johannes Kubasch, Dominik May
University of Wuppertal, Germany

9:54am - 10:12am
Artificial Intelligence Adaptive Learning Platform for STEM Skills Development
Unai Hernandez-Jayo, Mikel Pintado, Olga Dziabenko, Javier Garcia-Zubia, Diego Lopez-de-Ipina
University of Deusto, Spain

10:12am - 10:30am
Shaping Tomorrow's Classrooms: Integrating AI in Technology Teacher

STE-R S5: Remote Presentations
Location: **online**
Chair:
Link sesion
https://us06web.zoom.us/j/86029569789?pwd=lb8A099MB3li7gapetUi5bQuMIFlM8.1
ID: 860 2956 9789

9:00am - 9:18am
On the Use of Storytelling in a Databases Course: Developing Transversal Competencies
Alexandra Martínez[1], Aaron Mena[2]
1: Escuela de Ciencias de la Computación e Informática, Universidad de Costa Rica, San José, Costa Rica; 2: Escuela de Ciencias de la Comunicación Colectiva, Universidad de Costa Rica, San José, Costa Rica

9:18am - 9:42am
Anomaly Detection in Electric Vehicle Digital Twin
Raghuveer Rajesh Dani[1], Galyna Tabunshchyk[1], Carsten Wolff[1], Benjamin Geiger[2]
1: FH Dortmund, Germany; 2: Hochschule Bochum University of Applied Sciences

9:42am - 10:06am
Work-In-Progress: Evaluating Feasibility Of Band Matrix Solvers For Scaling Up Extreme Learning Machine Method
Anton Akusok[1], Kaj-Mikael Björk[2], Leonardo Espinosa Leal[1]
1: Arcada University of Applied Sciences, Finland; 2: University of Turku, Finland

10:06am - 10:30am
Object Detection for Machine-vision Based Sorting
Rizwan Ullah, Thumula Patabendige, Kim Roos
Arcada University of Applied Sciences, Finland

STE-R S6: Remote Presentations
Location: **online**
Chair: **Fabian Tellez**, DUOC UC
Link sesion
https://us06web.zoom.us/j/81989441270?pwd=ojpDAh8xffHDkDch8tfRcwe5YAQdGk.1
ID: 819 8944 1270

9:00am - 9:18am
Augmented Reality and AI Integration in Truth Detection Apps
Maria-Giulia Gheorghiu[1], Simona-Mihaela Bibic[1], Ioana Corina Bogdan[2]
1: National University of Science and Technology POLITEHNICA Bucharest, Romania; 2: Faculty of Electrical Engineering and Computer Science Transilvania University of Brasov, Romania

9:18am - 9:36am
Development of a Remote Learning Ecosystem using XR, AI and Data Science Lessons in the Tec21 Educational Model
Carlos Alberto Gonzalez Almaguer, Arturo González de Cosío, Veronica Saavedra Gastelum, Natalia Frias Reid, Lisy Leon Rubio, Sergio Tulio Hernandez Aceves, Serbio Sebastian Caballero Chavez
Tecnologico de Monterrey, Mexico

9:36am - 9:54am
Long-term implications of the pandemic on Higher Education: An analysis through the lenses of Actor-Network Theory
Cristina Chuva[1,2], Anabela Gomes[1,2]
1: ISEC/IPC, Portugal; 2: CISUC, Portugal

9:54am - 10:12am
Defining Standards in STE2AM Education
Dario Assante[1], Mehmet Başaran[2], Andrea Falegnami[1], Andrea Tomassi[1]
1: Università Telematica Internazionale Uninettuno, Italy; 2: Gaziantep Üniversitesi, Turkey

10:12am - 10:30am
Exploring Emerging Technologies in Online Exam Supervision
Marian Stan
Bucharest University of Economic Studies, Romania

10:30am - 11:00am	**Coffee Break 5: All participants** Location: Central Courtyard

11:00am - 1:00pm	**Keynote Presentation 5 & 6 & 7: All participants** Location: Aula Magna Chair: **Dominik May**, University of Wuppertal **11:00am - 11:45am** **Adapting Curriculums to Technological Change: Leveraging Learning Analytics for Skill-Based Education and Continuous Improvement** Isabel Hilliger - Pontificia Universidad Catolica de Chile (PUC) *** **11:45am - 12:30pm** **Remote Laboratories in Technical Education** Luciano Chiang - Pontificia Universidad Catolica de Chile (PUC) *** **12:30pm - 01:00pm (Special Invited Talk and Presentation of STE 2026)** **Online Technologies and Virtual Instrumentation in Sensing – Monitoring – Medicine – Industry: Cloud Instrumentation and IoT** Doru Ursutiu - Transilvania University of Brasov *** https://ste-conference.org/current/conference.php#keynotes **Live streaming** https://youtube.com/live/Q0neMg05RZY?feature=share

1:00pm - 2:00pm	**Lunch 3: All participants** Location: Central Courtyard

2:00pm - 4:00pm				

STE S8: Smart Education - Learning in Virtual Enviroments - Remote Control & Measurement
Location: Aula Magna
Chair: **Manuel Morales**, DUOC UC

2:00pm - 2:24pm
Enhancing Interaction with Remote Microcontroller-Based Experiments Using a Low-Cost Multi-Function Instrument in Educational Settings
Jakob Czekansky, Justin Sauer, Tim-Niclas Ruppert, Lars Merke, Clemens Haefke, Diethelm Bienhaus
University of Applied Sciences Mittelhessen, Germany

2:24pm - 2:48pm
Programming Education with LLMs and NPCs: A Dialogical Learning Framework for VS Code
Andrey Shcherbakov, Dennis Biström, Truong An Pham, Leonardo Espinosa-Leal
Arcada UAS, Finland

2:48pm - 3:12pm
STAYinBowling: A Suite of Digital Educational Tools for Supporting Bowling Coaches and Athletes
Hippokratis Apostolidis, Lampros Karavidas, Ilias Zosimadis, Dimitris Zygolanis, Nikolaos Politopoulos, Anastasia Stamelou, Ioannis Stamelos, Thrasyvoulos Tsiatsos
Aristotle University of Thessaloniki, Greece

3:12pm - 3:36pm
HALT4Kids Alert Ecosystem for Child Safety in Sports
Iakovos Stratigakis, Stella Douka, Thrasyvoulos Tsiatsos
Aristotle University of Thessaloniki, Greece

3:36pm - 4:00pm
Defining Dimension Metrics for Evaluating Overall Prompting Effectiveness
Andrey Shcherbakov, Leonardo Espinosa-Leal
Arcada UAS, Finland

STE S9: Engineering Education of the Future II/II
Location: Auditorio
Chair: **Maria Paula Obando**, Universidad Estatal a Distancia

2:00pm - 2:20pm
Digital Competence in Teaching and Learning Research Skills at the University
María Isabel Pozzo[1,2,3], Abdallah Al Zoubi[4]
1: National Scientific and Technical Research Council, Argentina; 2: National Technological University, Argentina; 3: National University of Rosario, Argentina; 4: Princess Sumaya University for Technology: Amman, Jordan

2:20pm - 2:40pm
The Modern Engineering Portfolio – A Framework To Capture Student Achievement In The Context Of A Modern Engineering Curriculum
Catherine Mary Hills, Zachary Quince, Justine Baillie, Alexander A Kist
University of Southern Queensland, Australia

2:40pm - 3:00pm
Applying Systems Engineering to the Design of a Project Based Learning Unit
Catherine Mary Hills[1], Leslie Bowtell[1], Ananda Maiti[2], Alexander A Kist[1]
1: University of Southern Queensland, Australia; 2: Deakin University, Australia

3:00pm - 3:20pm
Implementation and Effectiveness of a Game-Based Production Management Workshop to Motivate Women in STEM
Marie Gillian Guerne[1], Brit-Maren Block[1], Matthias Schmidt[2]
1: Leuphana University, Germany; 2: Leibnitz University, Germany

3:20pm - 3:40pm
New Insights On The Characterization of Handgrip Strength Time Profile
Alberto Cardoso[1], Diana Urbano[2], Maria Teresa Restivo[3]
1: University of Coimbra, Dep. of Informatics Engineering, CISUC-LASI, Portugal; 2: LAETA, FEUP, University of Porto, Portugal; 3: LAETA, FEUP, University of Porto, A3ES, Portugal

3:40pm - 4:00pm
Increasing Deep Learning in a Chemical Engineering Laboratory Course with Constructive Alignment: Preparing Students for Industry and Work 4.0
Alexander Stephan Behr[1], Stefan Höving[1,2], Marcel Schade[2], Konrad E. R. Boettcher[1], Stijn de Vries[1], Claudius Terkowsky[2], Norbert Kockmann[1]
1: TU Dortmund University, Department of Biochemical and Chemical Engineering,

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STE Special 3: IAOE Doctoral Consortium
Location: V213 Classroom
Chair: **María Isabel Pozzo**, National Technological University
Chair: **Dominik May**, University of Wuppertal

2:00pm - 2:30pm
Development of an Energy Monitoring and Management Platform for Smart Grids
Sebastian Alejandro Irribarra, Luis Garcia Santander
University of Concepcion, Chile

2:30pm - 3:00pm
Implementing a Stewart Platform in Robotics Education: A Case Study
Axel Jacobus J Degrande, Jona Gladines, Sam Van der Jeught, Amélie Chevalier
University of Antwerp, Belgium

3:00pm - 3:30pm
Open Education in Engineering Programs in Argentina: A Study on Its Feasibility and Implications
Juan María Palmieri
UTN Buenos Aires School, Argentine Republic

STE-R S7: Remote Presentations
Location: online
Chair: **Franco Gnecco**, Duoc UC

Link sesion
https://us06web.zoom.us/j/89216170363?pwd=b026BqOyCz3ilNHyzYFzU8zwBzQnkK.1
ID: 892 1617 0363

2:00pm - 2:24pm
Modern Potential of Machine Learning in Adaptive Interface Development
Denys Volodymyrovych Borysenko, Songshan Cao
Simon Kuznets Kharkiv National University of Economics, Ukraine

2:24pm - 2:48pm
Machine Learning and Data Mining Techniques for Detecting Fraudulent Job Postings
Alexandra-Ştefania Gârbacea, Horia Alexandru Modran, Ioana Corina Bogdan
Transilvania University of Brasov, Romania

2:48pm - 3:12pm
SME AI Outreach in Finland – a case study
Kaj-Mikael Björk[1,2], Anton Akusok[2], Amaury Lendasse[3], Leonardo Espinosa-Leal[2]
1: Centre for Intelligent Computing, University of Turku, Finland; 2: Arcada University of Applied Sciences, Helsinki, Finland; 3: Missouri S&T, dept. of engineering management and systems engineering

3:12pm - 3:36pm
Integrating Blockchain into Vocational Education and Training: The BCH4VET Modular Framework for Digital Transformation
Dario Assante[1], Christina Irene Karvouna[2], Ali Gökdemir[3]
1: Università Telematica Internazionale Uninettuno, Italy; 2: NEFINIA, The Netherlands; 3: Innomate, Turkey

3:36pm - 4:00pm
An Extreme Learning Machine Model for Predicting the Duration of User Stories in Agile Project Management
Asif Raza[1,3], Christian Fernandez-Campusano[2], Leonardo Espinosa-Leal[3]
1: VizTrend OY; 2: Universidad de Santiago de Chile (USACH); 3: Arcada University of Applied Sciences, Finland

Emil-Figge-Str. 68, 44227 Dortmund, Germany; 2: TU Dortmund University, Center for Higher Education, Vogelpothsweg 78, 44227 Dortmund, Germany

4:00pm - 4:30pm	**Closing Session & Farewell: All participants** Location: **Aula Magna** Chair: **Dominik May**, University of Wuppertal <u>**04:00pm - 04:30pm**</u> **Closing Session with Best Paper Awards of STE 2025** **Live streaming** https://youtube.com/live/rFeFxhNJHOQ?feature=share
4:30pm - 5:30pm	**Farewell Coffee: All participants** Location: **Central Courtyard**

Date: Saturday, 12/Apr/2025

9:00am	**Social Event: Visit to the High Mountain - Pre registered participants**
-	Location: **Andes Moutain**
4:00pm	The bus leaves from Duoc UC HQ at 09:00
	It is recommended to wear comfortable clothing, considering a forecasted temperature of 15°C