

Final Program of the MCCSIS 2023

Multi Conference on Computer Science and Information Systems

Conference Sessions:
e-Learning and Digital Learning 2023
ICT, Society and Human Beings 2023
e-Health 2023
Sustainability, Technology and Education 2023

Saturday 15th July 2023

in Porto, Portugal

08:30-19:25 Welcome Desk

09:15 – 09:30 Session O – Opening Session
Room Belmonte

Profs. Pedro Isaias and Piet Kommers

09:40-10:55 FRP 15.1
Primary and Secondary Education
Room Belmonte
Chair: *Veronika Makarova*

A SURVEY WITH FUTURE PRIMARY SCHOOL TEACHERS ON USING GEOGEBRA FOR 2D AND 3D SHAPES (F030)

Vittoria Bonanzinga

DESIGN DIDACTIC ACTIVITIES USING GAMIFICATION: THE PERSPECTIVE OF TEACHERS (F138)

Cecilia Fissore, Valeria Fradiante, Marina Marchisio and Claudio Pardini

ENGAGING WAYS OF LEARNING: ESPORTS AND VIDEO GAMES AS A LEARNING ENVIRONMENT FOR STUDENTS IN BRAZIL (R032)

Andréa Corrêa Lagareiro and Claudio Alexandre Kovacs Pires de Godoi

09:40-10:50 FSP 15.2
ICT and effects on humans // Other
Room Guimarães
Chair: *Kristiina Korjonen-Kuusipuro*

“UNLOCKING MEMORIES, REIGNITING JOY”: A FEASIBILITY STUDY ON PERSONALIZED INTERACTIVE GAMES TO ENHANCE REMINISCENCE FOR PEOPLE WITH ALZHEIMER’S DISEASE (F094)

Anis Hasliza Abu Hashim, Emma Nuraihan Mior Ibrahim, Marina Ismail and Juhaida Ismail

EXPLORING THE POTENTIAL OF MUSICAL ACTIVITY SYSTEMS FOR PEOPLE WITH DEMENTIA AND THEIR CAREGIVERS (S072)

Kevin C. Tseng, Chieh-Yun Liu and Tsai-Husan Tsai

ADOPTION ATTITUDE AND CONTINUANCE INTENTION TO ONLINE FINFLUENCER VIDEO USAGE: THE ROLE OF TRUST (S092)

Emine Cigdem Canatan, Ali Coskun and Aysegul Tokar

09:40-11:10 FRP 15.3
Actions for reaching the Good Information Society // Quality of life // Other
Room Bragança
Chair: *Jari Laarni*

SEARCHING FOR FALLS TRAJECTORIES OF THE ELDERLY (F052)

Ndiaye Amadou Maguette Djiogomaye, Michel Harel, Joseph Ngatchou-Wandji, Justine Trimouillas, Nassima Toumi,

Caroline Gayot, Sophie Boyer and Achille Edem Tchalla

PUBLIC ATTITUDE TOWARD PARTICIPATION IN DISCUSSIONS ON ARTIFICIAL INTELLIGENCE IN JAPAN (F057)

Yukiko Maruyama

RESPONSIBLE TECHNOLOGY: THINKING ON THIS VITAL CONCEPT (R056)

Marcel J. Simonette and Edison Spina

DIGITAL CHALLENGES OF WORK MODEL (F067)

Katarina Šiber Makar, Anita Belak Bradač and Ivana Ogrizek Biškupič

11:00-11:30 Coffee Break

11:30-13:00 FSP 15.4

Instructional Design Issues

Room Belmonte

Chair: Fabian Dillenhofer

PANDEMIC IMPACT ON ARGENTINIAN HIGHER EDUCATION. THE CASE OF THE NATIONAL UNIVERSITY OF LA PLATA (F142)

Francisco Javier Díaz, María Alejandra Osorio, Ana Paola Amadeo and Isabel Kimura

DESIGNING A PICTURE E-BOOK INTERFACE WITH A READ-ALoud FUNCTION TO IMPROVE ELEMENTARY SCHOOL STUDENTS' READING INTEREST (S123)

Gloria Yi-Ming Kao and Pei-Wen Lin

CHALLENGES IN DESIGNING AN ONLINE ACADEMIC WRITING TUTORIAL FOR INTERNATIONAL EFL/ESL SPEAKING GRADUATE STUDENTS (S025)

Zhengxiang Wang, Zhi Li and Veronika Makarova

AN ANALYSIS OF PATHS TO RECOVER DEFICIENCIES IN THE LOGICAL-MATHEMATICAL FIELD DURING TWO YEARS OF THE PANDEMIC (S058)

Vittoria Bonanzinga and David Barilla

11:30-13:05 FSP 15.5

Globalization and ICT // Sustainability, Democracy

Room Guimarães

Chair: Anis Hasliza Abu Hashim

CORÈHEALTH: OPERATING CENTER OF TELEMEDICINE FOR CHRONIC DISEASES AND CLINICAL NETWORKS OF APULIA REGION (F031)

Giovanni Gorgoni, Pasquale Notarangelo and Vito Petrarolo

THE ROLE OF BUILT HERITAGE WITHIN EDUCATION FOR SUSTAINABLE DEVELOPMENT THROUGH MOBILE AUGMENTED REALITY GAMES (F036)

João Ferreira-Santos and Lúcia Pombo

SUSTAINABLE TRANSPORT SYSTEM AS A BASIS IN THE FUNCTIONAL ASPECT OF SUSTAINABLE MOBILITY (S051)

Natalya Shramenko and Christoph Hupfer

EMPLOYABILITY OF ICT GRADUATES IN CROATIA (F055)

Ana Tecilazić

11:30-12:50 FSP 15.6

Sustainability, Technology and Education

Room Bragança

Chair: Anne-Marie Tuomala

"A PIECE OF CAKE" - SUSTAINABLE EDUCATION PRACTICES WITH TRANSFORMER MODELS (F022)

Francisco de Arriba-Pérez, Silvia García-Méndez and Francisco J. González-Castaño

CONSUMER ATTITUDES AND GREEN SCEPTICISM TOWARDS ENERGY-EFFICIENT HOUSEHOLD APPLIANCES: FINDINGS FROM A PRELIMINARY STUDY (F033)

Gabriella Francesca Amalia Pernice, Valeria Orso and Luciano Gamberini

USING PARTICIPATORY ACTION RESEARCH TO IMPROVE STUDENT OUTCOMES IN FASHION SUSTAINABILITY EDUCATION (S016)

Alexandra Howell Abolo and Elizabeth Shorrock

13:00 – 14:15 Lunch Break

14:15 – 15:15 Session KL1 – Keynote Presentation

Room Belmonte

HOW THE FAILURE OF E-LEARNING DURING THE COVID-19 LOCKDOWN COULD HAVE BEEN AVOIDED THROUGH ENHANCED LEARNING DESIGN ALIGNMENT

Thomas C. Reeves, Ph.D., Professor Emeritus of Learning, Design, and Technology, The University of Georgia, USA

15:15-16:20 FSP 15.7

e-Learning Delivery Issues

Room Belmonte

Chair: Jun Lio

ELECTRONIC VISUAL LEARNING AIDS FOR THE EFFECTIVE CLASS IN HIGHER EDUCATION TOWARDS METACOGNITIVE LEARNING (F019)

Dileta Jatautaite, Edita Butrime and Vaiva Zuzevičiūtė

ROLE OF METAVERSE IN E-LEARNING AND ITS CONTRIBUTION TO IMPROVING THE QUALITY OF EDUCATION (S018)

Kyriakos Kouveliottis and Maryam Mansuri

TYPES OF AFFORDANCES AND THEIR ROLE IN QUANTITATIVE UX/UI RESEARCH. A SCOPING REVIEW OF AFFORDANCES-FOCUSED LITERATURE (F129)

Ionut-Dorin Stanciu, Oana Teodora Cramariuc and Irina Georgiana Mocanu

15:15-16:20 FSP 15.8

Life environment and ICT

Room Guimarães

Chair: Natalya Shramenko

PROCEDURE DEVELOPMENT PRACTICES IN FINNISH NUCLEAR POWER PLANTS (F033)

Jari Laarni and Marja Limasuo

BONE+: AN AI-DRIVEN CHATBOT PLATFORM FOR PROMOTING BEHAVIOR CHANGE IN BONE HEALTH AND OSTEOPOROSIS PREVENTION (S088)

Tsai-Hsuan Tsai, Yue-Shan Hsieh, Chan-Shien Ho, Yu-Cheng Pei and Chien-Lung Hsu

ONLINE TEACHING IN A UNIVERSITY ENVIRONMENT WITH LIMITED INTERNET ACCESS: CASE OF CONGOLESE UNIVERSITIES (F041)

Efrem Mbaki Luzayisu

15:15 – 16:15 Tutorial - Part I

Room Bragança

BECOMING MORE RESILIENT BY USING RESEARCH-SUPPORTED STANDARDS AND PRACTICES TO IMPROVE COURSE/PROGRAM DESIGN FOR MULTIPLE DELIVERY MODALITIES

Dr Yaping Gao, EDD, Vice President, Member Services & Partnerships Quality Matters, USA

16:20-16:50 Coffee Break

16:50 – 18:50 Tutorial - Part II

Room Bragança

BECOMING MORE RESILIENT BY USING RESEARCH-SUPPORTED STANDARDS AND PRACTICES TO IMPROVE COURSE/PROGRAM DESIGN FOR MULTIPLE DELIVERY MODALITIES

Dr Yaping Gao, EDD, Vice President, Member Services & Partnerships Quality Matters, USA

16:50 – 17:50 Panel

Room Belmonte

CHATGPT IN EDUCATION: BENEFITS AND CHALLENGES

Pedro Isaías, The University of New South Wales (UNSW – Sydney), Australia and Paula Miranda, Polytechnic Institute of Setubal, Portugal

16:50-19:10 Session FSPP 15.9
Research Issues // eHealth Architectures
Room Guimarães
Chair: Eisque Hanada

DEVELOPMENT OF AN INTEROPERABILITY PLATFORM FOR INFORMATION SYSTEMS IN THE EHEALTH DOMAIN, FOR THE PORTUGUESE HEALTH SYSTEM (F033)
José D. Pereira, Miguel A. Brito and Ricardo J. Machado

CONNECTED PUERPERIUM IN PORTUGAL: A DIGITAL SYSTEM FOR AN INTEGRATIVE POSTPARTUM CARE (F064)
Carla V. Leite, Tala Al Shrbaji, Hannakaisa Niela-Vilen, Ana Patrícia Oliveira and Rita Oliveira

PHYSICAL ACTIVITY PROMOTION AND DIGITAL INTERVENTIONS (F047)
Jennifer Santos and Rita Oliveira

FROM DATA TO DECISION: EXAMINING REAL-WORLD DATA ANALYSIS TRENDS (S043)
Alfredo Tirado-Ramos, Ximwen Xu, Yuxuan Peng, Manuel Castañón-Puga, Luis Enrique Palafox-Maestre and E. Dante Suarez

AN IOT-BASED SYSTEM FOR MEASURING PENIBILITY AT WORK (S066)
Rémi Bastide

CONSTRUCTING A STROKE DIAGNOSIS AND PROGNOSIS SYSTEM BASED ON THE BPN ALGORITHM USING TC-99M-ECD SPECT IMAGES (P022)
Jui-Jen Chen, Hung-Nien Chang Chien and Yen-Hsiang Chang

BLOOD PRESSURE PREDICTION SYSTEM BASED ARTIFICIAL INTELLIGENCE (P034)
Yonghee Lee and Hakjin Kim

17:50-19:20 Session FSPP 15.10
Evaluation of Student and Tutor Satisfaction // Case Studies
Room Belmonte
Chair: Rose Sebastieneli

1 **DEVELOPMENT OF MODULAR E-LEARNING MATERIALS AS OER FOR A MOOC (F088)**
Fabian Dillenhöfer, Bernd Künne, Silke Frye, Tobias Haertel, Laura Altland, Frederike Kossack, Beate Bender, Alina Serssch, Peter Gust, Yannick Lattner, Matthias Müller, Dominik Hinse, Klaus Pantke, Jens Bechthold, Julia Frank and Tim Richard

2 **ENHANCING ACCESSIBILITY IN HIGHER EDUCATION (S027)**
Paula Escudeiro and Márcia Campos Gouveia

3 **PARTICIPANTS' NET PROMOTER SCORE ON THE STUDENTS MEET INTERNATIONALLY THROUGH LANGUAGE EDUCATION PROJECT (S087)**
Jun Iio, Shigenori Wakabayashi, Junji Sakurai and Yiyi Nakagawa

4 **CORPORATE LEARNING ANALYTICS – A CASE STUDY IN GERMAN FOOD RETAIL (P075)**
Mathias Groß

PREDICTING DROP-OUT INTENTIONS FROM STUDENTS' PERCEPTIONS OF ACADEMIC FEEDBACK AND PROCRASTINATION TENDENCIES. 'CAN PERSONALIZED FEEDBACK SOMETIMES BE TOO MUCH OF A GOOD THING?' (F097)
Ionut-Dorin Stanciu and Liliana Ciascai

Sunday, 16th July 2023

08:30-15:30 Welcome Desk

08:50-11:00 Session FSDP 16.1

Higher and Further Education

Room Bragança

Chair: Cathie Norris

EU SECURITY AND DEFENCE STUDENTS' PERCEPTION AND USE OF DIGITAL COMPETENCIES IN HIGHER EDUCATION (F139)

Marina Marchisio, Fabio Roman, Matteo Sacchet, Enrico Spinello, Linko Nikolov, Malgorzata Grzelak and Alin-Constantin Sava

VIDEO-PLAYING LOGS FOR ANALOGOUS VIDEOS REVEAL LEARNERS' PROACTIVE LEARNING STRATEGIES (F022)

Satoshi Yazawa, Masashi Imutsuka, Terutaka Komahashi, Kento Kanemura and Kazuo Hiraki

THE TUTOR'S PERCEPTION ON THE ACTIVITY OF A STUDENT IN GROUP ACTIVITY IN REMOTE MODE (S124)

Bertil P. Marques, Marilio Cardoso and Rosa M. Reis

VR GAME FOR IMPROVING SPATIAL UNDERSTANDING (S134)

Abdullah Doksanbir, Fabian Dillenhöfer, Jan Lennart Kraske, Martin Möller and Bernd Künne

INVESTIGATING CHARACTERISTICS OF TARGET HIGHER EDUCATION INSTITUTIONS ON THE PERFORMANCE OF MERGERS AND ACQUISITIONS IN GERMANY (D021)

Soheila Shahidi Asl

08:45-10:15 Session FP 16.2

Cross-cultural // Class

Room Guimarães

Chair: Tsai-Hsuan Tsai

AN EXPLORATORY STUDY ABOUT THE ROLE OF GENDER IN CYBERSECURITY AWARENESS FOR CHILDREN (F059)

Farzana Quayyum and Letizia Jaccheri

A COMPARATIVE ANALYSIS OF URBAN AND RURAL BROADBAND PENETRATION AND ACCESS TRENDS IN SOUTH AFRICA (F089)

Sicelokuhle Oscar Ngwenya, Reolyn Heymann, Theo G. Swart and Albert Lysko

DIGITAL EXPERIENCES FOR THE PROMOTION OF CULTURAL HERITAGE (F100)

Dalia Gallico

10:15-11:00 Talk 1

Room Guimarães

THE CRUCIAL, MULTI-FACETED AND EVOLVING ROLE OF FACULTY IN DELIVERING QUALITY EDUCATION AND ENSURING STUDENT SUCCESS

Dr Yaping Gao, EDD, Vice President, Member Services & Partnerships Quality Matters, USA

11:00-11:30 Coffee Break

11:30-13:05 Session SRP 16.3

Distance Learning // e-Learning Pedagogical Strategies

Room Guimarães

Chair: Alina Sersch

THE ITERATIVE DEVELOPMENT OF OPEN BLENDED TEACHING COMPETENCIES, FRAMEWORKS, AND RESOURCES (S053)

Jered Borup

INTERNATIONAL COOPERATION IN THE NORDIC AND BALTIC COUNTRIES. THROUGH SEMI-ONLINE TEACHER TRAINING AND RESEARCH (S152)

Kristina Mullamaa

ONLINE MS IN BUSINESS ANALYTICS BEST PRACTICES AND BEYOND (S057)

Rose Sebastianelli and Nabil Tamimi

THE INCLUSIVE EDUCATIONAL POTENTIAL OF VIRTUAL REALITY FROM AN ETHNO-RACIAL APPROACH: DEVELOPING DIGITAL SKILLS FOR THE CONTEMPORARY WORLD (S082)

Wanderlucy Czeszak and Romero Tori

AN OVERVIEW OF SOCIAL NETWORKS IN EDUCATION: HIGHLIGHTING THE ROLE OF ONLINE FEEDBACK (R074)

Elham Akbari

11:30-13:00 Session FP 16.4
eHealth Decision Support Systems
Room Bragança
Chair: Abderrahim Derouiche

DECISION-MAKING REGARDING LABOR AND BIRTH: AN ANALYSIS OF ONLINE SYSTEMS FOR EXPECTANT PARENTS (F042)

Carla V. Leite, Rita Oliveira, Catarina Lélis and Ana Patricia Oliveira

DEVELOPMENT OF A MOBILE APP DIAGNOSTIC SYSTEM FOR TROPICAL FEBRILE DISEASES (F017)

Okure Obot, Daniel Asuquo, Kingsley Attai, Ekemini Johnson, Kiriya Arnold, Mercy Edoho, Moses Ekpenyong, Christy Akwaowo, Ovoidoho Udoh, Victoria Usen and Faith-Michael Uzoka

EXPLAINABLE ARTIFICIAL INTELLIGENCE IN THE DIAGNOSIS OF CARDIOVASCULAR DISEASES IN SMALL SAMPLES (F068)

Natalia Gusarova, Ivan Tomilov, Danil Znievskii, Vladimir Shilonosov, Tatiana Polevaya and Aleksandra Vatian

13:00 – 14:15 Lunch Break

14:15-15:15 Special Talk
Room Belmonte

TODAY'S YOUNG LEARNERS DO NOT WANT TO USE PAPER!

Cathie Norris, Associate Dean for Research & Development, University of North Texas, USA and Elliot Soloway, Arthur F. Thurnau Professor, University of Michigan, USA

15:30 – Conference Tour and Dinner

Monday, 17th July 2023

08:30-13:00 Welcome Desk

08:50-10:05 Session FP 17.1
ICT and effects on humans
Room Belmonte
Chair: Hesham Alomyan

PROMISES OF DIGITAL IMAGINARIES AND RE-THINKING IDEALS OF DIGITAL YOUTH (F048)

Sari Tuuva-Hongisto and Kristiina Korjonen-Kuusipuro

UNIVERSITY STUDENTS' ATTITUDES TOWARDS ONLINE LEARNING DURING THE COVID-19 PANDEMIC (F071)

Hesham Alomyan

CYBERAGGRESSION AMONG YOUNG STUDENTS IN THE DEMOCRATIC REPUBLIC OF THE CONGO (DRC): PREVALENCE AND RISK FACTORS (F043)

Efrem Mbaki Luzayisu and Jean-Pierre Zamwangana Tungu

08:50-11:00 Session FSDP 17.2
Management Issues // Applications
Room Guimarães
Chair: Okure Obot

EXAMINATION OF UNREMITTING KIDNEY ILLNESS BY UTILIZING MACHINE LEARNING CLASSIFIERS (F058)

Fareeha Sarwar, Nuno Garrido, Pedro Sebastião and Akmal Rehan

INNOVATIVE NUTRITIONAL DIGITAL BIOMARKERS BASED ON ACTIMETRIC BEHAVIOR MONITORING (F023)

Abderrahim Derouiche, Ghazi Bouaziz, Damien Brulin, Eric Campo and Antoine Piau

HOW TO INTEGRATE WIRELESS COMMUNICATION INTO THE HOSPITAL INFRASTRUCTURE TO ENSURE ITS SAFETY AND EFFECTIVENESS (S035)

Eisuke Hanada

COMPUTER MODEL FOR PREDICTING EFFECTS OF STRAIN-SPECIFIC IMMUNITY (S046)

Manuel Castañón – Puga, Camilo Khatchikian, E. Dante Suarez, Dustin Brisson and Alfredo Tirado – Ramos

ADOPTION AND DIFFUSION PROCESSES OF TELEMEDICINE IN HEALTHCARE SYSTEMS (D021)

Yvonne Rauner and Harald Stummer

10:10-11:00 Session FSP 17.3
Sustainability, Technology and Education
Room Belmonte

Chair: Silvia Garcia-Méndez

YOUNG PROFESSIONALS' CDW RECYCLING OBSERVATIONS (F018)

Anne-Marie Tuomala

LIFE CYCLE ASSESSMENT OF THE EXTRACTION OF CONDENSED TANNINS FROM ACACIA BARK RESIDUES (S064)

Ricardo Simões, Carla L. Simões, Ricardo Ferreira and Ana C. Rodrigues

11:00-11:30 Coffee Break

11:30-12:55 Session FSRP 17.4
ICT skills education // Learning Analytics // Other
Room Belmonte

Chair: Elliot Soloway

THE ROLE OF NEW TECHNOLOGY IN EDUCATION OF PROGRAMMING NOVICES (S128)

Mario Konecki, Mladen Konecki and Ivana Ogrizek Biškupić

INVESTIGATION OF INTERACTIVE VIDEO-WATCHING PATTERNS AND VIEWS BY CONTENT TYPE (S091)

Cansu Gokrem and Emine Sendurur

PROPOSAL FOR A SERIOUS GAME ON THE THEME OF PERSONAL INFORMATION (R086)

Rin Kokubo and Jun Iio

THE ROLE OF DOMAIN FAMILIARITY TO LEARN INTRODUCTORY PROGRAMMING (R092)

Polat Sendurur and Emine Sendurur

HIGH-PERFORMING ONLINE STUDENT BEHAVIOURS (F052)

Rhodora Abadia, Sisi Liu and Qiaoling Sun

12:55 Best Paper Awards Ceremony and Closing Session
Room Belmonte

Profs. Pedro Isaias and Piet Kommers