MROL 2023

6th International Workshop on Methods, Resources and Technologies for Open Learning and Research (MROL 2023)

Co-located with the 18th International Conference on **ICT** in **E**ducation, **R**esearch, and **I**ndustrial Applications: Integration, Harmonization, and Knowledge Transfer (ICTERI 2023)
September 18, 2023, Ivano-Frankivsk – Ukraine

http://icteri.org/icteri-2023

Proceedings: CEUR-WS, indexed by DBLP, Scopus, Web of Science,
International e-journal "Information Technologies and Learning Tools" (indexed by Web of Science)

Venue: Vasyl Stefanyk Precarpathian National University

MROL 2023 at a Glance

This Workshop is designed to consider the state of the art and potential benefit of new and emerging adaptive technologies application within the open systems of higher education. The aim is to explore the use of open education and research methods, resources and technologies for forming the creative and ICT competent person in view of European Research Area development. That have to meet the priorities of open education, open science, open communication and open data access and delivery, the wide use of cloud-based learning tools, platforms and infrastructures to support learning and research. Workshop topics are related to big data, smart data, data and resources of the European Open Science Cloud (EOSC), adaptive data processing and analytics, smart learning and research environments to provide effective technologies for data access and processing within the open pedagogical systems of higher education.

The Workshop aims at:

(i) Exploration and use of open education and open research tools, resources and methods for forming the creative and ICT competent person in view of European Research Area development.
(ii) Considering and evaluating the realization of the design and development of open systems of higher education.

Important Dates

(23:59 Hawaii time)
Monday, 26.06.2023 – paper submission deadline
Monday, 17.07.2023 – acceptance notification for papers
Monday, 14.08.2023 – submission of camera-ready papers
Monday, 04.09.2023 – presentation submission deadline
Monday, 18.09.2023 – workshop day

Workshop Language: English

No Fees

The Workshop does not charge any conference fee. Participation is FREE; ICTERI 2023 sponsors cover expenses.

ICTERI 2023 will run in a **hybrid mode**, which combines physical assembly and virtual participation for those colleagues, who are unable to attend physically due to valid reasons.

The Scope of MROL

Nowadays, an effective and promising approach to open pedagogical systems design is the use of the cloud computing technologies to provide ICT support for the functioning and development of the computer-based educational and research environment. Innovative technological solutions for learning environment organization and design using cloud computing (CC) and ICT outsourcing show promise and usefulness. The challenges of making the ICT infrastructure of the university environment fit the needs of its users, taking maximum advantage of modern network technologies, and ensuring the best pedagogical outcomes leads to the search for the most reasonable ways of its modernization.

The cloud-based approach is to ensure the processes of open learning giving way for broader access to quality learning resources, supporting the processes of collaborative learning and also making the learning environment available for the user practically from any place and at any time.

The open science processes are related to open access to research data, open discussion and analysis of research results and open communication with society. To support these processes, the corporate or hybrid cloud-based university environments are useful as the essential components (accomplishments) for the resources of the various public information networks such as research infrastructures and social networks. Thus, the analysis of the principles and essential features of the structure and design of the cloud-based learning and research university environment becomes additionally valuable because of its the open science processes support.

The Workshop should lead to benchmarking the state of the art and defining the future prospects of the open systems of higher education design and development, with the focus on the most valuable trends, methods, tools and technologies driving the innovative development of educational environment.

The learner' competencies needed for the open educational and research systems development including higher responsibility, collaborative skills, leadership, creative thinking, taking the problem in general and others are to be considered and explored. **Topics of interest** include, but are not limited to:

- Cloud-based Educational and Research Environment Design
- ICT and Methods of Distance and Enhanced Learning
- Smart-systems: Models, Technologies and Resources – STEM Education, Learning Robotics, Knowledge Extraction, Engineering and Management, Learning and Scientific Analytics
- Internet of Things, Block Chain in Open Learning and Research Systems
- Methods, Technologies and Resources for Virtual and Remote Laboratories, Virtual and Augmented Reality in Open Learning,

- ICT Competence in Open Systems Design and Development,
- Quality Assurance of ICT Education: Methods, Resources and Technologies,
- Research Infrastructures for Open Science
- Mobile Resources and Ubiquitous Computing in Open Education
- Multimedia, Simulation, Virtualization and Open Learning Resources
- Data Computing for Open Education and Research etc.

Submission Types and Requirements

MROL solicits:
(i) Regular (full) research papers,
(ii) Short research papers,
(iii) Discussion or problem analysis papers.
All papers must describe the original work not previously published or submitted elsewhere, including other workshops of this conference.

Submission Instructions and Publication

The language of the Workshop is English. All submissions shall be annotated by the key words/phrases freely chosen by the authors. At least three and at most five key phrases should be provided.

Formatting instructions and template can be found at https://notso.easyscience.education/mrol/2023/templates.

Submissions must be made in MS Word format by using **"Not So Easy Science Education Conference System"**: https://notso.easyscience.education/mrol/2023. Please submit your paper to the **ICTERI-2023 MROL Workshop**.

The papers accepted for MROL are planned to be published online at CEUR-WS (indexed by Scopus).

Evaluation and Presentation

Every submission will be evaluated by at least three members of the MROL Program Committee. Based on evaluation results, the best papers will be accepted for their presentation at the workshop.

It is strongly required that at least one author of an accepted paper attends the workshop in person and presents their paper. Workshop organizers will withdraw the paper from the publication in CEUR-WS proceedings if the author(s) do not attend the workshop. The paper evaluation system is described in more detail at the link: http://icteri.org/icteri-2023/evaluation-criteria.

Chairs

Hennadiy KRAVTSOV (kgmkherson@gmail.com), Kherson State University, Ukraine

Mariya SHYSHKINA (marimodi@ gmail.com), Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine

Pawel PLASKURA (p.plaskura@unipt.pl), Jan Kochanowski University in Kielce, Poland

Program Committee Members

Pablo Garcia Bringas, University of Deusto, Spain
Antonio Sarasa Cabezuelo, Universidad Complutense de Madrid, Spain
Nadire Cavus, Near East University, Cyprus

Helena Fidlerova, Slovak University of Technology in Bratislava, Slovak Republic
Irina Georgescu, Bucharest University of Economics, Romania
Mustansar Ali Ghazanfar, University of East London, England
Sven Hartmann, Clausthal University of Technology, Germany
Olha Hniedkova, Kherson State University, Ukraine
Iryna Ivaniuk, Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine
Michail Kalogiannakis, mkalogian@uoc.gr, University of Crete, Greece
Oksana Klochko, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine
Olexandr Kolgatin, Simon Kuznets Kharkiv National University of Economics, Ukraine
Yuriy P. Kondratenko, Institute of Artificial Intelligence Problems of the MES and NAS of Ukraine, Ukraine
Vladislav Kruglik, Bogdan Khmelnitsky Melitopol State Pedagogical University, Ukraine
Yuliya Krylova-Grek, National University of "Kyiv-Mohyla Academy", Ukraine
Vladimir Kukharenko, Kharkiv National Automobile Highway University, Ukraine
Olena Kuzminska, National University of Life and Environmental Sciences (NULES) of Ukraine
Chung-Sheng Li, Taiwan Semiconductor Manufacturing Company, Taiwan
Jinwei Liu, Florida Agricultural and Mechanical University, USA
Lilia Luparenko, Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine
Maiia Marienko, Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine
Vincenzo Moscato, University of Naples Federico II, Italy
Thomas Moser, St. Pölten University of Applied Sciences, Austria
Yuliya Nosenko, Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine
Vasyl Oleksiuk, Ternopil Volodymyr Hnatiuk National Pedagogical University, Ukraine
Oksana Ovcharuk, Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine
Stamatios Papadakis, University of Crete, Greece
Abdel-Badeeh M. Salem, Ain Shams University, Cairo, Egypt
Prem Kumar Singh, Gandhi Institute of Technology and Management-Visakhapatnam, Andhra Pradesh-India
Nataliia Soroko, Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine
Alisa Sukhikh, Institute for Digitalisation of Education of the National Academy of Educational Sciences of Ukraine, Ukraine
Daniel Thalmann, École Polytechnique Fédérale de Lausanne, Switzerland
Ivan Tsidylo, Ternopil Volodymyr Hnatiuk National Pedagogical University, Ukraine
Alexander Weissblut, Kherson State University, Ukraine
Longkai Wu, Central China Normal University, China

How to Get to Ivano-Frankivsk

Detail information are available at the Conference Venue page at the ICTERI 2023 web site: http://icteri.org/icteri-2023.