17th International Conference ICTERI 2021
ICT in Education, Research, and Industrial Applications: Integration, Harmonization, and Knowledge Transfer
September 28 – October 02, 2021, Kherson – Ukraine


Conference Scope
ICTERI is an annual peer-reviewed international Computer Science conference. It focuses on research, design, development, deployment, and usage of advanced information systems and ICT Infrastructures in industry and education. Particular attention is paid to make sure that the presented ideas and solutions can be or have already been put into practice. This can be demonstrated, for example, by a proof-of-concept implementation, a comprehensive prototype, a comprehensive case study, or the analysis of real use cases. Reports on academic-industrial partnerships for ICT innovation and knowledge transfer are as welcome as technological and methodological submissions.

We solicit submissions of original work, not previously published, or submitted for publication elsewhere. Papers must be submitted to one of the following thematic tracks:

- **Track 1: Advances in ICT Research**
  - Resources Integration and Interoperability
  - Managing Big Data and Linked Open Data at Scale
  - Data Analytics and Business Intelligence
  - Knowledge Models, Languages, and Representations
  - Ontologies: Extraction, Engineering and Evolution
  - Domain Modelling Languages and Tools
  - Machine Learning: Deep Learning and Reasoning
  - Recommender Systems: Methods and Technologies
  - Challenges Arising within the Concept of Digital Society

- **Track 2: Information Systems: Technology and Applications**
  - Service-Oriented and Large-scale Distributed Computing and Cloud-based Technologies
  - Model Driven Architectures / Software Development
  - Smart Systems: Models, Technologies and Applications
  - Knowledge Extraction, Engineering and Management

- **Track 3: Academic/Industry ICT Cooperation**
  - Joint Academic-Industrial Research and Development
  - Infrastructures, Tools and Framework Conditions for Cooperation and Knowledge Transfer
  - Experiences in ICT for Technology-Enhanced Learning and Corporative Team Training
  - Best Practices in Cooperative Projects

- **Track 4: ICT in Education**
  - Methodology and Didactics of Teaching and Using ICT
  - ICT in Technology Enhanced Learning and Instruction
  - Advances in and Tools for Technology Enhanced Learning
  - ICT Competence Design and Development
  - Quality Assurance of ICT Education
  - Professional Retraining and Life-Long Learning using ICT

*ICTERI Tracks focus, but are not limited to the listed topics

Hybrid Mode
ICTERI supports and respects all the aspects that help promote diversity in our conference community, which aspires to facilitate a truly international and multicultural gathering. Though we prefer physical assembly for the conference as the most effective mean for scientific exchange and community building, we fully understand that some people might be under higher risk or stricter constraints, like international travellers. This is the reason for our decision to offer the choice of either physical or virtual participation for ICTERI 2021.

Please be informed that the current decision of the ICTERI Steering Committee is to run ICTERI 2021 in a hybrid mode, which combines physical assembly and virtual participation for those colleagues, who are unable to attend physically due to pandemic restrictions. However, it might be changed to a fully online mode based on the monitoring and assessment of the pandemic situation and restrictions closer to the conference dates.

The information about the arrangements and requirements related to the hybrid mode of the conference are provided and updated at [http://icteri.org/icteri-2021/hybrid/](http://icteri.org/icteri-2021/hybrid/).

Important Dates
(23:59 H awntime)
- Monday, 26.04.2021 - paper abstract submission
- Monday, 17.05.2021 - all paper types submission
- Monday, 28.06.2021 - acceptance notification
- Saturday, 28.08.2021 - camera ready papers submission
- Saturday, 28.08.2021 - registration
- Saturday, 28.08.2021 - presentation drafts submission
- Tuesday, 28.09.2021 - Sunday, 02.10.2021 - Conference days

No Conference Fee
Traditionally, ICTERI does not charge conference fees. Participation is FREE. Infrastructure and service expenses are covered by our sponsors.

Workshops and PhD Symposium

Submission Guidelines
The language of the ICTERI Main Conference is English. Submissions in any other language or not following the style guidelines will be rejected without review. Presentations in any other language are also not accepted and withdrawn from the program. All submissions shall be annotated by key words/phrases freely chosen by the authors. At least three and at most five key phrases

Venue: Kherson State University
have to be provided. All submissions must comply with the format guidelines. Formatting instructions and template as well as submission guidelines are provided for your convenience at the ICTERI 2021 web site: http://icteri.org/icteri-2021.

Please submit your paper in .pdf to the applicable ICTERI 2021 Track via the EasyChair Conference Management System: https://easychair.org/conferences/?conf=icteri2021.

Submission Types

Several types of papers are solicited for the main ICTERI conference tracks. Submission types are:

I. Full (regular) research papers
   - Report on accomplished, unpublished research work
   - Present a novel method, technique or analysis with appropriate empirical or other evaluation as a proof of validity
   Evaluation focuses on originality, technical soundness and the soundness of the real use demonstration.

Page limit: 12-16 LNCS pages.

II. Short (work-in-progress) research papers
   - Short reports of preliminary results or work in progress
   Evaluation focuses on originality, technical correctness and the value of the planned results in a short to mid-term perspective.

Page limit: 10-12 LNCS pages.

III. Discussion, survey, or problem analysis papers
   - Help understand a relevant problem without introducing a novel method, technique, or approach.
   Examples: a review placing a problem onto the state-of-the-art landscape and analyzing how far current solutions fall short; an in-depth discussion and analysis of a certain problem, etc.
   Evaluation focuses on the soundness of the problem analysis and the interest for the scientific community.

Page limit: 12-16 LNCS pages.

IV. Industry or education experience reports
   - Report on industrial or academic deployments of ICT
   - Experiences in the effective and efficient use of ICT in education
   Evaluation focuses on significance and practical relevance, technical soundness, and accompanying evaluation or industrial validation.

Page limit: 12-16 LNCS pages.

The papers submitted as one of the above types (I-IV) and II may be recommended to be considered as a Poster.

Evaluation and Publication

All submissions will be evaluated by the members of the international program committee. Accepted papers will be published in the international proceedings volume on-line (CEUR-W S).

The best papers among the accepted and presented at the conference will be selected and invited, by the ICTERI Steering Committee, to be revised and extended for the ICTERI post-proceedings volume by Springer Communications in the Computer and Information Science (CCIS) series.

Please check the Previous ICTERI Conferences page at the ICTERI 2021 web site (http://icteri.org/icteri-2021/previous-icteri-conferences/) to access the proceedings and post-proceedings volumes published by the previous conferences.

Presentation

Accepted papers must be presented at the conference by one of their authors, who commit to register and attend the conference. The Presentation Chair reserves the right to withdraw those papers from the proceedings, which have not been presented at the conference.

Organizers

Ministry of Education and Science of Ukraine
Kherson State University, Ukraine
Zaporizhzhia National University, Ukraine
TECH FORCE, Spain
V.N. Karazin Kharkiv National University, Ukraine
Taras Shevchenko National University of Kyiv, Ukraine
Universität Klagenfurt, Austria
Lviv Polytechnic National University, Ukraine
University of W arnia and Mazury in Olsztyn, Poland
Institute of Information Technology and Learning Tools
National Academy of Educational Science, Ukraine
Ukrainian Scientific and Educational IT-Society (UNIT), Ukraine
DataArt Solutions Inc., USA

General Chair
Oleksandr Spivakovsky, Kherson State University, Ukraine

Program Chairs
Vadim Ermolayev, Zaporizhzhia National University, Ukraine
David Esteban, TECH FORCE, Spain

Program Committee
Please check the Program Committee page at the ICTERI 2021 web site for the list of the PC members: http://icteri.org/icteri-2021/program-committee/

Presentations Chair
Hernich C. Mayr, Universität Klagenfurt, Austria

Poster Chair
Nagrytė Zholtkeychič, V.N. Karazin Kharkiv National University, Ukraine

Proceedings Chair
Vitaly Yakovyna, Lviv Polytechnic National University, Ukraine

Local Organization Chair
Maksym Vinnik, Kherson State University, Ukraine

Publicity Chair
Nataliya Kushnir, Kherson State University, Ukraine

How to Get to Kherson
Kherson is the regional capital city in the South of Ukraine. It is a nice and calm city with many nations living in one comfortable place, famous for their traditions of southern-Ukrainian hospitality. Kherson region is also known for its passion and effort in protecting and maintaining natural environment. The city and neighbourhood offer abundant attractions for traditional and ecological tourism. Kherson is well connected to international air hubs through its local airport. (http://airport.kherson.ua? lang=en). More details are available at the Conference Venue page at the ICTERI 2021 web site: http://icteri.org/icteri-2021/conference-venue/