

**Ministry of Education and Science of Ukraine
National University of Water and Environmental Engineering
Taras Shevchenko National University of Kyiv
National Technical University of Ukraine
«Igor Sikorsky Kyiv Polytechnic Institute»
National University of Ostroh Academy
V.M. Glushkov Institute of Cybernetics of NAS of Ukraine
Lviv Polytechnic National University
Pidstryhach Institute for Applied Problems of Mechanics and
Mathematics of NAS of Ukraine
Liverpool John Moores University (Great Britain)
University of Technology and Sciences in Bydgoszcz (UTP), Poland
Lublin University of Technology
Wroclaw University of Science and Technology**

PROGRAM

OF 2ND INTERNATIONAL WORKSHOP ON COMPUTATIONAL & INFORMATION TECHNOLOGIES FOR CONTROL & MODELING

(CITCM 2021)

co-located with V International scientific-practical conference on Modeling, Control
and Information Technology (MCIT 2021)



CITCM

WORKSHOP

**Rivne, Ukraine
November 5, 2021**

INTERNATIONAL PROGRAMME COMMITTEE

Agratini Octavian, Ph. D., Professor of Babeş-Bolyai University, Romania
Bomba Andrii, Dr. Sc., Technical Sciences, Professor, Professor of the Department of Computer Science and Applied Mathematics of the National University of Water and Environmental Engineering, Ukraine

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Novitzka Valerie, Dr. Sc., Technical Sciences, Professor of Department of Computers and Informatics, Technical University of Košice, Slovak Republic

Volodymyr Pasichnyk, Dr. Sc., Technical Sciences, Professor, Professor of the Department of Information Systems and Networks of Lviv Polytechnic National University, Ukraine

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Sabziev Elkhan, Ph. D., Leading Scientific Researcher of the Institute of Control Systems (Cybernetics Institute) of Azerbaijan Academy of Sciences, Azerbaijan

Savina Natalia, Dr. Sc., Economics, Professor, Vice-rector for Research Work and International Relations of the National University of Water and Environmental Engineering, Ukraine

Salvador César D., Ph. D., Chief Audio Scientist for Silicon Integrated, Peru

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Mariusz Kaczmarek, Ph.D., Professor, Kazimierz Wielki University in Bydgoszcz, Poland

ORGANIZING COMMITTEE

Safonyk Andrii, Dr. Sc., Technical Sciences, Professor of the Department of Automation, Electrical Engineering and Computer-Integrated Technologies of the National University of Water and Environmental Engineering, Ukraine (Chair)

Burduk Anna, Dr. Sc., Technical Sciences, Associate Professor, Department of Laser Technology, Automation and Production Organization of Wrocław University of Science and Technology, Poland

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Hrytcruk Ivanna, Assistant of the Department of Computer Science and Applied Mathematics of the National University of Water and Environmental Engineering, Ukraine.

PARTICIPANTS INSTRUCTION

The conference will be held online using online room in the software ZOOM. The software will install once before using it, by clicking the link to the zoom room. It is not necessary to create an account in zoom for joining the conference.

Either use the link or copy the Meeting ID to your Zoom-Software:

<https://zoom.us/j/99341700721?pwd=WUFITTLwYnFuUmZHdmhXRlZJRUtqdz09>

Meeting-ID: 993 4170 0721

Access code: 334044

CONFERENCE SCHEDULE

Friday, 5th November 09:00 - 13:00

Location: [ZOOM online room](#)

Conference opening

Prof. Viktor Moshynskiy, Rector of the National University of Water and Environmental Engineering (Ukraine)

Welcome Speech and Participants Congratulation

Prof. Burduk Anna, Dr. Sc. Technical Sciences, Associate Professor, Department of Laser Technology, Automation and Production Organization of Wroclaw University of Science and Technology, Poland

Welcome Speech and Participants Congratulation

Prysiachniuk Olena, Ph.D., Associate Professor of the Department of Automation, Electrical Engineering and Computer-Integrated Technologies of the National University of Water and Environmental Engineering, Ukraine

Welcome Speech and Participants Congratulation

Friday, 5th November 09:00 - 13:00

2nd International Workshop on Computational & Information Technologies for Control & Modeling (CITCM 2021)



1	<p><i>Pavlo Mamenko, Serhii Zinchenko, Pavlo Nosov, Kostiantyn Kyrychenko, Ihor Popovych, Yaroslav Nahrybelnyi and Vitaliy Kobets</i></p> <p>Optimization the Process of Avoid Collision Vessels by Sliding on the Ellipse of a Given Risk</p>
2	<p><i>Vadym Mateichuk, Serhii Zinchenko, Oleh Tovstokoryi, Pavlo Nosov, Yaroslav Nahrybelnyi, Ihor Popovych and Vitaliy Kobets</i></p> <p>Automatic Vessel Steering in Stormy Conditions</p>
3	<p><i>Volodymyr Hnatushenko, Sergey Nikulin, Kateryna Sergieieva and Olga Korobko</i></p> <p>Computer System for Estimation Spatial Characteristics of Linear Element Networks Derived from Satellite Images to Solve Geological Problems</p>
4	<p><i>Mykyta Myrontsov, Oleksandr Trofymchuk, Viacheslav Okhariev, Oleksii Noskov and Volodymyr Sokolov</i></p> <p>Solving an Hadamard's incorrect problem in the example of induction logging</p>
5	<p><i>Serhii Denysov, Vladimir Semenov</i></p> <p>Adaptive operator extrapolation method for operator inclusions in Banach Spaces</p>
6	<p><i>Volodymyr Hnatushenko, Victoriia Hnatushenko, Nataliia Dorosh, Nataliia Solodka and Oksana Liashenko</i></p> <p>Use Of A Data Graph Model To Develop Database Of An Expert System Prototype</p>
7	<p><i>Sergey Lyashko, Dmitriy Klyushin and Andrii Tymoshenko</i></p> <p>Gradient Algorithms for Optimal Control of Buried Point Sources in Two-Dimensional Richards-Klute Equation</p>
8	<p><i>Lyudmyla Kuzmych, Olena Bezvesilna, Volodymyr Kvasnikov, Stepan Kuzmych</i></p> <p>Development of the model of the intelligent instrument system for measuring the parameters of the stress-strain state</p>



9	<p><i>Andrii Safonyk, Ivanna Hrytsiuk, Anna Burduk, Andriy Khrystyuk and Olena Prysiashniuk</i></p> <p>Development and research of a remote control system based on the MESH network</p>
10	<p><i>Mariia Voronenko, Volodymyr Lytvynenko, Nataliia Savina, Viktor Mashkov and Mohamed Ali Taif</i></p> <p>Learning a Bayesian Network for Estimate the Environmental Performance Index</p>
11	<p><i>Oleksandr Sharko, Marharyta Sharko, Natalia Petrushenko, Nataliia Vasylenko, Mikhailo Mosin, Alexey Belousov</i></p> <p>Information Technologies For Assessing The Readiness Of Enterprises For Innovative Transformations Using Markov Chains</p>
12	<p><i>Gennadiy Sandrakov, Andrii Hulianytskyi, Vladimir Semenov</i></p> <p>Modeling of Homogenized Filtration Processes in Porous Media</p>
13	<p><i>Andrii Chugay, Georgi Yaskov and Andrii Zhuravka</i></p> <p>A solving approach for non-regular 3D shapes packing based on nonlinear programming</p>
14	<p><i>Nataliya Boyko and Oleksandr Petrovskiy</i></p> <p>Application of Topic Modelling Methods for Text Document Collections in Synthetic Languages</p>
15	<p><i>Nataliya Boyko and Viktor Kachmaryk</i></p> <p>Analysis of Long-Term Memory Network and Construction of Models for Predicting Time Series</p>
16	<p><i>Yurii Turbal, Andrii Bomba, Mariana Turbal and Nataliia Kunanets</i></p> <p>Mathematic and Computer Modeling of a Solitary Waves Trajectories in the “Shallow Water” Environments</p>
17	<p><i>Volodymyr Petrivskiy, Victor Shevchenko, Oleksii Bychkov, Yaroslav Petrivskiy, Pavel Petrov and Georgi Petrov Dimitrov</i></p> <p>Information technology for territory covering by sensors with</p>



	energy consumption optimization and network survivability testing
18	<i>Viktor Zhukovskyy, Serhii Shatnyi, Nataliia Zhukovska, and Jan Perhac</i> Information System of Cartographic Images Analysis for Soil Condition Monitoring of Agricultural Parcels