



**TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV
(FACULTY OF INFORMATION TECHNOLOGY, FACULTY OF COMPUTER SCIENCE AND
CYBERNETICS)**

**NATIONAL TECHNICAL UNIVERSITY OF UKRAINE "IGOR SIKORSKY KYIV POLYTECHNIC
INSTITUTE"**

**VIKTOR GLUSHKOV INSTITUTE OF CYBERNETICS OF THE NAS OF UKRAINE
INSTITUTE OF INFORMATION TECHNOLOGY AND LEARNING TOOLS OF THE NAES OF
UKRAINE**

**INSTITUTE FOR INFORMATION RECORDING OF THE NAS OF UKRAINE
INSTITUTE OF SOFTWARE SYSTEMS OF THE NAS OF UKRAINE
THE COUNCIL OF YOUNG SCIENTISTS OF THE FACULTY OF COMPUTER SCIENCE AND
CYBERNETICS AND THE FACULTY OF INFORMATION TECHNOLOGY OF TARAS
SHEVCHENKO NATIONAL UNIVERSITY OF KYIV**

PROGRAM

VIII International conference



IT&I



Information Technology and Implementation (Satellite)

December 01-03, 2021, Kyiv

The conference is planned to be held as video conference using the Zoom platform on 1 December, 2021 at **10 a.m.**

Link: <https://zoom.us/j/4263476258?pwd=SVNYOTZwL1luREVwWmlyWVhZS3RGUT09>
Code: 177837

Contact details

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PROGRAM COMMITTEE



General Chairs

- **Prof. Anatoly Anisimov**, Taras Shevchenko National University of Kyiv, Ukraine
- **Prof. Vitaliy Snytyuk**, Taras Shevchenko National University of Kyiv, Ukraine

International Program Committee

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- **Prof. Andreas Pester**, Fachhochschule Kärnten, Austria
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- **Prof. Oleksandr Marchenko**, Taras Shevchenko National University of Kyiv, Ukraine
- **Prof. Sándor Bozóki**, Computer and Automation Research Institute Hungarian Academy of Sciences, Hungary
- **Prof. Vitaliy Tsyganok**, Institute for Information Recording of NAS of Ukraine, Ukraine
- **Prof. Vladimir Vovk**, Royal Holloway, University of London, United Kingdom



ORGANIZING COMMITTEE



Organizing committee

Anatoly Anisimov	–	Correspondent-member of National Academy of Sciences of Ukraine, Doctor of Physical and Mathematical Sciences, Professor, Dean of the Faculty of Computer Sciences and Cybernetics.
Vitaliy Snytyuk	–	Doctor of Technical Sciences, Professor, Dean of the Faculty of Information Technology.
Anatolii Pashko	–	Doctor of Physical and Mathematical Sciences, Professor, Professor of the Department of Theoretical Cybernetics of the Faculty of Computer Sciences and Cybernetics.
Kateryna Kolesnikova	–	Doctor of Technical Sciences, Professor, Professor of the Department of Technologies Management of the Faculty of Information Technology.
Mykola Nikitchenko	–	Doctor of Physical and Mathematical Sciences, Professor, Head of the Department of Theory and Technology of Programming of the Faculty of Computer Sciences and Cybernetics.
Nataliia Lukova-Chuiko	–	Doctor of Technical Sciences, Professor, Head of the Department of Cybersecurity and Information Protection of the Faculty of Information Technology.
Oleh Ilarionov	–	Candidate of Technical Sciences, Associate Professor, Head of the Department of Intelligent Technologies of the Faculty of Information Technology.
Oleksandr Marchenko	–	Doctor of Physical and Mathematical Sciences, Professor, Professor of the Department of Mathematical Informatics of the Faculty of Computer Sciences and Cybernetics.

Oleksii Bychkov	–	Doctor of Technical Sciences, Professor, Head of the Department of Program Systems and Technology of the Faculty of Information Technology.
Serhii Toliupa	–	Doctor of Technical Sciences, Professor, Professor of the Department of Cybersecurity and Information Protection of the Faculty of Information Technology.
Taras Panchenko	–	Candidate of Physical and Mathematical Sciences, Associate Professor, Associate Professor of the Department of Theory and Technology of Programming of the Faculty of Computer Sciences and Cybernetics.
Valentyna Pleskach	–	Doctor of Economics, Candidate of Technical Sciences, Professor, Head of the Department of Applied Information Systems of the Faculty of Information Technology.
Viktor Morozov	–	Candidate of Technical Sciences, Professor, Head of the Department of Technologies Management of the Faculty of Information Technology.
Volodymyr Zaslavsky	–	Doctor of Technical Sciences, Professor, Professor of the Department of Mathematical Informatics of the Faculty of Computer Sciences and Cybernetics.
Iurii Krak	–	Correspondent-member of National Academy of Sciences of Ukraine, Doctor of Physical and Mathematical Sciences, Professor, Head of the Department of Theoretical Cybernetics of the Faculty of Computer Sciences and Cybernetics.
Yurii Samokhvalov	–	Doctor of Technical Sciences, Professor, Professor of the Department of Intelligent Technologies of the Faculty of Information Technology.
Yurii Kravchenko	–	Doctor of Technical Sciences, Professor, Head of the Department of Network and Internet Technologies of the Faculty of Information Technology.

Secretariat

Anastasiia Dubnytska	–	(specialist, FIT, Taras Shevchenko KNU)
Andrii Fesenko	–	(PhD in Technical Sciences, Head of the council of young scientists, FIT, Taras Shevchenko KNU)
Andriy Dudnik	–	(Doctor of Sciences, Ass. Prof., FIT, Taras Shevchenko KNU)
Dmytro Krukovets	–	(PhD student, FCSC, Taras Shevchenko KNU)
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Volodymyr Nakonechnyi	–	(Doctor of Sciences, Prof., FIT, Taras Shevchenko KNU)
Yuliia Shevchuk	–	(PhD in Physical and Mathematical Sciences, Head of the council of young scientists, FCSC, Taras Shevchenko KNU)



CONFERENCE TIMETABLE



Thursday, December 02, 2021

**OPENING OF THE CONFERENCE
(10:00 – 10:15)**

Welcome speech:

Link: <https://zoom.us/j/4263476258?pwd=SVNYOTZwL1luREVwWmlyWVhZS3RGUT09>
Code: 177837

9:30 – 10:00	Registration of conference participants
10:00 – 10:15	<i>Opening of the Conference</i>
10:15 – 10:55	Parallel sessions
11:00 – 13:00	Parallel sessions
13:00 – 13:20	<i>Break</i>
13:20 – 18:00	Parallel sessions

Section 1. Artificial Intelligence Technologies

Link: <https://zoom.us/j/4263476258?pwd=SVNYOTZwL1luREVwWmlyWVhZS3RGUT09>
Passcode: 177837

Section 2. Cyberspace Protection Technologies

Link: <https://zoom.us/j/2921506465?pwd=OFBjMXovL0dYTk9WdzNjdHFyT29zUT09>
Passcode: 240108

Section 3. Data Analytics & Digital Project Management Technologies

Link:

<https://us02web.zoom.us/j/87848843627?pwd=V3NPY01WcERTOW5wSGsxL0dRR2N3dz09>
Passcode: 230648



CONFERENCE PROGRAMME



02

Wednesday

DECEMBER

OPENING OF THE CONFERENCE (10:00 – 10:15) Moderator V.Y. Snytyuk

Welcome speech (10:00 – 10:15):

Prof. V. Snytyuk, Taras Shevchenko National University of Kyiv, Ukraine

Keynote Speaker report (10:15 – 10:35):

Oleksandr, Director LexerX Group Ukraine

Keynote Speaker report (10:35 – 10:55):

Maxim Pochebut, Sigma

Tracks 1:

**Artificial Intelligence Technologies & E-commerce, E-government and E-learning
Technologies & Mathematical Foundations of Information Technology & Network
and Internet Technologies**

Link:

<https://zoom.us/j/4263476258?pwd=SVNYOTZwL1luREVwWmlyWVhZS3RGUT09>
Passcode: 177837

Head: Yuriy Samochvalov, Mykola Kiktev

1.	Mingxin Huang	Development of GIS Using for Monitoring Crop Yields
2.	Huilin Xu	Development of Methods for Solving the Partner Selection Problem
3.	Yuanyuan Li	Development of Methods for Diversification Strategies Choice in Building Enterprise
4.	Chunmei Ji	Development of Methods for Decision-Making for Agriculture Under Uncertainty
5.	Denys Symonov	Using LSTM-Method in Supply Chain Planning
6.	Georgii Gaina	Use of Ontologies and Graphs of Knowledge in the Educational Process

7.	Maryna Antonevych, Vitaliy Snytyuk	Development And Research of the Intelligent Technology for Predicting the Popularity of Animals From the Shelter
8.	Anastasiia Mudra, Olga Maezentseva	Description of the Stages of Examination a Dependence Between Criminal's Appearance and Their Offense With Convolutional Neural Network
9.	Andrii Kopp, Dmytro Orlovskiy, Sergey Orekhov	An Approach to Build a Decentralized Collection of Business Process Models
10.	Nazar Bakukha, Yuliia Khlevna	Classification Models in E-Commerce Projects
COFFEE BREAK (13:00 – 13:20)		
11.	Vladimir Semenov, Serhii Denysov	Theoretical Bound of The Complexity of Some Algorithms for Variational Inequalities
12.	Volodymyr Petrivskiy, Oleksandr Pyzh	A Smart Dust Technology Structure and Applications Overview
13.	Petro Soroka, Snezhana Gamotska, Oksana Vlasenko	Solving Systems of Linear Algebraic Equations by Cramer's Rule and Excel Table Processor
14.	Anastasiia Nicheporuk, Andrii Nicheporuk, Bohdan Savenko, Antonina Kashtalian, Isaac Oppong	Analysis of Potential Vulnerabilities in IoT Systems
15.	Valerii Kozlovskiy, Oleksandr Turovsky, Yuliia Boiko, Yuliia Klobukov	The Choice of Information Technology on Improving the Accuracy of the Signal Synchronization Received by The Radio Technical System
16.	Vitalii Bidochka, Serhiy Paliy	Decentralized network in IoT systems
17.	Hryhorii Hnatienko, Yelyzaveta Izhevskia	Mathematical Model for Determination of Prioritizing Services When Allocating Limited Resources
18.	Borys Kredentser, Dmytro Mogylevych, Iryna Kononova and Ihor Subach	Taking Into Account a Priori Uncertainty in the Model of Maintenance of Objects With Time Redundanc
19.	Hryhorii Hnatiienko, Oksana Vlasenko	Mathematical Support Of The Rating Voting Procedure

**Tracks 2:
Cyberspace Protection Technologies**

Link:

<https://zoom.us/j/2921506465?pwd=OFBjMXovL0dYTk9WdzNjdHFyT29zUT09>

Passcode: 240108

Head: Serhii Toliupa

Secretary: Volodymyr Nakonechnyi

1	Serhii Toliupa, Vladyslav Lutsenko	How to Protect Your Card on the Internet
2	Serhii Toliupa, Nataliia Honcharenko	The Potential Danger of Shodan Search Engine
3	Serhii Toliupa, Olesia Bielozorova	Cryptography Module Solution for ACS
4	Volodymyr Nakonechnyy, Yevgenii Zakharchenko	Methods to Increase the Effectiveness of Protection of External Media From Unauthorized Access and Modification
5	Nataliia Lukova-Chuiko, Anastasiia Bielonozhko	Protection of the Authentication Process in Banking Information Systems
6	Ivan Parkhomenko, Serhii Ozhereliev	Cisco Network Resources Protection Using Python Language Specifics
7	Viktoriia Antoniuk, Ivan Parkhomenko	Identification of Critical Information Infrastructure Objects
8	Larysa Myrutenko, Leila Nasyrova	Biometric Identification in Mobile Operating Systems
9	Nataliia Lukova-Chuiko, Alina Prokopenko	Impact of the COVID-19 on Social Engineering in Ukraine
10	Nataliia Lukova-Chuiko, Danylo Vdovenko	Package Managers Security Management
COFFEE BREAK (13:00 – 13:20)		
11	Roman Kvyetnyy, Yaroslav Ivanchuk, Andrii Yarovyi, Yurii Horobets	Algorithm for Increasing the Stability Level of Cryptosystems
12	Pavlo Piskovyi, Oleksandr Laptev	Research of Detection Methods of Steganography Applying in Cyberattacks and Spying Software
13	Vladyslav Hetman, Serhii Toliupa	Comparative Analysis of Well-Known Security Scanners (With Nessus)
14	Serhii Buchyk, Vitalii Piatyhor	Password Complexity Analysis of Diceware Password Generation Algorithm Modification Based on Pseudo-Random Sequences
15	Serhii Buchyk,	BadUSB: Overview of the Possible

	Anton Kosse	Attacks With the Usage of Arduino Board
16	Serhii Buchyk, Elina Piatashova	Phishing Detection Based on Unsupervised Learning Method
Tracks 3: Data Analytics & Digital Project Management Technologies		
Link: https://us02web.zoom.us/j/87848843627?pwd=V3NPNY01WcERTOW5wSGsxL0dRR2N3dz09 Passcode: 230648		
Head: Viktor Morozov, Kateryna Kolesnikova Secretary: Olha Mezentseva		
1	Jie Chen	Competitiveness Factors Prognosis of International Educational Programs of Chinese Educational Establishments
2	Ming Li	Project Management Platform for International Research and Development
3	YingXing Wang	A Model for Determining the Proficiency of the Workers of Educators of Higher Education Institutions
4	Huan Zhou	HR in International Educational Service System
5	Ting Zhu	Agile Methodology for Joint Educational Programs Implementation
6	Yuanfang He	Development of Methods for Environmental Pollution Monitoring
7	Karyna Skorobahatko, Alina Myrchenko, Yuliia Khlevna	The Analysis of the Approach to the Remote Implementation of the Information Systems Into the Project-Oriented Organizations
8	Andrii Khlevnyi, Yehor Nesterenko	How Human Resources Processes Have Changed During the Pandemic
9	Iryna Prysiashniuk, Andrii Khlevnyi	Project Management of Information System Pick by Voice Implementation for Warehouse Processes Automation
10	Alina Kontorer, Yuliia Khlevna	Peculiarities of Project Team Management in a Remote Work Conditions
COFFEE BREAK (13:00 – 13:20)		
11	Denys Fediuk, Yuliia Khlevna	Collecting Feedback During Online Conferences as a Means of Increasing Team Productivity
12	Daryna Kriuchek, Oleksii Yehorchenkov	Project Management of Creation and Implementation of Electronic Documentation System

13	Olga Tsesliv, Anna Kolomiets	Management of Creative Projects in Tourism
14	Valentyna Stelmakh, Nataliia Koberka, Andrii Khlevnyi	Analytics of Automated Systems in the Context of Personnel Management
15	Taras Matolinets, Kateryna Kolesnikova	Using Agile Tools to Development the Project of Creating a “My City” Mobile Application
16	Yelyzaveta Kupchyk, Vladyslav Fesiuk, Kateryna Kolesnikova	Features of the Project to Develop an Application to Detect Fake Counterfeits
17	Oleg Tatsienko, Viktor Morozov	Development and Features of Project Management to Create an Interactive Map for Solving Ecological Problems and Air Pollution
18	Maria Titova, Viktor Morozov	Lead Nurturing Implementation Project Management to Optimize Marketing Communications in the B2B Segment
19	Danylo Kushlianskyi, Viktor Morozov	Features of Project Management of Development and Implementation of the System Using Cloud Calculation for Remote Gaming
20	Nazar Chernetsky, Andriy Pavlichenko, Viktor Morozov	Comparison of Methods of Development of Computer Video Games in Project Management in the Game Industry
21	Tetiana Kuziv, Kyrylo Bovsunovskyi, Tetiana Latysheva	Development of a System of Protection Against Sale of Counterfeit Drugs in Pharmacies
22	Andrii Khlevny, Liia Kashapova	The Conceptual Project Management Model in the Sphere of E-Commerce Based on a Personalized Analysis
23	Mykyta Paliienko, Tatiana Latysheva	Usage of N-grams for Predictive Search
24	Yuliia Fedirko, Oleksii Yehorchenkov	Random Forest Algorithm in Predicting Diabetes (Type 2)
25	Viktoriiia Tsykun, Yuliia Khlevna, Andrii Khlevnyi	Development and Analysis of an Expert System in the Field of Retail Trade of Motor Vehicles