Program

of the 1st International Workshop on Computational & Information Technologies for Risk-Informed Systems CITRisk-2020

Kherson, Ukraine, October 15-16, 2020

Timetable of the Workshop

Time (EET)	October 15th 2020	October 16th 2020
10.00-11.20		**Session 3.** *Talk 1*
11.20-11.40		Coffee Break
11.40-13.00		**Session 2.** *Talk 2*
13.00-14.00	***Welcome and Invited Session***	Lunch time
14.00-15.20	**Session 1.** *Talk 1*	**Session 1.** *Talk 2*
15.20-15.40	Coffee Break	Coffee Break
15.40-17.00	**Session 2.** *Talk 1*	**Session 3.** *Talk 2*
17.00-17.30		
17.30-17.50		***Close Session***

Session 1. Computational Models and Methods for Risk-Informed Systems
Session 2. Intelligent Information Technologies for Risk-Informed Systems
Session 3. Information Technologies for Diagnostic, Modeling, and Monitoring of Crisis and Disaster Situations

Presentation timing for the session talks – 12-15 minutes + 5 minutes Q&A.

Presenters of the papers are bolded and underlined within the Sessions Schedules

Google Meet Link: https://meet.google.com/woq-ypym-woa

Welcome and Invited Session

	Schedule
Welcome **October 15, 2020** **13.00-13.15**	Prof. Volodymyr Lytvynenko, Co-Chair of the International Program Committee, and Prof. Yurii Bardachov, Rector of Kherson National Technical University ***Greetings from the CITRisk-2020 Organizers*** ***KEYNOTE SPEECHES***
Invited presentations **October 15, 2020** **13.20-14.00** *Moderators*: Maryna Zharikova, Volodymyr Sherstiuk	**Volodymyr Bakhrushin**, Anna Bakurova, Mariia Pasichnyk and Elina Tereschenko (Ukraine) ***Risks of Data Inconsistency in Information Systems Used for Predicting the Pandemics Development*** **Vira Liubchenko** (Ukraine) ***Risk-Oriented Approach in Multi-Criteria Decision-Making***

Session 1.
Computational Models and Methods for Risk-Informed Systems

Session talks	Presentations
Talk 1 **October 15, 2020** **14.00-15.20** *Moderator*: Maryna Zharikova	Ivan Izonin, Igor Nevliudov and **Yurii Romashov** (Ukraine) ***Computational Models and Methods for Automated Risks Assessments in Deterministic Stationary Systems*** Alexandr Kuznetsov, **Anastasiia Kiian**, Kateryna Kuznetsova and Alexey Smirnov (Ukraine) ***Data Hiding Scheme Based on Spread Sequence Addressing*** Peter Bidyuk, Liudmyla Petrenko, Nataliia Savina, Tetyana Ivchenko and **Mariia Voronenko** (Ukraine) ***Assessing Risk of Enterprise Bankruptcy by Indicators of Financial and Economic Activity Using Bayesian Networks*** **Myroslava Bublyk**, Victoria Vysotska, Yurii Matseliukh, Volodymyr Mayik and Mariya Nashkerska (Ukraine) ***Assessing Losses of Human Capital Due to Man-Made Pollution Caused by Emergencies***
Talk 2 **October 16, 2020** **14.00-15.20** *Moderator*: Volodymyr Sherstiuk	Peter Bidyuk, Olexander Trofymchuk, Irina Kalinina and **Aleksandr Gozhyj** (Ukraine) ***Modeling Risk Factor Interaction Using Copula Functions*** Ihor Rishnyak, Oleh Veres, Vasyl Lytvyn, **Myroslava Bublyk**, Ihor Karpov, Victoria Vysotska and Valentyna Panasyuk (Ukraine) ***Implementation Models Application for IT Project Risk Management*** Victor Krasnobayev, Alexandr Kuznetsov, **Anna Kononchenko** and Tetiana Kuznetsova (Ukraine) ***Algorithms for Determining Residues Modulo in a Complex Numerical Domain*** Oleksandr Arkhypov (Ukraine), Michal Gregus (Slovakia) and **Yevheniia Arkhypova** (Ukraine) ***Application of a Risk-Based Approach Using Reflexive Risk Models in Building Information Security Systems***

Session 2.
Intelligent Information Technologies for Risk-Informed Systems

Session talks	Presentations
Talk 1 **October 15, 2020** **15.40-17.00** *Moderator*: Volodymyr Sherstiuk	Yosip Saldan, **Lubov Zagoruiko**, Tetiana Martianova, Sergey Sergienko, Dmytro Chernov (Ukraine), Iryna Ivanochko (Austria) and Alya Zilgaraeva (Kazakhstan) *Personal Data Protection with Smart Cards Using Eye-Ground Image Recognition Technique* **Elena Kuzmina**, Oksana Klochko, Nataliia Savina, Svetlana Yaremko, Roman Akselrod (Ukraine) and Christine Strauss (Austria) *Risk Analysis of the Company's Activities by Means of Simulation* Viktor Perederyi, Eugene Borchik, Volodymyr Lytvynenko and **Oksana Ohnieva** (Ukraine) *Information Technology for Performance Assessment of Complex Multilevel Systems in Managing Technogenic Objects* **Tetiana Hovorushchenko**, Alla Herts and Valentina Kunchenko-Kharchenko (Ukraine) *Intelligent Information Technology for Verifying the Correctness of the Mortgage Agreement Structure*
Talk 2 **October 16, 2020** **11.40-13.00** *Moderator*: Maryna Zharikova	Leonid Timchenko (Ukraine), Waldemar Wojcik (Poland), Natalia Kokriatskaia, Volodymyr Tverdomed, **Oleksandr Poplavskyi**, Olga Levchenko (Ukraine) and Natalia Kryvinska (Slovakia) *New Methods of Network Modelling Using Parallel-Hierarchical Networks for Processing Data and Reducing Erroneous Calculation Risk* **Nataliia Burennikova**, Vyacheslav Kavetskiy, Oleksandr Lesko, Roman Akselrod, Oksana Adler (Ukraine) and Michal Greguš (Slovakia) *Modeling of the Investment Risks in Human Capital as the Factor of Enterprise Safety in the Context of the Stakeholder Theory* **Marian Sorin Nistor**, Truong Son Pham, Stefan Pickl (Germany), Constantin Gaindric and Svetlana Cojocaru (Moldova) *A concise review of AI-based solutions for mass casualty management* Lubomir Sikora, Natalia Lysa, Olga Fedevych, Mariya Navytka, **Rostislav Tkachuk** and Ivanna Dronyuk (Ukraine) *Information Technologies of Formation of Intellectual Decision-Making Strategies Under Conditions of Cognitive Failures*

Session 3.
Information Technologies for Diagnostic, Modeling, and Monitoring of Crisis and Disaster Situations

Schedule

Session talks	Presentations
Talk 1 **October 16, 2020** **10.00-11.20** *Moderator*: Volodymyr Sherstiuk	**Maryna Zharikova**, Volodymyr Sherstjuk, Oleg Boskin and Iryna Dorovska (Ukraine) *Event-Based Approach to Multi-Hazard Risk Assessment* Nataliia Komleva, **Vira Liubchenko**, Svitlana Zinovatna and Vitaliy Kobets (Ukraine) *Risk Management with Lean Methodology* **Sergiy Gnatyuk** (Kazakhstan), Viktoriia Sydorenko, Oleh Polihenko, Yuliia Sotnichenko and Olena Nechyporuk (Ukraine) *Studies on the Disasters Criticality Assessment in Aviation Information Infrastructure* **Ivan Ostroumov**, Oleg Ivashchuk, Tetiana Shmelova (Ukraine) and Sergii Babichev (Chech Republic) *Risk of mid-air collision in a lateral plane*
Talk 2 **October 16, 2020** **15.40-17.30** *Moderator*: Maryna Zharikova	**Anzhelika Azarova**, Larysa Azarova, Liliia Nikiforova, Veronika (Nicole) Azarova, Olena Teplova (Ukraine) and Natalia Kryvinska (Slovakia) *Neural Network Technologies of Investment Risk Estimation Taking into Account the Legislative Aspect* Sergey Vyatkin (Russia), **Olexandr Romanyuk**, Sergii Pavlov, Pavlo Mykhaylov (Germany), Roman Chekhmestruk, Oksana Vodzinska, Olena Prozor and Volodymyr Lytvynenko (Ukraine) *Manipulating Function-Based Objects with Interactive Collision Risk Models* **Serhii Zinchenko**, Oleh Tovstokoryi, Pavlo Nosov, Ihor Popovych, Vitaliy Kobets and Gennadii Abramov (Ukraine) *Mathematical Support of the Vessel Information and Risk Control Systems* **Volodymyr Sherstjuk**, Maryna Zharikova, Ruslan Levkivskyi and Victor Gusev (Ukraine) *Density-Based Risk Assessments within Soft Safety Domains* Oleksandr Tymchenko (Poland), Bohdana Havrysh, Orest Khamula, Sergii Lysenko, **Oleksandr O. Tymchenko** and Kateryna Havrysh (Ukraine) *Risks of Loss of Personal Data in the Process of Sending and Printing Documents*

Close Session

October 16, 2020 17.30-17.40 **Moderators**: Maryna Zharikova, Volodymyr Sherstiuk	Prof. Volodymyr Lytvynenko, Co-Chair of International Program Committee **Awards and Close Ceremony**