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08:30 - 12:30

REGISTRATION

09:00 - 10:30

WORKSHOPS SESSION 1

WS RMSE SESSION 1: Rigorous Methods in Software Engineering	WS TheRMIT SESSION 1 : Welcome. Models of High Available Systems	WS 3L-Person SESSION 1: Welcome. The Cloud-based Systems in Adaptive and Person-oriented Learning
Room: #46 Chair: Mykola Nikitchenko	Room: Assembly Hall Chairs: Vyacheslav Kharchenko, Bogdan Volochiy	Room: #70 Chairs: Mariya Shyshkina, Yuliya Nosenko
Artur Kornilowicz, Andrii Kryvolap, Mykola Nikitchenko and Ievgen Ivanov. An Approach To Formalization of an Extension of Floyd-Hoare Logic	WS TheRMIT 2017 Chairs Welcome Vyacheslav Kharchenko. IT-Industry Challenges in Context of Reliability, Safety, Security Assessment and Assurance Jüri Vain, Leonidas Tsiopoulos, Vyacheslav Kharchenko, Apneet Kaur, Maksim Jenihhin and Jaan Raik. Multi-fragment Markov Model Guided Online Test Generation for Multi-Processor System Miroslav Kvassay, Elena Zaitseva and Vitaly Levashenko. Minimal Cut and Minimal Path Vectors in Reliability Analysis of Binary- and Multi-State Systems Maryna Kolisnyk, Vyacheslav Kharchenko, Iryna Piskachova and Nikolaos Bardis. Markov Model of IoT System Availability Considering DDoS Attacks and Energy Modes of Server and Router Discussion	WS 3L-Person 2017 Chairs Welcome Mariya Shyshkina, Ulyana Kohut and Maya Popel. The Systems of Computer Mathematics in the Cloud-based Learning Environment of the Educational Institutions Maria Shyshkina, Svitlana Shokalyuk and Maya Popel. The Learning Technique of the SageMathCloud Use for Students Collaboration Support Maryna Rassovytska and Andrii Striuk. Mechanical Engineers' Training in Using Cloud and Mobile Services in Professional Activity Vasyl Oleksiuk, Olessia Oleksiuk and Mykola Berezitskyi. Planning and Implementation of the Project "Cloud Services to Each School" Discussion

10:30 - 11:00

COFFEE BREAK

11:00 - 12:30

WORKSHOPS SESSION 2

**WS RMSE SESSION
2: Rigorous Methods in
Software Engineering**

**WS TheRMIT SESSION 2
: Models of Software
Systems Reliability**

**WS 3L-Person SESSION
2: Tools and Methods of
Professional Training and
Self-Learning**

Room: #46
Chair: Mykola Nikitchenko

Room: Assembly Hall
Chairs: Dmitry Maevsky, Juri Vain Lytvynova

Room: #70
Chairs: Alexander Burov, Svitlana Lytvynova

Alexander Godlevskiy, Aleksander Letichevskiy, Vladimir Peschanenko, Oleksandr Letychevskiy, Maryna Morokhovets, Volodymyr Skobelev and Maksym Poltorackiy. Formalization and Algebraic Verification of Legal Requirements	Oleksandr Mulyak, Bohdan Volochiy, Vitaliy Yakovyna and Vyacheslav Kharchenko. Availability Model of Critical NPP I&C Systems with K-phase Erlang Distribution of Software Update	Svitlana Lytvynova and Oleksandr Burov. Methods, forms and safety of learning in corporate social networks
Michael Lvov, Vladimir Peschanenko, Oleksandr Letychevskiy and Yulia Tarasich. The Canonical Forms of Logical Formulae Over the Data Types and Their Using in Programs Verification	Oleg Ivanchenko, Vyacheslav Kharchenko, Yuriy Ponochovny, Ivan Blindyuk. Semi-Markov Availability Model for Infrastructure as a Service Cloud Considering Hidden Failures of Physical Machines	Alena Zhmurko, Vladislav Kruglik and Michail Lvov. The Concepts of Software Development for OOP and BAP self-learning courses
	Vyacheslav Kharchenko and Svitlana Yaremchuk. Technology Oriented Assessment of Software Reliability: Big Data Based Search of Similar Programs	Volodymyr Morkun, Serhiy Semerikov, Svitlana Hryshchenko and Kateryna Slovak. Environmental Geo-information Technologies as a Tool of Pre-service Mining Engineer's Training for Sustainable Development of Mining Industry
	Dmitry Maevsky, Elena Maevskaya and Lyudmila Shapa. Software Reliability Model's Assumptions in Context of the Secondary Defects Discussion	Pavlo Nechypurenko and Serhiy Semerikov. VlabEmbed – the New Plugin Moodle for the Chemistry Education
		Taras Kobylnyk. Statistical Software in the Higher School Educational Process

12:30 - 14:00

LUNCH

14:00 - 15:30

WORKSHOPS SESSION 3

**WS RMSE SESSION
3: Rigorous Methods in
Software Engineering**

**WS TheRMIT SESSION 3 : Formal
Methods for Security and
Trustworthiness**

**WS 3L-Person SESSION 3: E-
learning in Social Systems
and Life Long Learning**

Room: #46
Chair: Grygoriy Zholtkevych

Room: Assembly Hall
Chairs: Oleksandr Drozd, Alex Gordeev

Room: #70
Chairs: Yuliya Nosenko, Olga Pinchuk

		Yuliya Nosenko and Zhanna Matyukh. The Implementation of Multimedia Technology in Ukrainian Inclusive Pre-school Education
Vladimir Pevnev. Pseudoprime Numbers: Basic Concepts and the Problem of Security		Larysa Ruban, Maria Leshchenko Leshchenko and Larysa Tymchuk. Digital Storytelling in a Foreign Language Classroom of Higher Educational Establishments
Oleksandr Gordieiev, Vyacheslav Kharchenko and Kate Vereshchak. Usable Security Versus Secure Usability: an Assessment of Attributes Interaction		Svitlana Lytvynova and Olga Pinchuk. The Evolution of Teaching Methods of Students in Electronic Social Networks
Oleg Savenko, Sergii Lysenko, Andrii Nicheporuk and Bohdan Savenko. Metamorphic Viruses' Detection Technique Based on the Equivalent Functional Block Search		Yuliya Nosenko and Viktoriya Bohdan. The Implementation of Cloud Services in Ukrainian Pre-School Educational Institution Management
Taras Panchenko and Ievgen Ivanov. A Formal Proof of Correctness of a Distributed Presentation Software System	Kuznetsov. Improving of a Checkability and Trustworthiness of Results in Digital Components of Safety-Related Systems	
	Discussion	Discussion

15:30 - 16:00

COFFEE BREAK

16:00 - 17:30

WORKSHOPS SESSION 4

WS RMSE SESSION	WS TheRMIT SESSION 4: Safety and Assurance Cases for Industry Systems	WS 3L-Person SESSION
4:Rigorous Methods in Software Engineering		4:Evaluation and Testing in Professional Training and Life Long Learning

Room: #46
Chair: Volodymyr Peschanenko

Room: **Assembly Hall**
Chairs: Yuriy Kondratenko, Miroslav Kvassay

Room: #70
Chairs: Hennadiy Kravtsov, Mariya Shyshkina

	Yuriy Kondratenko, Oleksiy Kozlov, Andriy Topalov and Oleksandr Gerasin. Computerized System for Remote Level Control with Discrete Self-Testing	Michael Lvov and Hanna Shmarova. Generation of Test Tasks in Systems of Computer Mathematics for Educational Purposes
	Yuriy Pashchuk, Yuriy Salnyk and Serhiy Volochiy. Reliability-Based Synthesis of Components of Flight Control System of Unmanned Aerial Vehicle	Hennadiy Kravtsov and Vitaliy Kobets. Implementation of Stakeholders' Requirements and Innovations for ICT Curriculum Through Relevant Competences
Martin Strecker. Proving Description Logic Formulas with Tableau Methods and SAT Solvers	Vladimir Sklyar and Vyacheslav Kharchenko. Assurance Case Driven Design Based on the Harmonized Framework of Safety and Security Requirements	Serhiy Rakov, Mariia Mazorchuk and Viktoria Dobriak. Data Processing Technologies for Calculating Prognostic Validity of Educational Achievement Tests
	Volodymyr Zaslavskiy and Maya	Nadiia Balyk, Vasyl Oleksiuk and Galina

Pasichna. **AHP-Based Comparative Analysis of Electricity Generating Portfolios for the Companies in EU and Ukraine: Criteria, Reliability, Safety**

Discussion

Final discussion. Closing remarks

Shmyger. **Development of E-Learning Quality Assessment Model in Pedagogical University**

Olga Gnedkova. **Adaptive Learning Organization in Distance Learning**

Final discussion. Closing remarks

8:30 - 9:00

REGISTRATION

9:00 - 9:30

ASSEMBLY HALL

OPENING, WELCOME & MESSAGE FROM THE CONFERENCE CHAIRS

Alexander Spivakovsky, Anatoly Anisimov, Mykola Nikitchenko, Vadim Ermolayev, Frederic Mallet / Grygoriy Zholtkevych, Yaroslav Prytula

9:30 - 10:30

ASSEMBLY HALL

PLENARY SESSION 1

Chair: Vadim Ermolayev

Keynote Talk: [Linked Open Data about Springer Nature Conferences. The Story so Far](#)

Keynote Speaker: [Aliaksandr Birukou](#)

10:30 - 11:00

COFFEE BREAK

11:00 - 12:30

CONFERENCE SESSION 1

ICTERI SESSION 1: Information Systems: Technology and Applications - 1

ICTERI PhD Symposium 1

Room: Assembly Hall **Chair:** Yaroslav Prytula

Room: 46 **Chair:** Frederic Mallet

Paper 1: Artem Artyukhov, Viktor Obodiak, Pavlo Boiko and Pablo Rossi.

Computer Modeling of Hydrodynamic and Heat-Mass Transfer Processes in the Vortex Type Granulation Devices

FULL

Paper 1: Victoria Kosa, Alyona Chugunenko, Eugene Yuschenko, Carlos Badenes, Vadim Ermolayev and Aliaksandr Birukou.

Semantic Saturation in Retrospective Text Document Collections

Paper 2: Jan Rabcan and Miroslav Kvassay
Electroencephalogram signals classification by ordered fuzzy decision tree

FULL

Paper 2: Leonid Vasylevych, Olena Vasylevych and Dmitry Bodnenko.

Methods of estimating competence as a system of fuzzy statements

Paper 3: Olena Liashenko, Tetyana Kravets and Kateryna Krytsun.

Econometric modeling of financial time series volatility using software packages

DISC

Paper 3: Serhii Lilikovych and Volodymyr Sokol.

A Human-Centered Approach to Assessment of Team Diversity in Multi-Version Software

12:30 - 13:30

LUNCH

13:30 - 15:00

CONFERENCE SESSION 2

ICTERI SESSION 2: ICT in Education - 1

ICTERI PhD Symposium 2

Room: Assembly Hall
Chair: Vyacheslav Kharchenko

Room: 46
Chair: Grygoriy Zholtkevych

Paper 1: Jozef Kostolny and Monika Vaclavkova.
Learning system FRIMAN

SHORT

Paper 4: Hui Zhao, Ludovic Apvrille and Frédéric Mallet. **Multi-View Design for Cyber-Physical Systems**

Paper 2: Halyna Kuchakovska.
The organization of students' joint activity by means of popular network services

DISC

Paper 5: Anastasiia Strielkina and Dmytro Uzun.
Researching the Applicability of Mathematical Approaches for Modeling Cyber Security Processes

Paper 3: Yuliia Denysenko, Vitalii Ivanov and Oleksandr Ivchenko.
Quality Assessment of Teaching the Disciplines in the E-learning Environment of Sumy State University

FULL

Paper 6: Keterina Isirova and Oleksandr Potii.
Requirements and Security Models for Post-Quantum Cryptography Analysis

15:00 - 15:10

BREAK

15:10 - 16:40

ROOM 46

ICTERI PHD MENTORS PANEL

Chair: Vadim Ermolayev

Panelists: Prof. Yannis Dimitriadis, Prof. Heinrich C. Mayr, Prof. Mykola Tkachuk

The panel will include several short **enlightning presentations** by recognized **Computer Science experts**. They will share their thoughts and prognoses regarding an answer to one important question which has been posed to them:

If you were thinking about starting a (yet one more) PhD project of your own, what would be the topic of your choice? Why this?

In addition to the presentations of the experts, the panel will answer and discuss the **questions from the audience**.

16:40 - 17:00

COFFEE BREAK

17:00 - 18:00

CONFERENCE SESSION 3

ICTERI SESSION 3: Academia / Industry ICT Cooperation - 1

Room: Assembly Hall
Chair: Heinrich C. Mayr

Paper 1: Yaroslava Samchynska and Maxim Vinnyk.
Decision Making in Information Technologies Governance of Companies **DISC**

Paper 2: Alla Ivashchenko, Yuliia Sybirianska and Yevheniia Polischuk.
Information and Communication Platform as a Complex Approach for Solving Information Asymmetry Problems **DISC**

18:00 - 20:00

ICTERI 2017 WELCOME RECEPTION

Welcome reception will start with a concert by

Mike Kaufman-Portnikov

Royal Man

The entire life is just 88 royal keys

A pianoman and composer, actor and director

Laureat of international piano contests, jazz and theatre festivals

Place: Assembly hall

8:30 - 9:30

REGISTRATION

09:30-10:30

ROOM 46

PLENARY SESSION 2

Chair: Vadim Ermolayev

Keynote Talk: [Designing for Learning: Patterns, Architectures and Tools](#)

Keynote Speaker: [Yannis Dimitriadis](#)

10:30 - 11:00

COFFEE BREAK

11:00 - 12:30

CONFERENCE SESSION 4

ICTERI SESSION 4 : ICT in Education - 2

ICTERI PhD Symposium 3

Room: 46
Chair: Oleksandr Burov

Room: 70
Chair: Frederic Mallet

Paper 4: Leo Van Moergestel and John-Jules Meyer.

Is knowledge of mathematics a key for success for studying ICT?

FULL

Paper 7: Illia Otlev. **Descriptive Modeling of System Dynamics at Different Stages**

Paper 5: Nataliia Morze, Oksana Buinytska, Iryna Vorotnykova, Olena Glazunova, Olena Kuzminska and Galyna Protsenko.

E-Learning Managers Training at Universities: Projection, Design and Efficiency Indicators

FULL

Paper 8: Hennadii Dobrovolskyi and Nataliya Keberle. **Principal Component Analysis in Topic Modelling of Short Text Document Collections**

Paper 6: Alexander Prokhorov, Ihor Klymenko, Elena Yashina, Olga Morozova, Sergey Oleynick and Tatiana Solyanyk. **SCADA Systems and Augmented Reality as Technologies for Interactive and Distance Learning**

Paper 9: Oleksandr Porunov. **Automatic Scalability of the OpenStack Object Storage**
SHORT

12:30 - 14:00

LUNCH

14:00 - 15:30

CONFERENCE SESSION 5

ICTERI SESSION 5: ICT in Education - 3

ICTERI PhD Symposium 4

Room: **46**
Chair: Mykola Tkachuk

Room: **70**
Chair: Grygoriy Zholtkevych

Paper 7: Oleksandr Spivakovskiy, Nataliya Kushnir, Natalya Valko and Maksym Vinnyk. **ICT advanced training of teachers of university**

DISC

Paper 10: Inna Kolesnyk, Artem Perepelitsyn and Vitaliy Kulanov. **Providing of FPGA Resources as a Service: Technologies, Deployment and Case-Study**

Paper 8: Nataliya Osipova, Vitaliy Kobets and Tatyana Bazanova. **Design, Development and Use of Decision Support Systems in the Study of Economic Disciplines in Higher Education**

FULL PhD Symposium closing

Paper 9: Galyna Chornous and Serhii Rybalchenko. **Integration of Information Technologies' Dynamic Development into Academic Teaching Process**

DISC

15:30 - 16:00

COFFEE BREAK

16:00 - 17:30

CONFERENCE SESSION 6

ICTERI SESSION 6: Advances in ICT Research - 1

DataArt IT Talks

Room: **70**
Chair: Vadim Ermolayev

Room: **46**
Speaker: Andriy Yarmolenko

Paper 1: Yuriy Kondratenko, Oleksiy Kozlov, Oleksiy Korobko and Andriy Topalov. **Internet of Things Approach for Automation of the Complex Industrial Systems**

FULL

Title: **LEAN thinking. The way to synergy**

Paper 2: Sergey Orekhov, Michail Godlevsky and Elena Orekhova. **Theoretical fundamentals of search engine optimization** **DISC**

Plan:
- What is LEAN Philosophy?

based on machine learning

- Why do we need LEAN?
- Constant improvement, myth or reality?
- Why to adopt changes? Does it really necessary?
- What is the goal of LEAN?
- What is competitive advantage of LEAN teams / organizations?
- How to became LEAN in reality?

Paper 3: Alexander Lyaletski, Alexandre Lyaletsky and Konstantin Verchinine. **The SAD system: a current state and future work** **SHORT**

19:00 - 20:00

CONFERENCE DINNER

08:30 - 09:00

REGISTRATION

09:00 - 10:00

ICTERI DEMONSTRATIONS

Room: 46

Chair: Yaroslav Prytula

Demo 1: Roberto Santos and Gil Miranda. **iPKBuilder - a Lightweight Platform for Building Pictorial Keys**

Demo 2: Oleksandr Khyzha and Igor Vysokopoyasny. **Automatic Online Static Verification in E-Learning Programming**

10:00 - 10:30

COFFEE BREAK

10:30-12:00

CONFERENCE SESSION 7

ICTERI SESSION 7:
ICT in Education - 4

DataArt IT Talks

Room: 70
Chair: Leo van Moergestel

Room: 46
Speaker: Oleksandr Tryshchenko

Paper 10: Juan Pablo Martinez Bastida, Andrey Chukhray and Elena Gavrilenko.

Developing a Pedagogical Intervention Support based on Bayesian Networks

SHORT **Title:** Introduction to Front-End Architecture Patterns

Paper 11: Aleksandra Mreła and Oleksandr Sokolov.
Rankings of students based on experts' assessment of levels of verification of learning outcomes by test items

FULL

Plan:

- Classic Back-End architecture patterns
- Origins of Front-End
- Main principles of Front-End development
- Contemporary Front-End architecture patterns

Paper 12: Vitaliy Pavlenko, Alexander Prokhorov, Olena Kuzminska, Mariia Mazorchuk and Anastasiia Matiushko.
Competency Approach to Modeling and Control of Students' Learning Pathways in the Cloud Service

SHORT

12:00-13:00

LUNCH

13:00-14:00

CONFERENCE SESSION 8

**ICTERI SESSION 8:
Information Systems: Technology and Applications - 2**

Room: **70**
Chair: Anatoliy Doroshenko

Paper 4: Olena Tymchenko and Yuliia Sybirianska.
ICT and Personal Income Tax Control in Ukraine

SHORT

Paper 5: Oleksii Ignatenko.
Game theoretic analysis of multi-processor schedulers: matrix multiplication example

SHORT

14:00 - 14:30

COFFEE BREAK

14:30 - 15:30

CONFERENCE SESSION 9

**ICTERI SESSION 9:
Academia / Industry ICT Cooperation - 2**

Room: **70**
Chair:

Paper 3: Oleksandr Burov. **ICT for performance assessment of emergent technologies operators**

FULL

Paper 4: Vitaliy Kobets and Alexander Weissblut. **Mathematical Model of Microeconomic System with Different Social Responsibilities in Software Module**

FULL

15:30 - 16:00

AWARDS AND FAREWELL