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**9<sup>th</sup> International IEEE Conference  
Dependable Systems, Services  
and Technologies  
DESSERT'2018  
UKRAINE, KIEV, MAY 24-27, 2018**



### Organizers

IEEE Ukraine Section including  
IEEE Ukraine Section SP/AES Societies Joint Chapter, Kyiv  
IEEE Ukraine Section ED/MTT/CPMT/COM/SSC Societies Joint Chapter, Kyiv  
IEEE Ukraine Section SP/AP/C/EMC/Com Societies Joint Chapter, Kharkiv  
IEEE Ukraine Section IM/CIS Societies Joint Chapter, Ternopil  
National Aerospace University KhAI, Kharkiv, Ukraine  
Banking University, Kyiv, Ukraine  
National Aviation University, Kyiv, Ukraine

### Scope

Information, communication and electronic technologies are, on the one hand, mean of dependability and safety assurance for sophisticated systems and, on the other hand, they are source of threats, vulnerabilities and fatal failures causing new reliability, security and safety deficits for critical infrastructures and business applications. Hence, in this regard role and influence of ICT systems, electronic devices are becoming a mandatory part of each complex system and the linkage between ones and infrastructures increase. Failures and emergencies of critical systems as a rule are caused by several reasons, combination of physical, design and interaction faults and human errors. Thus to ensure dependability we have to analyze related possibilities and risks at the all levels of a hierarchy "element-component-system-infrastructure" taking into account interaction and interdependency in the vertical and horizontal dimensions. Paradigm "dependable and safe infrastructure/system/component out of undependable and unsafe (or not enough dependable and safe) systems/components/elements" is becoming more and more important.

The DESSERT conferences beginning from 2006 focus on the problems of dependability, security and safety assessment and assurance at the component, system and infrastructure levels. DESSERT'2018 is responding to major challenges for them considering modern information, communication and electronic technologies and paradigms such as cloud and fog computing, Internet of things and everything, big data, software defined applications, cyber physical systems and so on. It relates to regulation, analysis, modeling, development, verification, operation and

maintenance of hardware, software and human related components, computer systems, networks and infrastructures for safety critical (I&C systems of nuclear power plants and power grids, ground and boarding aviation and piloting space systems, railway automatics, computer-based health systems, etc.), mission critical (unmanned space systems, etc.) and business (banking systems, telecommunications, e-services, etc.) critical applications.

Authors are invited to submit original manuscripts demonstrating recent advances the following areas, but are not limited to

- Methodology of dependable and resilient computing and communication
- Critical infrastructure and I&C safety and security
- Dependability and resilience of web, cloud, fog and dew computing
- Reliability, safety and cyber security of IoT systems for human and industry domains
- Fault- and intrusion-tolerance and testing of CPU and FPGA-based systems
- Cyber safety and cyber security in post-quantum era
- Model-checking for development and verification
- Assurance case-based techniques for critical and business applications
- Technology oriented software reliability assessment and management
- Big data analysis for dependability of software and systems
- Techniques of green computing and communication
- Intellectual systems for safety and security
- Reliability and safety of drones and UAV fleets
- Dependable aerospace, automotive and railway systems and devices
- Diversity for safety critical systems and e-services
- Signal processing and recognition for dependable computing
- University-industry cooperation for business and critical domains.

The conference will include special events (workshops, tutorials, industrial panels and so on) including sessions dedicated to the 50<sup>th</sup> anniversary of the 1<sup>st</sup> NATO Software Engineering Conference, where the term “software engineering” was coined (and development of “critical software engineering” and “software reliability engineering”), and to the 70<sup>th</sup> anniversary of the Claude Shannon’s paper "A Mathematical Theory of Communication", etc.

### **The Expected Benefit**

DESSERT’2018 provides the opportunity to discuss topics with colleagues from different spheres such as academia, industry, IT, instrumentation and computer manufacturing companies, public and private research institutions and organizations. DESSERT’2018 with its truly international character promotes the development of relationships between countries from all parts of the globe.

### **Submission Guidelines**

The language of DESSERT’2018 Conference is English. Submissions in any other language will be rejected. Presentations in any other language are also not accepted. All submissions must comply with the IEEE format guidelines. Formatting instructions and template as well as submission guidelines are provided at the <http://dessert.ieee.org.ua/for-authors>

Prospective authors are invited to submit a paper of minimum 4 and maximum 6 pages.

Submissions must be made in .pdf or .doc/.docx by using EasyChair Conference Management System. You can find more details on how to complete the online registration at the registration page at <https://easychair.org/>. Please submit your paper to the applicable DESSERT’2018 Track.

### **Important Dates**

Paper submission: March 4, 2018

Notification of paper acceptance: April 2, 2018

Final manuscript: April 12, 2018  
Registration and payment: April 15, 2018  
Program draft publication: May 1, 2018  
Conference date: May 24-26, 2018

### **Publication and Indexing**

Accepted papers will be published in Conference Proceedings and available in the IEEE Xplore and indexed by Scopus. Selected papers will be collected for a publication in international journals indexed by Web of Science and Scopus. A list of the journals will be specified.

### **Invitation to Sponsoring Program**

Organizations interested in presenting their products are invited to participate in the Sponsor Program and to take part in the Technical exhibition. The exhibition area assigned during the DESSERT'2018 will be offered free of charge for sponsors only.

### **The City of Kyiv and Venue**

Kyiv is the capital and largest city of Ukraine, an important economic and cultural regional hub. Kyiv is one of the oldest cities of Eastern Europe, it was founded more 1500 years ago. In 9th century Kyiv became a capital of East Slavic state Kievan Rus. During the conference participants will see one of the most beautiful cities of the world. A social and tour program will be organized. Conference will be held at University of Banking which is located in Podil, one of the beautiful districts of Kyiv <http://ubs.edu.ua/en/contacts>.

### **Organizers**

General Chair:

Prof, DrS Vyacheslav Kharchenko, National Aerospace University KhAI, Ukraine  
Centre for Safety Infrastructure-Oriented Research and Analysis, Kharkiv, Ukraine

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Artem Tetskyi, National Aerospace University KhAI, Kharkiv, Ukraine

### **Contact Information**

All information concerning DESSERT2018 is available at <http://dessert.ieee.org.ua>

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