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**11<sup>th</sup> International IEEE Conference  
Dependable Systems, Services and  
Technologies  
DESSERT'2020  
Ukraine, Kyiv, May 14-18, 2020**



**2020 Theme:  
IoT, Big Data and AI for  
a Safe&Secure World and Industry 4.0**

### Organizers

IEEE Ukraine Section  
IEEE United Kingdom and Ireland Section  
National Aerospace University KhAI, Kharkiv, Ukraine  
Banking University, Kyiv, Ukraine  
Leeds Beckett University, UK

### Scope

The annual DESSERT conference began since 2006 and its primary focus has been on methodologies, techniques and tools for dependability, security and safety assessment and assurance of software, hardware and middleware, computer systems and IT-infrastructures. DESSERT'2020 is responding to current major challenges relating to state-of-the-art information and communication technologies and paradigms such as cloud and edge computing, Internet of things, big data, AI and ML, software defined applications, cyber physical systems, etc. Relevant areas of interest encompasses regulations, analysis, modeling, development, verification, operation and maintenance of computer systems and components, networks and infrastructures for safety-, secure, mission- and business-critical applications.

DESSERT'2020 is addressing the main dependability challenges related to ***the IoT, Big Data and AI for a Safe&Secure World and Industry 4.0***. Authors are invited to submit original manuscripts demonstrating recent advances in in all areas relevant to these challenges, including, but not limited to:

#### ***Fundamentals and methodologies***

- Methodology and technologies of dependable and resilient computing
- Methodologies and technologies of smart and pervasive computing
- Methodologies and technologies in sustainable and green computing and communications
- Multi-sectoral cybersecurity and safety analysis and assurance
- Safety, cybersecurity and resilience of Industry 4.0 and 5.0
- AI for design, safety and security of intelligent systems
- Digital economy for sustainable development

### ***Methods and technologies***

- Dependable and trust IoT for human and industry domains
- Human-machine interaction and cooperation for safety and security
- Dependability, security and resilience of web, cloud-, fog- and dew- computing
- Big data and data mining techniques for business and critical domains
- Augmented, virtual and mixed reality for secure industrial and human applications
- Blockchain technology for critical and business domains
- Fintech, digital banking and cybersecurity
- Formal methods and assurance case-based techniques of development and assessment
- Quantum computing and post quantum cryptography
- Image processing and recognition for smart and dependable systems

### ***Domains and applications***

- Protecting critical infrastructures from cyberattacks
- Smart grid cybersecurity and resilience
- Reliability and safety of unmanned vehicles, drones and UAV fleets
- Dependability of mission critical, aviation and space systems
- Cybersecurity of medical devices and health systems
- Intellectual transport systems
- Ecology monitoring and decision making support
- Robotics and industry 4.0 and 5.0
- Dependable communication and high-reliable electronics
- UI cooperation, networking, education and training for business and critical domains
- Collaborative networked organisations for security: stakeholders requirements, business and governance models

The conference will include special events (workshops, tutorials, industrial panels) including sessions dedicated to special topics. In particular, one of the streams will be dedicated to topics of the H2020-ECHO project “European network of Cybersecurity centres and competence Hub for innovation and Operations” <https://echonetwork.eu/>

## **The Expected Benefit**

DESSERT’2020 provides the opportunity to discuss topics with colleagues from different spheres such as academia, industry, IT, manufacturing companies, public and private research institutions and organizations. DESSERT’2020 with its truly international character promotes the development of relationships between countries from all parts of the globe. The key DESSERT target is to create new values for industry, state organizations and business.

## **Submission Guidelines**

The language of DESSERT’2020 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/dessert-2020/for-authors/>

Prospective authors are invited to submit a paper of minimum 5 and maximum 7 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’2020 Track.

## **Important Dates**

Paper submission: February 10, 2020  
Notification of paper acceptance: March 23, 2020  
Final manuscript: April 5, 2020  
Registration and payment: April 8, 2020  
Program draft publication: May 1, 2020  
Conference date: May 14-18, 2020

### **Publication and Indexing**

Accepted papers presented at the DESSERT will be published in Conference Proceedings, available in the IEEE Xplore and indexed by Scopus. Selected papers will be collected for a publication in international journals and books indexed by Web of Science and Scopus. A list of them 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'2020 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 Kievskaya 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>.

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