Preface

The 2nd International Workshop on Information, Computation, and Control Systems for Distributed Environments (ICCS-DE 2020) was held online July 6-7, 2020 at the Matrosov Institute for System Dynamics and Control Theory (ISDCT) of the Siberian Branch of the Russian Academy of Sciences (SB RAS), Irkutsk, Russia (https://iccs-de.icc.ru/). It addresses the theory and practice in developing information, computation, and control systems related to different subject domains of information, technical, economic, and other fields of human activity. Special attention was paid to the systems that function in various distributed environments.

Our scientific event continues the previous Workshop. The 1st International Workshop on Information, Computation, and Control Systems for Distributed Environments (ICCS-DE 2019) was held July 8-9, 2019 (https://iccs-de.icc.ru/en/ws2019.php).

Within the framework of the 2nd International Workshop, we traditionally grouped the topics for discussion into the following key directions:

- Theoretical foundation of information, computing, and control systems,
- Methods, tools, and technologies of the system development,
- Development and application of systems in computer science,
- Mathematical modeling of systems,
- Control systems,
- Decision support systems,
- Intelligent systems,
- Multi-agent systems,
- Parallel and distributed computing systems.

The number and geography of participants have expanded significantly compared to ICCS-DE 2019. Sixty-seven participants from ten countries have been related to holding the Workshop.

All submitted papers were evaluated based on their originality, novelty, quality, and technical contribution. We thank all Program Committee Members for their help in selecting papers.

Based on the reviews, we accepted 27 papers for the presentation at the Workshop and publication in this volume. The reports examined various fields of computer science in application to such important subject domains as space, energy sector, autonomous robot control, remote monitoring, 3D modeling, environmentally friendly technologies, storage and processing of big data, high-performance computing, etc. We hope that the study results represented by the Workshop participants will be in demand by readers interested in the aforementioned fields.

We planned to have a physical location of the Workshop. However, all sessions of the Workshop have been held online owing to the difficult epidemiological situation caused by COVID-19 in Irkutsk. Nevertheless, the Workshop allowed us to discuss the state and experience of art study.

We appreciate the importance to meet each other personally. Therefore, in the future, we will continue to expand the number of the Workshop participants from different countries in a physical location in order to share new ideas, approaches, and projects related to creating information, computation, and control systems for distributed environments.

July 2020

Igor Bychkov Andrei Tchernykh Alexander Feoktistov

International Program Committee

Program Committee Chair

Igor Bychkov, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Program Committee Members

Yurii Shokin, Institute of Computational Technologies of the Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia

Andrei Tchernykh, CICESE Research Center, Ensenada, Mexico

Denys Dutykh, CNRS/INSMI, University Savoie Mont Blanc, France

Alexander Legalov, Siberian Federal University, Krasnoyarsk, Russia

Mikhail Babenko, North-Caucasus Federal University, Stavropol, Russia

Ljubica Kazi, University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia

Zeljko Stojanov, University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia

Dalibor Dobrilovic, University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia

Xiwang Guo, Computer and Communication Engineering College, Liaoning Shihua University, Fushun, China

Zhihui Du, Department of Computer Science and Technology, Tsinghua University, Beijing, China

Xinheng (Henry) Wang, Department of Electrical and Electronic Engineering Xi'an Jiaotong-Liverpool University, Suzhou, China

Sergio Nesmachnow, Universidad de la República, Montevideo, Uruguay

Muddesar Iqbal, Division of Computer Science and Informatics, London South Bank University, London, UK

Vijay Kumar Chaurasiya, Indian Institute of Information Technology, Allahabad, India

Nam Hoai Nguyen, IES of the Vietnam Academy of Science and Technology, Hanoi, Vietnam

Alexander Feoktistov, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Sergey Ul'yanov, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Evgeniy Cherkashin, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Oleg Zaikin, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Organizing Committee

Organizing Committee Chair

Alexander Feoktistov, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Organizing Committee Member

Olga Basharina, Irkutsk State University, Irkutsk, Russia

Alexei Edelev, Melentiev Energy Systems Institute of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Maksim Kenzin, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Roman Kostromin, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

Galina Kononenko, Matrosov Institute for System Dynamics and Control Theory of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia