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Victor Malyshkin (Ed.)

# Parallel Computing Technologies

15th International Conference, PaCT 2019  
Almaty, Kazakhstan, August 19–23, 2019  
Proceedings

*Editor*

Victor Malyshkin 

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# Preface

The 15th International Conference on Parallel Computing Technologies (PaCT 2019) was a four-day event held in Almaty, Kazakhstan. It was organized by the Institute of Computational Mathematics and Mathematical Geophysics of the Russian Academy of Sciences (Novosibirsk) in cooperation with Novosibirsk State University, Novosibirsk State Technical University, al-Farabi Kazakh National University (Almaty, Kazakhstan), and the University of International Business (Almaty).

Previous conferences of the PaCT series were held in various cities of Russia every odd year beginning with PaCT 1991 that took place in Novosibirsk (Akademgorodok). Since 1995, all the PaCT proceedings have been published by Springer in the LNCS series.

The aim of the PaCT 2019 conference was to provide a forum for an exchange of views among the international community of researchers in the field of development of parallel computing technologies. The PaCT 2019 Program Committee selected papers that contributed new knowledge in methods and tools for parallel solution of topical large-scale problems. The papers selected for PaCT 2019:

- Present and study tools for parallel program development such as languages, performance analyzers, automated performance tuners
- Examine and optimize the processes related to management of jobs, data and computing resources at high-performance computing centers
- Look into ways to enhance productivity of those who use high-performance computing resources to solve problems in their application domains
- Propose new models and algorithms in numerical analysis and data processing specifically targeted at parallel computing architectures
- Theoretically study practically relevant properties of distributed systems

Authors from 17 countries submitted 72 papers. The submitted papers were subjected to a single-blind reviewing process. The average number of reviews per submitted paper was 2.6. The Program Committee selected 24 full papers and ten short papers for presentation at the PaCT 2019.

Many thanks to our sponsors: the Ministry of Science and Higher Education of the Russian Federation, Russian Academy of Sciences, JSC Kazakhtelecom, Microsoft, and RSC Technologies.

August 2019

Victor Malyshkin

# Organization

The PaCT 2019 was organized by the Institute of Computational Mathematics and Mathematical Geophysics, Siberian Branch of Russian Academy of Sciences (Novosibirsk, Russia) in cooperation with Novosibirsk State University, Novosibirsk State Technical University, al-Farabi Kazakh National University (Almaty, Kazakhstan), and the University of International Business (Almaty, Kazakhstan).

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