

Lecture Notes in Mechanical Engineering

Andrey A. Radionov
Oleg A. Kravchenko · Victor I. Guzeev
Yurij V. Rozhdestvenskiy *Editors*

Proceedings of the 4th International Conference on Industrial Engineering

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Preface

International Conference on Industrial Engineering took place on May 15–18, 2018 in Moscow, Russian Federation. The conference was organized by three universities—Moscow Polytechnic University, South Ural State University (national research university), and Platov South-Russian State Polytechnic University. It was carried out under financial support of the South Ural State University (national research university), Moscow Polytechnic University as well as at informational support of the Institute of Electrical and Electronics Engineers (South Ural IEEE Chapter).

The conference was really large-scaled and international. The program committee selected more than 900 reports. The delegates represented several Russian universities and 15 states such as Egypt, Belarus, Bulgaria, Canada, Cyprus, China, Germany, Iraq, Kazakhstan, Mongolia, Portugal, Spain, Tajikistan, United States, and Ukraine.

The conference participants submitted papers reflecting recent advances in the field of Industrial Engineering. The conference was organized in 14 sections, including

- Part 1: Research and Development of Machines and Mechanisms (Dynamics of Machines and Working Processes; Friction, Wear and Lubrication in Machines; Design and Manufacturing Engineering of Industrial Facilities; Surface Transport and Technological Machines; Equipment and Technology of Welding Production).
- Part 2: Materials Engineering and Technologies for Production and Processing (New Functional Materials and Technologies; Innovation and Cost-Effective Use of Resources of Metallurgy Industry).
- Part 3: Control and Automation Systems for Manufacturing in the Industrial Production Areas (Control Systems and Their Industrial Application; Industrial Mechatronics, Automation, and Robotics; Electric Power Systems and Renewable Energy Sources; Power Electronics, Electrical Machines, and Drives;

Signal Processing and Real-Time Embedded Control; Modeling and Computer Technologies; Theory and Applications of Dynamical Measurements).

The present volume gathers 269 peer-reviewed papers from Part 1 of the conference technical sections, “Research and Development of Machines and Mechanisms”, and these papers were selected by the program committee for publication in Springer book series “Lecture Notes in Mechanical Engineering”.

The organizing committee would like to express its sincere gratitude to everybody who has contributed to the conference. Heartfelt thanks are due to authors, reviewers, participants, and to all the team of organizers for their support and enthusiasm which granted success to the conference.

Moscow, Russia

Prof. Andrey A. Radionov
Conference Chair

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