Alexander V. Tuzikov
Alexei M. Belotserkovsky
Marina M. Lukashevich (Eds.)

Communications in Computer and Information Science 1562

Pattern Recognition and Information Processing

15th International Conference, PRIP 2021
Minsk, Belarus, September 21–24, 2021
Revised Selected Papers

Springer

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Editors
Alexander V. Tuzikov
United Institute of Informatics Problems
of The National Academy of Sciences
of Belarus
Minsk, Belarus

Alexei M. Belotserkovsky
United Institute of Informatics Problems
of The National Academy of Sciences
of Belarus
Minsk, Belarus

Marina M. Lukashevich
Belarusian State University of Informatics
and Radioelectronics
Minsk, Belarus

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Preface

This book contains selected extended papers from the 15th International Conference on Pattern Recognition and Information Processing (PRIP 2021), which was held during September 21–24, 2021, and hosted (online) by the United Institute of Informatics Problems of the National Academy of Sciences of Belarus.

The PRIP conference has a long history. It began in 1991 as the First All-Union USSR Conference on Pattern Recognition and Image Analysis in Minsk. PRIP was organized alternately by the Institute of Engineering Cybernetics of the Belarusian Academy of Sciences, the Belarusian State University, and the Belarusian State University of Informatics and Radioelectronics. Currently, it is organized under the Belarusian Association for Image Analysis and Recognition (BAIAR), which was officially accepted by the International Association of Pattern Recognition (IAPR) in March 1993 as a national representative of Belarus at IAPR. To date, 15 editions of PRIP conference have been held.

The onset and continuation of the COVID-19 pandemic in 2020 and 2021 changed the international landscape, and thus PRIP 2021 took place purely online although it was still endorsed by the International Association for Pattern Recognition (IAPR). For the first time, the conference was endorsed by the Asia-Pacific Artificial Intelligence Association (AAIA) and GÉANT, an association of collaborating European National Research and Education Networks (NRENs).

This year, the conference had a single track for which we received 90 submissions. Of these, only 53 papers (representing 142 co-authors) were accepted after peer review for presentation at the conference. In total, 75 speakers (including keynotes and invited speakers) from 18 countries took the floor.

PRIP usually includes theoretical and applied aspects of computer vision, recognition of signals and images, the use of distributed resources, and high-performance systems. This year it was significantly expanded with the inclusion of issues related to artificial intelligence. The conference had the motto "Artificial Intelligence: Facing the Challenges".

Proceedings of PRIP conferences are regularly published by conference organizers. The current book includes the best papers from the conference, which were selected by PRIP Program Committee. The final papers were reviewed again after being revised and extended following presentation at the conference.

The book is aimed at researchers working in pattern recognition and image analysis; knowledge processing; and knowledge-based decision support system.

December 2021

Alexander V. Tuzikov
Alexei M. Belotserkovsky
Marina M. Lukashevich

Organization

The 15th International Conference on Pattern Recognition and Information Processing (PRIP 2021) was hosted by the United Institute of Informatics Problems of the National Academy of Sciences of Belarus in cooperation with the Belarusian State University, the Belarusian State University of Informatics and Radioelectronics, and the Belarusian Association for Image Analysis and Recognition.

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- GÉANT Association
- The International Association for Pattern Recognition
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