

Preface

International Russian Conference on Materials Science and Metallurgical Technology has taken place on September 21-23, 2021.

The conference was carried out under the financial support of the South Ural State University (national research university). The conference was organized to maintain discus and the presentation of research papers, summarizing research in technical disciplines in universities, research institutes, large industrial enterprises, scientific and industrial associations of the Russian Federation and the World, as well as foreign authors, and research results obtained on the personal initiative of the authors. The conference was aimed to exchange information between scientists and practitioners of the most promising research areas and achievements in material science, metallurgy, and materials processing technologies.

The conference was organized in 7 sections, including:

1. Materials: design, synthesis and characterization;
2. Technologies of pyrometallurgical and electrometallurgical production;
3. Technologies of hydrometallurgical production;
4. Modern problems of foundry production;
5. Metal forming: rolling, stamping, forging, pressing;
6. Technologies of welding production;
7. Additive manufacturing.

The spread of the coronavirus COVID-19 has made adjustments to our lives this year, including the organization of our conference. Participants could take part in the conference in a traditional face-to-face format and remotely as the video conference format.

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

Conference Chair, prof. Andrey A. Radionov.

Conference Committee

Conference Chair

prof. Radionov A.A., Vice-Rector of the South Ural State University (National Research University), Chelyabinsk, Russia

Program Co-Chair

prof. Ivanov M.A., South Ural State University (National Research University), Chelyabinsk, Russia
prof. Pino Tese, President of SMS group GmbH, Dusseldorf, Germany

International Program Committee

prof. Christof Sommitsch, Graz University of Technology, Graz, Austria

prof. Erkki Lahderanta, Lappeenranta University of Technology, Lappeenranta, Finland

prof. Galevskiy G.V., Siberian State Industrial University, Novokuznetsk, Russia

prof. Gumerov K.M., Institute for Transport of Energy Resources Problems, Ufa, Russia

prof. Yeremin Ye.N., Omsk State Technical University, Omsk, Russia

prof. Ivanov I.A., Belarusian National Technical University, Minsk, Republic of Belarus

prof. Khlybov A.A., Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Nizhny Novgorod, Russia

prof. Korchunov A.G., Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia

prof. Leushin I.O., Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Nizhny Novgorod, Russia

prof. Lopatin A.A., Kazan National Research Technical University n.a. A.N. Tupolev, Kazan, Russia

prof. Moller A.B., Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia

prof. Mysik R.K., Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, Russia

prof. Movchan I.A., National Engineering School of Saint Etienne, France

prof. Nayzabekov A.B., Rudny Industrial Institute, Rudny, Republic of Kazakhstan

prof. Panteleyenko F.I., Belarusian National Technical University, Minsk, Republic of Belarus

prof. Philippe Bertrand, National Engineering School of Saint Etienne, France

prof. Rainer Niewa, Institut fur Anorganische Chemie Universitat Stuttgart, Stuttgart, Germany

prof. Savinov A.S., Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia

prof. Sheshukov O.Yu., Ural Federal University named after the first President of Russia B.N. Yeltsin, Ekaterinburg, Russia

prof. Smirnov L.A., Russian Academy of Sciences, Ekaterinburg, Russia

dr. Trukhanov A.V., National Academy of Sciences of Belarus, Minsk, Republic of Belarus

dr. Trukhanov S.V., National Academy of Sciences of Belarus, Minsk, Republic of Belarus

dr. Turchenko V.A., Joint Institute for Nuclear Research, Dubna, Russia

Organising Committee

prof. Ivanov V.A., South Ural State University (National Research University), Chelyabinsk, Russia
prof. Gasimov V.R., South Ural State University (National Research University), Chelyabinsk, Russia

prof. Kulmukhametova A.S., South Ural State University (National Research University), Chelyabinsk, Russia

prof. Radionova L.V., South Ural State University (National Research University), Chelyabinsk, Russia