

Preface

First of all, we would like to thank all the participants of the Energy Systems Environmental Impacts conference (ESEI 2021) which was held on September 24-26, 2021 in St.Petersburg, Russia. The conference was organized and supported by the National Technology Initiative Center for Advanced Manufacturing Technologies based on the Institute of Advanced Manufacturing Technologies of Peter the Great St. Petersburg Polytechnic University. The organizers of the Conference are the members of the world-class research center program “Advanced Digital Technologies”. The conference was supported by Peter the Great St. Petersburg Polytechnic University under the strategic program 'Priority 2030' of the Russian Federation (Agreement 075-15-2021-1333 dated 30.09.2021).

The ESEI puts together distinguished professors and researchers from industry and academia all over Russia and aims at discussing the most recent advancements on the Energy Systems impact on environment, power engineering and energy use in industrial sector.

This year due to the pandemic and travel restrictions of local governments, the ESEI was held remotely. Though the authors and speakers could not communicate face to face, the passion for involvement was not affected. Participants were actively involved in the discussion. The conference featured more than 45 papers distributed along 4 sessions.

Presentations were made on the following topics of the conference:

- 1) Hydroelectric and energy machines impact on Ecosystem
- 2) Energy use in industrial sector
- 3) Data accuracy analysis
- 4) Power engineering

The volume represents an outstanding state-of-the-art of the above mentioned topics related to the Energy Systems and it provides interesting insights for current and future methodological and technological developments.

The conference was chaired by Prof.Yury Klochkov and Dr.Albina Gazizulina.

For the conference proceedings all the papers were reviewed to meet the requirements of E3S Web of Conferences standards. We would like to thank all the technical program committee members for their great efforts on paper reviewing. Besides, we would like to thank all the conference participants for their contributions. Many thanks to the conference committee members for their concern, support and advice. The help of each person was tremendous in the success of the conference.

With best regards,

ESEI 2021 Organizing committee

ESEI-2021 Scientific Committee

National Technology Initiative Center for Advanced Manufacturing Technologies based on the Institute of Advanced Manufacturing Technologies of Peter the Great St.Petersburg Polytechnic University

The conference is held within the framework of the III International Forum "New Manufacturing Technologies"

The organizers of the Forum are World-class Research Center program "Advanced Digital Technologies", National Technology Initiative Center for Advanced Manufacturing Technologies, with the support by Peter the Great St. Petersburg Polytechnic University and supported under the strategic program 'Priority 2030' of the Russian Federation (Agreement 075-15-2021-1333 dated 30.09.2021)

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