

Preface

Fourth International Conference «Convergence of digital and physical worlds: technological, economic and social challenges» (CC-TEESC2018) was held at the St. Petersburg Polytechnic University named after Peter the Great, with the participation of the two strategic partners - the University of Applied Science Wildau (THW, Germany) and St. Petersburg State Economic University (SPSEU) with the support of the Russian Science Foundation (RSF).

The conference aimed to exchange views, organize scientific discussion and dialogue between representatives of universities, academic institutions and industry representatives in such areas as: industrial Internet and industry 4.0; diffusion of technologies and the formation of a new technological platform; ensuring information security when processing large data; the economic potential of the new industrial base and the structure of the future economy; social consequences of the convergence of the digital and physical worlds; business management model and entrepreneurship in the new industrial base. The subject of a broad discussion was the question about significance of the breakthrough technologies, especially information and communication technologies, which become the basis for a new technological and digital infrastructure of society. The latter circumstance should play a key role in the creation of a new industrial base, which received such names as "Internet of Things" or "Industry 4.0". Scientific discussions at the conference were aimed at mobilizing intellectual forces to clarify the concept (platform) of the new industrial base (taking into account already accumulated international experience), as well as to systemic consideration of the issues of creating and developing a new industrial base, which we understand more widely than mentioned above the concept of "Internet of Things" and "Industry 4.0". Also during the conference it was suggested to consider technological, economic and social components as a single and integral platform for shaping the structure of the future economy. This conference has become a regular platform for the international exchange of views of scientists and is the continuation of the 3-rd conference, held in 2016.

All submitted to the conference articles were double-blind peer review of qualified experts. The program committee of the conference, after careful study, selected 77 articles from the 139 submissions. 160 people from 7 countries representing 21 universities, academic institutes, industrial companies and research organizations took part in the work of the scientific forum.

We would like to express special gratitude to EDP Sciences - SHS Web of Conferences for their cooperation and the presented opportunity for wide and open access of the conference proceedings to the international scientific community.

We would also like to thank all members of the program and organizing committees, reviewers, rapporteurs, authors of articles and participants for their contribution to the work of the conference. We hope that the results obtained during the work of our conference will be in demand by the scientific community and industry practice to solve the pressing problems of technological and economic development.

Professor Andrei Rudskoy

Chairman IV International Scientific Conference «Convergence of digital and physical worlds: technological, economic and social challenges» St. Petersburg, Russia, May 2018