



26th Scientific Conference on Power Engineering and Power Machines (PEPM'2021)

18 – 21 September 2021

Sozopol, Bulgaria and parallel online sessions

www.copepm.eu

The conference is organized by the Faculty of Power Engineering and Power Machines at the Technical University – Sofia. It is held annually during the global "Days of Science" forum at the university, since 1995. For the past 26 years the conference has become a traditional annual scientific event, for meeting of Bulgarian and foreign scientists, experts and industry representatives in the field of energetics, energy efficiency, renewable energy, heat engineering, hydraulics and pneumatics, environmental protection, textile and sewing production.

The PEPM conference provides the opportunity for the young researchers (PhD and MSc students, and Post Docs), involved in these scientific areas, to present their research activities and disseminate their work, as well as to meet and discuss with well-known and recognized scientists and experts from all over the world. Academic, industry and business members are also welcomed and appreciated as key-note speakers and sponsors.

The PEPM' 2021 edition has established agreement with E3S Web of Conferences, for open access proceedings indexed by Scopus, Google Scholar, CAS, DOAJ, EBSCO, ProQuest and others. The best accepted peer-reviewed papers will be published as special conference edition issue. During the article review process, a double-blind review is followed, with minimum of two reviewers for each paper submitted. The accepted papers should justify the conference topics, comply with the general ethics, be innovative and represent high level of research quality. Each paper is verified for plagiarism, with the PlagScan Tool, set to less than 20% plagiarism. The Microsoft CMT platform (Conference Management Toolkit) is used for the event management and paper submissions and reviewing process.

The main topics of the Conference are:

Renewable Energy Technologies

Thermodynamics, Heat and Mass Transfer

Building Efficiency Improvements and HVAC systems

Fundamental and Applied Fluid Mechanics

Thermal Comfort, Indoor Air Quality

Hydraulic and pneumatic machines and equipment

Hydraulic and Pneumatic Drive and Control Systems
Energy and Environment Protection
Nuclear Technologies
Thermal Equipment
Control and Automation of energy processes
Design and Technologies for Clothing and Textiles
Advanced Fibres and Materials, Innovative Textiles
Comfort Science, Ecological and Environmental Textiles

For the PEPM 2021 edition are received 60 papers, distributed to 39 reviewers. 43 papers were accepted for presentation and further editing, and 17 papers were rejected or withdrawn by the authors after revision process.

Thus, the PEPM 2021 edition conference was organized in 5 tracks:

- 15 papers in section *Thermal equipment, heat and mass transfer processes*
- 11 papers in section *Renewable Energy and Environmental protection*
- 6 papers in the section *Design and Technologies for Clothing and Textiles*
- 5 papers in the section *Hydraulic and Pneumatic Fluid Power Systems and Machinery*
- 6 papers in the section *Miscellaneous*

Among the participants, and aside from the local organization representatives, the conference was attended from scientists from following foreign universities:

Karlsruhe Institute of Technology
High Performance Computing Center Stuttgart
Moscow State University of Civil Engineering;
University "Politehnica" Bucharest;
"Dunarea de Jos" University of Galati
Tashkent State Technical University;
Tashkent Institute of Irrigation and Agricultural Mechanization Engineers;
Almaty University of Energy and Telecommunications;
Kazakh National Agrarian University;
HCMC University of Technology and Education;
PetroVietnam University;
Wroclaw University of Science and Technology;

On behalf of the organizing committee and as editors of this conference issue of the PEPM 2021 proceedings, we wish to express our sincere gratitude to the sponsors, plenary speakers, authors and participants, reviewers and organizing members, who have contributed in the organization of the PEPM 2021 conference! See you, in **2022!**

Prof. Totyo Totev

Conference Chairman

Assoc. Prof. Ilinca Nastase

Assoc. Prof. August Hubert Wierling

Chief Editors of PEPM 2021 Proceedings