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Editor in Chief: Tomasz Kapitaniak

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**Editor in chief – Tomasz Kapitaniak**

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Mechanics and Mechanical Engineering publishes original papers, notes, and invited review articles from all fields of theoretical and applied mechanics as well as mechanical engineering. In addition to the classical fields, such as Rigid Body Dynamics, Elasticity, Plasticity, Hydrodynamics and Gas Dynamics, it gives special attention to recently developed and boundary areas of mechanics. As a rule, only contributions written in English will be accepted.

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13<sup>th</sup> INTERNATIONAL SYMPOSIUM  
ON COMPRESSOR & TURBINE FLOW SYSTEMS  
– THEORY & APPLICATION AREAS  
**SYMKOM 2018 IMP<sup>2</sup>**



## LETTER FROM EDITORS

It is a great pleasure to submit to our readers a Special Issue of the journal **Mechanics and Mechanical Engineering**, in which full texts of the manuscripts presented at the 13<sup>th</sup> International Symposium **SYMKOM 2018 IMP<sup>2</sup>** are included. **Book of Abstracts** – as the Conference Proceedings after the revision procedure – will be distributed in an electronic version among the symposium participants.

**SYMKOM 2018 IMP<sup>2</sup>** follows the tradition of meetings of people who conduct scientific and R&D activities in the field of turbomachinery: turbines, compressors, pumps, as well as modern power engineering technologies.

The first symposia were devoted to compressors exclusively, hence their name which comes from “SYMpozjum KOMpresorów” (i.e., **SYM**posium on **COM**pressors). These symposia were held at the time when the production of first industrial compressors and blowers, designed at the Chair of Thermal Turbomachines, the predecessor of the Institute of Turbomachinery, started in Poland. Since 1987 the problem scope covered by the symposia has included problems of theory and experiment of turbomachines, as well as their practical applications.

The first **SYMKOM** organised by the Institute of Turbomachinery, Lodz University of Technology, in which foreign participants took part was held in metricconverterProductID1967 in 1967 in Łódź. The next venues were, respectively: 1977 – Tuszyn, 1987 – Bronisławów, 1991 – Łódź and Bronisławów, 1995 – Bronisławów, 1999 – Łódź and Arturówek, and 2002, 2005, 2008, 2011 – Łódź.

This year, for the third time, the symposium is organized by two scientific centres: **Institute of Turbomachinery, Lodz University of Technology** and **Szewalski Institute of Fluid-Flow Machinery, Polish Academy of Sciences** in Gdańsk.

The symposium programme includes plenary sessions introduced by keynote speeches delivered by eminent specialists recognized in various fields of turbomachines and representing the world of science and industry. Moreover, an exchange of ideas among users, manufacturers and researchers involved in turbomachinery will be possible within a separate industrial panel session.

The scope of **SYMKOM 2018 IMP<sup>2</sup>** covers the following topics:

- design and manufacturing of turbomachinery components (rotor dynamics, performance prediction, optimization, revamp and retrofit);
- turbomachinery maintenance and diagnostics;
- problems of flow unsteadiness (rotor - stator interaction, surge and stall, aeroacoustics, noise reduction);
- numerical flow simulations and their experimental validation (new computational models; turbulent, transitional, multiphase flow simulations, etc.);

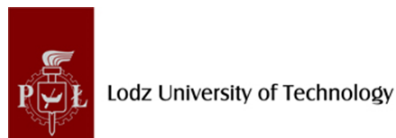
- experimental investigations and measurement techniques;
- new energy and heat generating cycles (thermodynamics of turbomachines);
- designs for special applications (medicine, biotechnology, etc.);
- wind turbines, special devices and technology for 'green energy' generation;
- microdevices and microflows;
- educational issues;
- AOB (Any Other Business).

Following the decision of the Scientific Committee, the symposium contributions will be published in two scientific journals: **Mechanics and Mechanical Engineering** and **Open Engineering**.

We wish fruitful sessions, vivid discussions and a nice stay in Łódź to all the participants of the symposium.

Scientific and Organizing Committee  
*SYMKOM 2018 IMP<sup>2</sup>*

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