Special Issue

Advances and Challenges in the Development of Energy Efficiency in Hydraulic and Pneumatic Systems

Message from the Guest Editors

Hydraulic and pneumatic systems, including compressed air systems, are integral to the field of fluid power systems, employing pumps, compressors, actuators and various other components to perform a wide range of tasks across industries such as automotive, aerospace, construction, machine engineering, robotics, automation, and power engineering. Fluid power systems use the properties of fluids (hydraulic oil and compressed air) to transmit power, control, and drive machines and devices. Hydraulic and pneumatic systems are simple and easy to control, economical and safe to operate. In recent years, hydraulic and pneumatic system research has undergone tremendous expansion in various categories, such as energy regeneration, energy storage, energy harvesting, waste energy recovery, and energy loss reduction. The development of hydraulic and pneumatic systems is focused on energy efficiency, optimizing and increasing energy efficiency, and minimizing energy losses. With the wide use of hydraulic and pneumatic systems, especially high-powered machinery, there is great interest in research on energy-saving measures and strategies due to energy costs, environmental regulations, etc.

Guest Editors

Prof. Dr. Ryszard Dindorf

Prof. Dr. Jakub Takosglu

Prof. Dr. Piotr Wos

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Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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