Special Issue

Symmetry in Manufacturing Systems Engineering — Concept and Theory to Improve Design, Process, Quality and Circularity as the Basis for Future Manufacturing Philosophy

Message from the Guest Editor

Symmetry is a frequent pattern widely studied in a variety of fields. Since the first industrial revolution, engineers and scientists have been studying the symmetry of shapes, components, alignments etc. in industrial manufacturing systems. With the passage of time, various manufacturing processes have attracted attention and brought to light new application and perspective of symmetric manufacturing. For example, in mechanical systems and manufacture, symmetric and synchronized systems are often used to satisfy stability criteria for rotating structures; in electrical and electronics manufacturing, the study of symmetrical component faults is a critical issue; in power systems manufacturing, symmetric circuits and networks are essential to guarantee the same data speed/quantity in forward/backward transmission directions. Over time, we can observe a shift from a microscopic angle of seeking symmetrical component/material structures to a macroscopic angle of seeking symmetrical production processes and treatments (e.g., heating, forming, etching, machining, sintering, casting, fusion, and so forth)...

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

Editor-in-Chief

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