Special Issue

Analysis and Design of Structures Made of Plastically Anisotropic Materials

Message from the Guest Editors

Plastic anisotropy arises from different metal-forming processes, such as the production of rolled sheets, drawn sheets, extruded billets, and others. The most important cause of the anisotropic properties is the preferred orientation of grains. However, a quantitative treatment of plastic anisotropy is possible without regards to its crystallographic origin using this or that anisotropic yield criterion and a flow rule. The anisotropic yield criterion has a great effect on the analysis and design of structures and machine parts. The orthotropic form of anisotropy is most common. In this case, the anisotropic properties have two-fold symmetry. Another important form of anisotropy demands that a material has rotational symmetry about of the principal axes of anisotropy. This Special Issue of *Symmetry* features articles about analytical and numerical methods of analysis and design of structures and machine parts assuming that the material is plastically anisotropic. ...

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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.

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