







Special Issue Reprint

Mechanics of Corrugated and Composite Materials

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Corrugated and composite materials can significantly outperform traditional materials. Nowadays, such materials have gained more and more attention and application not only in theoretical, experimental or numerical scientific studies but also in daily industrial problems, which require innovative solutions. The specific geometry of a corrugated layer, or the combination of two or more materials in the structures allows the mechanical properties with specific features favorable for use in a specific engineering problem to be obtained. For example, due to the specific compositions of the corrugated materials, the ratio of the load capacity to the weight of the sections is much higher than that of traditional solid sections. Therefore, such materials should be used when the weight of the structure must be optimized or the structure must have openwork geometry. Among others, the composites can be employed for a variety of purposes, for example, in corrugated boards in the packaging industry; in soft-core sandwich panels, window frames in structural engineering; in wings in commercial, civilian and military aerospace applications; in the vehicle and its equipment devices, including, panels, frames or other interior components; in fans, grating, tanks, ducts and pumps in environmental installations; in electrical engineering in switchgear, motor controls, control system components or circuit breakers; and in many more. This Special Issue "Mechanics of Corrugated and Composite Materials" addresses selected knowledge gaps and aids advance in this area.





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