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Fatigue Behavior, Lifetime Prediction and Modeling of Welding Process

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Deadline for manuscript submissions:
closed (10 November 2023)

Message from the Guest Editors

Dear Colleagues,

Material fatigue is regarded as one of the most important factors for determining the service life and safety of engineering components under cyclic loads. Thus, accurate evaluations and lifetime prediction of fatigue behavior remain a major concern, which are particularly prominent in welded joints. Furthermore, the need to join dissimilar materials to produce improvements, such as protection from corrosion, require in-depth investigations and the development of new welding techniques. However, despite these difficulties, welded joints are considered indispensable for most engineering constructions. Studies on fatigue regarding welded joints and the modeling of welding processes are becoming essential.

Therefore, this Special Issue is dedicated to presenting the state-of-the-art advances in fatigue studies and lifetime predictions regarding welded joints. High-quality contributions, which present original concepts and new methodologies, with a clear indication of the progress made from existing literature, are encouraged. Research on the mathematical modeling of welding processes and the fatigue/fracture behavior of welded structures is also welcomed.

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