Special Issue

Feature Papers of Computational Modelling and Simulation for Fatigue and Fracture of Engineering Materials and Structures

Message from the Guest Editors

Computational modelling and simulation have become essential tools in understanding and predicting the behaviour of materials and structures under fatigue and fracture conditions. This Special Issue aims to collect reference papers on, but not limited to, the following topics of interest:

- Advanced computational methods for fatigue and fracture analysis (e.g., phase-field techniques; peridynamics; meshless; crystal plasticity);
- Multi-scale modelling and simulation of fatigue and fracture;
- Damage mechanics and failure analysis of engineering materials and structures;
- Probabilistic modelling and reliability analysis of fatigue and fracture;
- Experimental validation of computational models and simulations;
- Applications of computational modelling and simulation in the design and optimization of engineering structures;
- Modelling of fatigue crack initiation and propagation and multiaxial fatigue;
- Modelling of advanced materials;
- Modelling of corrosion-assisted fatigue and fracture (e.g., H2 embrittlement);
- Surrogate modelling (e.g., data-driven models, ANNs).

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Deadline for manuscript submissions

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