Special Issue

Advances in Statistical Analysis of Fatigue Data

Message from the Guest Editors

The development of appropriate statistical methodologies for modelling the fatigue response of components is fundamental to ensure their structural integrity and guarantee safe design. Fatigue is affected by many factors, e.g., type of load, component size, manufacturing defects and type of microstructure, all of which significantly influence the in-service life of the component. These factors contribute to the large scatter shown by the fatigue test data. This intrinsic variability of the fatigue phenomenon must be considered in a statistical framework. Statistical models have been proposed since the beginning of the research on the fatigue response of components. Nowadays, new challenges are to be faced by researchers working in this field. This Special Issue aims at providing an overview of the recent advances in the statistical modelling of the fatigue response. Papers on innovative statistical models, the comparison between conventional and innovative methodologies, efficient methods limiting the testing time without affecting the design reliability, the estimation of the design curves (at different confidence and reliability levels) and literature reviews are welcome.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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