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Advances in Very-High-Cycle Fatigue

Guest Editors:

Prof. Dr. Massimo Rossetto

Department of Mechanical and
Aerospace Engineering,
Politecnico di Torino, 10129
Turin, Italy

Dr. Davide S. Paolino

Department of Mechanical and
Aerospace Engineering,
Politecnico di Torino, Corso Duca
degli Abruzzi 24, 10129 Torino,
Italy

Dr. Andrea Tridello

Department of Mechanical and
Aerospace Engineering,
Politecnico di Torino, 10129
Turin, Italy

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Message from the Guest Editors

Dear Colleagues,

In the early 90s, the disconcerting finding of fatigue failures beyond 10^8 cycles and below the conventional fatigue limit has been the main driver for the rapid diffusion of research in the so-called very-high-cycle fatigue (VHCF) regime of materials. Recently, the research on VHCF has been further boosted by the need to fill in the gap of knowledge regarding the structural integrity of machinery parts whose performance—in terms of expected life, applied load, and speed—is drastically increasing.

This Special Issue aims to provide an overview of the VHCF response of materials, focusing on recent experimental results on the mechanism of crack initiation, innovative testing methodologies, and probabilistic models capable of describing the fatigue response beyond 10^8 cycles.

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Dr. Andrea Tridello

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Special Issue



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Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica,
Politecnico di Milano, Piazza L.
da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
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