Special Issue

System Dynamics and Fatigue of Materials

Message from the Guest Editor

Dynamics and multibody simulation can equally faithfully simulate load conditions that can range from quasi-static cases to transient ones, also simulating the absolute and relative motion of the components and, therefore, the actual operating conditions. In addition, innovative techniques of evaluation of fatigue behavior in the frequency domain, called Vibration Fatigue, are perfectly synergistic with the simulation techniques in the dynamic environment, the more these are also carried out in the frequency domain. This capability can reduce computational costs of fatigue strength, which can then be assessed extremely precisely even considering the non-linear behavior of the system in the time domain by combining transient dynamic simulation with the classic techniques to assess fatigue behavior. In this Special Issue, modern trends of dynamic and multibody simulation oriented to fatigue evaluation of mechanical systems are highlighted and discussed. It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are all welcome.

Guest Editor

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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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