Call for papers

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Uncertainty Quantification and Design under Uncertainty for Metallic Systems

The aim of this collection is to cover the advances in the development and application of uncertainty quantification (UQ) techniques to investigate the effects of uncertainty on the physical behavior of metals and design metals under uncertainty. We welcome papers focusing on UQ for metallic materials with applications in different length scales ranging from the atomistic to the macro-scale. Topics of interest include: • Design of metals under uncertainty • Material characterization methods to determine the uncertainty in experimental data • Data-driven and machine learning reinforced UQ • Quantification of manufacturing-related uncertainty • Effects of uncertainty on physical material behavior (mechanical, electronic, optical, and thermal properties, fatigue/failure behavior)

Original research papers should be 3,000-9,000 words with up to 12 figures maximum; review papers should be 6,000-11,000 words with up to 20 figures maximum.

Detailed author instructions are available at: http://www.tms.org/AuthorTools/

Keywords for this topic: Characterization; Computational Materials Science & Engineering; ICME; Physical Properties; Uncertainty Quantification

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