Special Issue

Modeling, Simulation and Experimental Studies in Metal Forming

Message from the Guest Editors

Currently, new forming processes are constantly emerging, and modeling/simulation plays an important role in the research into metal forming. In-depth research into the deformation mechanism, microstructure evolution, stress and strain, shape, defects, damage, and fracturing during metal forming is needed through experimental or multi-scale modeling/simulation. The goal of this Special Issue is to publish original, important, and well-developed research papers that focus on modeling/simulation and experiments in metal forming. In this Special Issue, we welcome the latest research on metal forming. Appropriate topics include but are not limited to the following: sheet metal forming, forging, extrusion, drawing, rolling, or special forming processes and numerical simulations (the finite element method, cellular automaton, the phase field method, etc.); microstructure evolution and control; constitutive behavior; the mechanical properties of deformed materials; and the optimization of process conditions.

Guest Editors

Prof. Dr. Gang Fang

Department of Mechanical Engineering, Tsinghua University, Beijing 100084, China

Prof. Dr. Chaoyang Sun

School of Mechanical Engineering, University of Science and Technology Beijing 100083, China

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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About the Journal

Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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