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Analysis and Design of Metal Forming Processes II

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Message from the Guest Editor

Large-scale bulk forming processes are widely used for the processing of materials. The analysis and design of such processes require accurate constitutive equations and boundary conditions. New experimental techniques are needed for developing accurate constitutive equations at large strains. Of special importance are the constitutive equations for the prediction of the evolution of ductile damage and plastic anisotropy. Friction has a great effect on material flow in forming processes. The development of new friction tests is a vital aspect of the successful analysis and design of material forming processes. On the other hand, fast computational methods are needed for solving boundary value problems, especially when calculations are to be performed in real time. The development of analytic methods is useful for understanding some general tendencies in solution behavior and for verifying numerical solutions.

In this Special Issue, we seek to provide a wide set of articles on various aspects of bulk forming processes. We are also seeking articles devoted to both experimental and theoretical (analytical and numerical) approaches, as well as a combination of these approaches.

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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.

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