

Special Issue

Analysis and Design of Metal-Forming Processes

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 requires accurate constitutive equations and boundary conditions. New experimental techniques are needed for developing accurate constitutive equations during large strains. Of special importance are the constitutive equations for prediction of the evolution of ductile damage and plastic anisotropy. Hence, the development of new friction tests is a vital aspect in 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 the calculations are to be performed in real time. Moreover, 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. Articles devoted to different materials are desired. We would like articles devoted to both experimental and theoretical approaches, as well as those that consider a combination of these approaches.

Guest Editor

Prof. Dr. Sergei Alexandrov

1. Laboratory of Technological Processes, Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences, 119526 Moscow, Russia
2. School of Mechanical Engineering and Automation, Beihang University, Beijing 100191, China

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

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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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