Journal of
Manufacturing and Materials Processing

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Advances in Friction Stir Welding in the Light of Industry 4.0

Guest Editor:

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Deadline for manuscript submissions:
closed (6 June 2022)

Message from the Guest Editor

With 30 years of friction stir welding research and development now available to the scientific community, the tools available to aid current research have greatly expanded. Novel approaches to the application of machine learning, modeling tools, and real-time data are changing how we control, predict, and apply friction stir technologies to a myriad of use cases. While initially friction stir welding was applied much like many other bespoke metallurgical process, the aid of real-time data acquisition has provided the impetus to evaluate and predict in-process changes that enable significant improvements in properties, reduction in cycle times, and consistency in application.

This Special Issue seeks papers that focus on the use of data to improve the control, understanding, quality, and process conditions of friction stir technologies, specifically in the following areas:

- in-process quality monitoring applied modeling tools that aid improved quality;
- predictive modeling tools that aid in process improvements;
- the application of machine learning to friction stir technologies; real-time control of friction stir technologies;
- the application of data-based model validation.

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Message from the Editor-in-Chief

Journal of Manufacturing and Materials Processing (*JMMP*) (ISSN 2504-4494) is a new MDPI peer-reviewed, open access venue with a focus on the scientific fundamentals and engineering methodologies of manufacturing and materials processing. We offer an online platform facilitating effective exchange of innovative scientific and engineering ideas and the dissemination of recent, original, and significant research and developmental findings. On behalf of the Editorial Board, I extend an invitation to our scientific and engineering colleagues to contribute high-quality, innovative, and ground-breaking research articles to *JMMP*.

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