



Advances in Friction Stir Welding in the Light of Industry 4.0

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Deadline for manuscript
submissions:

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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

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