Special Issue

Innovations in Laser-Assisted Machining for Precision and Efficiency

Message from the Guest Editors

Laser-assisted machining (LAM) is an advanced hybrid manufacturing process that integrates high-energy laser heating with conventional cutting operations to enhance efficiency, precision, and the processing of materials. These advantages allow for the high-precision processing of difficult-to-cut materials (e.g., titanium alloys, nickel alloys, ceramics, and composites) that are common in the aerospace, automotive, and biomedical industries. Recent advances in laser sources, beam delivery, and process modeling have expanded LAM's capabilities and flexibility, aligning perfectly with JMMP's focus on innovative manufacturing processes and the advanced processing of materials. We welcome contributions focused on topics such as the following:

- Laser-assisted cutting processes (turning, milling, drilling, grinding) and hybrid machining systems;
- Thermal modeling and control of laser–material interactions in machining;
- Cutting tool design, tool wear, and surface/subsurface integrity;
- Process monitoring, sensing, and adaptive control for laser-assisted machining;
- Applications and case studies in aerospace, biomedical, energy, micro/nano-manufacturing, and other high-tech fields.

Guest Editors

Dr. Sharizal Ahmad Sobri

Department of Engineering, Nottingham Trent University, Clifton Campus, Nottingham N11 8NS, UK

Dr. Mohamed Mazlan

Faculty of Data Science & Computing, Universiti Malaysia Kelantan, Kota Campus, Kota Bharu 16100, Kelantan, Malaysia

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Journal of Manufacturing and Materials Processing
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
jmmp@mdpi.com

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About the Journal

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.*

Editor-in-Chief

Prof. Dr. Steven Y. Liang
George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA 30332-0405, USA

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