Special Issue

Machining Properties of Wood and Advances in Wood Cutting

Message from the Guest Editors

Wood is an important renewable building material that effectively accumulates CO2, and the manufacturing processes of wood products have a low carbon footprint. However, ensuring sustainable management of forest/timber resources requires maintaining stable levels of raw material harvesting despite growing demand. There is a strong focus on the development of primary and secondary sawing and other wood machining processes to reduce material waste and the energy consumption required for these processes. To support these developments, a detailed study of wood cutting effects is essential. This includes studying the impact of cutting parameters on the stability, quality, and productivity of machining. The findings from such analyses can contribute significantly to sustainable wood processing. Topics of interest include, but are not limited to, the following research areas:

- Wood sawing processes;
- Wood machining processes;
- Cutting force analysis;
- Cutting power analysis:
- Forecasting cutting force and/or cutting power;
- Cutting tools analysis;
- Quality of machined products;
- Chips and dust during machining processes;
- Machining of wood-based composite panels.

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