

## Special Issue

# Integrated Machine, Process Analysis and Modeling of Mechatronic Production Systems

### Message from the Guest Editor

Today's global market with its economic uncertainties requires a resilient production with quickly adjustable production capacities. A prerequisite is modular production units, which allow for immediate recombination and adjustment to new products and changes of production volume. Based on their implemented digital twin and digital information about tools, workpieces and processes, the production systems are able to react to changing input parameters such as material properties or environmental conditions. The Special Issue aims to show current research in the field of machining and forming technology:

- Digital twins of machines, tools, and workpieces and their interfaces
- Methods for virtual commissioning and digital process optimization
- Numerical and physical analysis of process-machine interaction
- Integration of robust actuators and sensors for process control, predictive maintenance and real-time error detection
- Self-optimizing machine tools and production systems
- Modular production systems for flexible production

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### Guest Editor

Prof. Dr. Steffen Ihlenfeldt

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### Deadline for manuscript submissions

closed (31 August 2021)



## Materials

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### Message from the Editorial Board

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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