

# Special Issue on Self-Optimizing Machining Systems

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The idea of Self-Optimizing Machining Systems (SOMS) has been proposed in the era of Industry 4.0. In order to optimize for productivity, quality, and efficiency in manufacturing, each component technology related to machining processes such as CAD/CAM, process modeling/simulation, machine tool use, process monitoring/control, workpiece assessment, etc. has been developed independently, although the interactions among these component technologies determine the final machining performance and the quality of the products. SOMS deals with the information links among these components. Viewed from the opposite side, these links and functionalities could be combined to develop comprehensive SOMS. Nevertheless, an intensive implementation and combination of these technologies has yet to catch up with the state-of-the-art industrial level. Industry 4.0 requires that SOMS undergo further research and development.

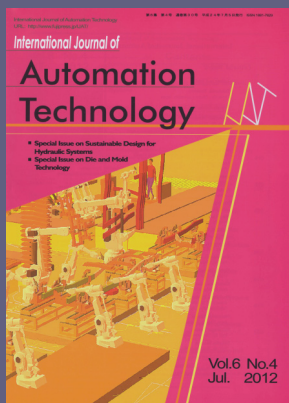
This Special Issue focuses on SOMS research trends, with an emphasis on the interactions among process modelling/simulation and process monitoring/control. We hope this Special Issue will contribute to the future research and development efforts of researchers and engineers in the field of manufacturing and machining systems.

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