

SPECIAL ISSUE ON ADVANCED SENSING TECHNOLOGY FOR SMART MANUFACTURING

PREFACE



A commonly asked question is, “What is smart manufacturing?” As smart manufacturing is such a broad area, the precise answer will depend on who exactly you ask—since every individual involved will have a different perspective on the most significant aspect. However, all will agree that the primary goal of smart manufacturing is optimization of all parts of the manufacturing process, which now extends from the generation of a concept to the end of the lifecycle of a product. With advances in technology, it is now possible to use information and data gathered throughout the lifecycle of a product to adjust and change manufacturing processes. This flexibility is one of the great strengths of smart manufacturing.

Sensors are a vital part of smart manufacturing. This special issue collected manufacturing-related papers with the technologies and components from sensing technology for smart manufacturing. By extension, components of smart manufacturing systems—consisting of systems with smart sensors, smart actuators, smart materials, and smart processes—are also important research areas in smart manufacturing.

I would like to thank all of the authors who submitted papers to this special issue, and hope that their work contributes to making smart manufacturing smarter. I also hope that this special issue inspires researchers to appreciate how their work could be applied in a smart manufacturing context. Finally, I would like to express my gratitude to the Editor-in-Chief, Professor Makoto Ishida, for the privilege of being Guest Editor of this issue.

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