



***machines***



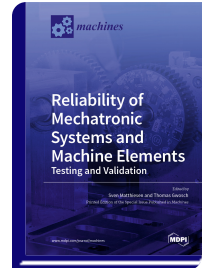
*Special Issue Reprint*

## **Reliability of Mechatronic Systems and Machine Elements: Testing and Validation**

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This reprint focuses on fundamental and applied research in the validation and testing of mechatronic systems and machine elements. It presents test strategies, reliability methods, and special insights into the systems under investigation. The focus is on advanced and complex mechatronic systems up to intelligent mechatronic systems with integrated sensor systems. The reliability of mechatronic systems and their machine elements is a key aspect of engineering design, which will become even more important in the future due to the complexity of mechatronic systems and systems control, especially in human-machine systems. Advances in mechatronic design require systematic testing and validation methods, test environments such as test benches, and modeling approaches. Effective test and validation methods are still a challenging topic for validating the system reliability of mechatronic systems and their machine elements, especially for human-machine interaction and mechatronic machine elements. This reprint covers a wide range of topics, from reliability strategies and design for reliability, to machine elements for intelligent mechatronic systems, to the role of testing and validation in the product development of these systems.



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