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**DIGITAL METHODS AND MODELS  
FOR CONTROL AND  
SURVIVABILITY OF COMPLEX  
TECHNICAL SYSTEMS**

**MONOGRAPH**

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The monograph presents modern methods for diagnostics, prognostics, and reliability management of complex technical systems. It examines system properties, digital twins, and Industry 4.0 concepts, along with approaches to technical condition assessment and failure risk analysis. The work highlights information technologies for processing streaming data and hybrid models that integrate physical calculations with machine learning. Cognitive and simulation modeling methods, as well as intelligent decision support tools, are described. Experimental results for ship power plant models are provided. The monograph is intended for researchers, engineers, and graduate students in the field of reliability and digitalization of technical systems.

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