

# Diagnostics, Prognostics and System's Health Management

By Michael Pecht and Kang Rui

## The First IEEE Authorized PHM Book in Chinese

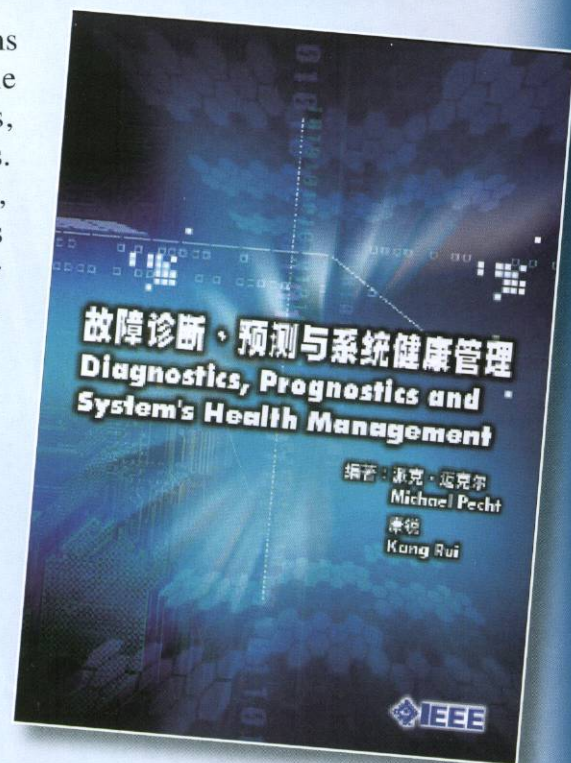
*Prognostics and Health Management (PHM) is of key importance to the future of structural and information systems, including the electronics that comprise such systems. The Electronic Manufacturing and Packaging Technology Society of Chinese Institute of Electronics (CIE-EMPT) has a publication series on electronics packaging which includes PHM as part of the series publication. The Society has scheduled the book "Diagnostics, Prognostics and System's Health Management (故障诊断、预测与系统健康管理)" by Professor Michael Pecht and Professor Kang Rui into its series of books on electronic packaging.*

*The Electronic Manufacturing and Packaging Technology Society of  
Chinese Institute of Electronics (CIE-EMPT)*

Recently, the field of prognostics for components, systems and products has received increased attention due to the potential to provide early warning of system failures, forecast maintenance as needed, and reduce life cycle costs. In response to the subject's growing interest among industry, government, and academic professionals, this book provides a road map to the current challenges and opportunities for research and development in Diagnostics, Prognostics and System's Health Management (PHM).

Readers can use the information in this book to:

- Detect and isolate faults
- Reduce the occurrence of No Fault Found (NFF)
- Provide advanced warning of system failures
- Enable condition-based (predictive) maintenance
- Obtain knowledge of load history for future design, qualification, and root cause analysis
- Increase system availability through an extension of maintenance cycles and / or timely repair actions
- Subtract life cycle costs of equipment from reduction in inspection costs, down time, and inventory



Diagnostics, Prognostics and System's Health Management is an indispensable reference for engineers in manufacturing, systems maintenance, and management, as well as design engineers in all areas of electronics.