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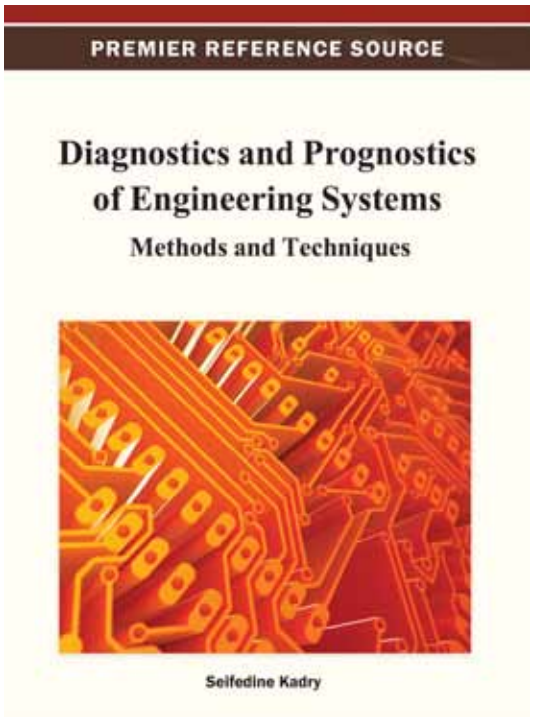
Diagnostics and Prognostics of Engineering Systems: Methods and Techniques



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Industrial Prognostics predicts an industrial system's lifespan using probability measurements to determine the way a machine operates. Prognostics are essential in determining being able to predict and stop failures before they occur. Therefore the development of dependable prognostic procedures for engineering systems is important to increase the system's performance and reliability.

Diagnostics and Prognostics of Engineering Systems: Methods and Techniques provides widespread coverage and discussions on the methods and techniques of diagnosis and prognosis systems. Including practical examples to display the method's effectiveness in real-world applications as well as the latest trends and research, this reference source aims to introduce fundamental theory and practice for system diagnosis and prognosis.

Topics Covered:

- Empirical Methods for Process and Equipment Prognostics
- Examples and Case Studies of Prognostics and Health Management
- In-Situ Monitoring Techniques
- Life Cycle Cost and Return on Investment for Prognostics and Health Management
- Making Predictions
- Monitoring Environmental and Usage Conditions
- Physics of Failure Based Prognostics
- Prognostics for Electronic Products
- Reliability and Prognostics
- Self Cognitive Capability for Anomaly Detection, Fault Analysis and Prognosis
- Sensors for Prognostics
- Time Series Analysis

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Seifedine Kadry is an associate professor of Applied Mathematics in the American University of the Middle East Kuwait. He received his masters' degree in Modelling and Intensive Computing (2001) from the Lebanese University – EPFL -INRIA. He did his doctoral research (2003-2007) in applied mathematics from Blaise Pascal University-Clermont Ferrand II, France. He worked as Head of Software Support and Analysis Unit of First National Bank where he designed and implement the data warehouse and business intelligence; he has published one book and more than 50 papers on Applied Math, computer science and stochastic systems in peer-reviewed journals.