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Sommario/riassunto

"This book attempts to outline the complete guide from the basics of rotating machine to the generation of knowledge using vibration signals. It is provided with an introduction to rotating machine and vibration signals produced from it at a level which can be easily understood by readers such as post-graduate students, researchers, and practicing engineers. The introduction helps those readers to get introduced to the basic knowledge needed to appreciate the specific application of the methods in this book. Based on the stages of machine condition monitoring framework and the aim to design an effective technique for fault detection and classification of rotating machine, a major part of the book will cover various feature extraction, feature selection, and classification methods as well as their applications to machine vibration datasets. Moreover, this book presents new methods including machine learning and compressive sampling. These offer significant improvements in accuracy with reduced computational costs. It is important that these are made available to all researchers as well as practitioners and new people coming into this field to help improve safety, reliability, and performance"--