This book addresses the steps needed to monitor health assessment systems and the anticipation of their failures: choice and location of sensors, data acquisition and processing, health assessment and prediction of the duration of residual useful life. The digital revolution and mechatronics foreshadowed the advent of the 4.0 industry where equipment has the ability to communicate. The ubiquity of sensors (300,000 sensors in the new generations of aircraft) produces a flood of data requiring us to give meaning to information and leads to the need for efficient processing and a relevant interpretation. The process of traceability and capitalization of data is a key element in the context of the evolution of the maintenance towards predictive strategies.

ABOUT THE AUTHOR

Noureddine ZERHOUNI, University professor (section 61), National School of Mechanics and Microtechnology (ENSMM), Besançon

Kamal Medjaher, Associate Professor with the National Institute in Mechanics and Microtechnologies, Besançon, France