

Brandon J. Dilworth  
Michael Mains *Editors*

# Topics in Modal Analysis & Testing, Volume 8

Proceedings of the 39th IMAC, A Conference and  
Exposition on Structural Dynamics 2021



# Modal Analysis And Testing

**Robert N. Coppolino**



## **Modal Analysis And Testing:**

**Modal Testing** D. J. Ewins, 1984 A survey of the technology of modal testing a new method for describing the vibration properties of a structure by constructing mathematical models based on test data rather than using conventional theoretical analysis Shows how to build a detailed mathematical model of a test structure and analyze and modify the structure to improve its dynamics Covers techniques for measuring the mode shapes and frequencies of practical structures from turbine blades to suspension bridges

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**Modal Testing** Peter Avitabile, 2017-11-13 The practical clear and concise guide for conducting experimental modal tests Modal Testing A Practitioner s Guide outlines the basic information necessary to conduct an experimental modal test The text draws on the author s extensive experience to cover the practical side of the concerns that may arise when performing an experimental modal test Taking a hands on approach the book explores the issues related to conducting a test from start to finish It covers the cornerstones of the basic information needed and summarizes all the pertinent theory related to experimental modal testing Designed to be accessible Modal Testing presents the most common excitation techniques used for modal testing today and is filled with illustrative examples related to impact testing which is the most widely used excitation technique for traditional experimental modal tests This practical text is not about developing the details of the theory but rather applying the theory to solve real life problems and Delivers easy to understand explanations of complicated theoretical concepts Presents basic steps of an experimental modal test Offers simple explanations of methods to obtain good measurements and avoid the common blunders typically found in many test approaches Focuses on the issues to be faced when performing an experimental modal test Contains full color format that enhances the clarity of the figures and presentations Modal Testing A Practitioner s Guide is a groundbreaking reference that treats modal testing at the level of the practicing engineer or a new entrant to the field of experimental dynamic testing

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