



Due to the rapid development of structural analysis techniques over the last few years there is a lack of comprehensive, up-to-date texts on the subject. This list of references covers a broad range of subjects and includes both basic and advanced methods.

ALLEMANG, R.J.; SHAPTON, W.R.

Using Modal Techniques to Guide Acoustic Signature Analysis

SAE Paper Number 780106, SAE Transactions, Volume 87, 1978, 12 pp.

ALLEMANG, R.J.

Investigation of Some Multiple Input/Output Frequency Response Function Experimental Modal Analysis Techniques

Doctor of Philosophy Dissertation, Department of Mechanical Engineering, University of Cincinnati, 1980, 358 pp.

ANDERSON, D.; MILLS, B.

Multi-Point Excitation Techniques

Environmental Engineering, Number 51, 1971, 6 pp.

ARCHER, J.S.

Natural Vibration Modal Analysis

NASA-SP-8012, 1968, 31 pp.

ASHER, G.W.

A Method of Normal Mode Excitation Utilizing Admittance Measurements

Dynamics and Aeroelasticity, Proceedings, Institute of the Aeronautical Sciences, 1958, pp. 69-76

ASHER, G.W.

A Note on the Effective Degrees of Freedom of a Vibrating Structure

AIAA Journal, Volume 5, Number 4, 1967, pp. 822-824

BALLARD, W.C.; CASEY, S.L.; CLAUSEN, J.D.

Vibration Testing with Mechanical Impedance Methods

Sound and Vibration, January, 1969

BENDAT, J.S.

Solutions for the Multiple Input/Output Problem

Journal of Sound and Vibration, Volume 44, Number 3, 1976, pp. 311-325

BROWN, D.L.

Grinding Dynamics

Doctor of Philosophy Dissertation, Department of Mechanical Engineering, University of Cincinnati, 1976, 400 pp.

BROWN, D.L.; ALLEMANG, R.J.

Modal Analysis Techniques Applicable to Acoustic Problem Solution

Inter-Noise 78, 1978, pp. 909-914

BROWN, D.L.; ALLEMANG, R.J.; ZIMMERMAN, R.; MERGEAY, M.

Parameter Estimation Techniques for Modal Analysis

SAE Paper Number 790221, SAE Transactions, Volume 88, 1979, pp. 828-846

BROWN, D.L.; CARBON, G.; RAMSEY, K.

Survey of Excitation Techniques Applicable to the Testing of Automotive Structures

SAE Paper Number 770029, 1977, 16 pp.

CAUGHEY, T.K.

Classical Normal Modes in Damped Linear Dynamic Systems

Journal of Applied Mechanics, Volume 27, 1960, pp. 269-271

CHANG, C.S.

A Hybrid Computer Controlled Structural Dynamics Test

Instrument Society of America. Proceedings, 1969, pp. 114-121

CHEN, J.C.; GARBA, J.A.

Matrix Perturbation for Analytical Model Improvement

AIAA Paper Number 79-0831, 1979, pp. 428-436

COLLINS, J.D.; YOUNG, J.P.; KIEFLING, L.

Methods and Application of System Identification in Shock and Vibration

System Identification of Vibrating Structures, ASME, 1972, pp. 45-71

CRAIG, R.R.

Structural Dynamics

John Wiley & Sons, 527pp.

CRAIG, R.R. JR.; SU, Y.W.T.

On Multiple-Shaker Resonance Testing

AIAA Journal, Volume 12, Number 7, 1974, pp. 924-931

DAT, R.

Structural Vibration Test Methods Used by O.N.E.R.A.

European Space Agency, ESA TT-221, 1975, 27 pp.

DE VEUBEKE, B.F.

A Variational Approach to Pure Mode Excitation Based on Characteristic Phase Lag Theory

Advisory Group for Aerospace Research and Development, AGARD-R-39, 1956, 35 pp.

- DE VEUBEKE, B.F.
Comment on 'On Multiple-Shaker Resonance Testing'
AIAA Journal, Volume 13, Number 5, 1975, pp. 702-704
- EWINS, D.J.
Whys and Wherefores of Modal Testing.
Journal of the Society of Environmental Engineers, September 1979, 24pp.
- EWINS, D.J.
Measurement and Application of Mechanical Impedance Data.
Journal of the Society of Environmental Engineers, December 1975 - June 1976, 32pp.
- EWINS, D.J.
Estimation of Resonant Peak Amplitudes.
Journal of Sound and Vibration, Vol. 43, No. 4, 1975.
- EWINS, D.J.; GLEESON, P.T.
A Method for Modal Identification of Lightly Damped Structures.
Journal of Sound and Vibration, Vol. 84, No. 1, 1982.
- EWINS, D.J.; SAINSBURY, M.G.
Mobility Measurements for the Vibration Analysis of Connected Structures
Shock and Vibration Bulletin, Volume 42, Part 1, 1972, pp. 105-121
- FAVOUR, J.D.; MITCHELL, M.L.; OLSEN, N.L.
Transient Test Techniques for Mechanical Impedance and Modal Survey Testing
Shock and Vibration Bulletin, Volume 42, Part 1, 1972, pp. 71-82
- FERRANTE, M.; STAHL, C.V.; BRESKMAN, D.G.
Spacecraft Modal Testing Using Single Point Random and Multi-Shaker Sine Techniques
Proceedings, Institute of Environmental Sciences, 1979, 8 pp.
- FLANNELLY, W.G.; LANG, G.F.
Modal Analysis for Managers
Sound and Vibration, November, 1979, pp. 18-23
- HALVORSEN, W.G.; BROWN, D.L.
Impulse Technique for Structural Frequency Response Testing
Sound and Vibration, November, 1977, pp. 8-21
- IBANEZ, P.
Force Appropriation by Extended Asher's Method
SAE Paper Number 760873, 1976, 11 pp.
- IBANEZ, P.; SPENCER, R.B.
Experience with a Field Computerized Vibration Analysis System
SAE Paper Number 791074, 1979, 12 pp.
- IBRAHIM, S.R.
Limitations on Random Input Forces in Random Dec Computation for Modal Identification
Shock and Vibration Bulletin, Volume 50, Part 3, 1980, pp. 99-112
- IBRAHIM, S.R.
Modal Confidence Factor in Vibration Testing
Shock and Vibration Bulletin, Volume 48, Part 1, 1978, pp. 183-198
- IBRAHIM, S.R.; GOGLIA, G.L.
Model Identification of Structures from the Responses and Random Decrement Signatures
NASA-CR-155321, 1977
- IBRAHIM, S.R.
The Use of Random Decrement Technique for Identification of Structural Modes of Vibration
AIAA Paper Number 77-368, 1977, 10 pp.
- IMES, R.S.; JENNINGS, W.P.; OLSEN, N.L.
The Use of Transient Testing Techniques in Boeing YC-14 Flutter Clearance Program
AIAA Paper Number 78-505, 1978
- JENNINGS, W.P.; OLSEN, N.L.; WALTER, M.J.
Transient Excitation and Data Processing Techniques Employing the Fast Fourier Transform for Aeroelastic Testing
Flutter Testing Techniques, NASA-SP-415, 1976, pp. 77-113
- JOHNSTON, G.D.; COLEMAN, A.D.
Modal Test of Shuttle Engine Nozzle.
Proceedings of the Society for Experimental Stress Analysis, 1983.
- KENNEDY, C.C.; PANCU, C.D.P.
Use of Vectors in Vibration Measurement and Analysis
Journal of Aeronautical Sciences, Volume 14, Number 11, 1947, pp. 603-625
- KLOSTERMAN, A.
On the Experimental Determination and Use of Modal Representations of Dynamic Characteristics
Doctor of Philosophy Dissertation, Department of Mechanical Engineering, University of Cincinnati, 1971, 184 pp.
- KLOSTERMAN, A.; MCCLELLAND, W.A.
Combining Experimental and Analytical Techniques for Dynamic System Analysis
Structural Dynamics Research Corporation, 1973, 20 pp.
- KLOSTERMAN, A.
A Combined Experimental and Analytical Procedure for Improving Automotive System Dynamics
SAE Paper Number 720093, 1972
- KLOSTERMAN, A.; LEMON, J.R.
Dynamic Design Analysis via the Building Block Approach
Shock and Vibration Bulletin, Volume 42, Part 1, 1972, pp. 97-104
- KLOSTERMAN, A.
Modal Surveys of Weakly Coupled Systems
SAE Paper Number 760876, 1976
- KLOSTERMAN, A.; ZIMMERMAN, R.
Modal Survey Activity via Frequency Response Functions
SAE Paper Number 751068, 1975
- KLOSTERMAN, A.; MCCLELLAND, W.A.; SHERLOCK, J.E.
Dynamic Simulation of Complex Systems Utilizing Experimental and Analytical Techniques
ASME Paper Number 75-WA/AERO-9, 1975

- KRAMER, J.A.; BENEDICT, B.K.
Experimental-analytical Modal Analysis Interface Program.
Proceedings of the Society for Experimental Stress Analysis, 1983.
- LEPPERT, E.L.; LEE, S.H.; DAY, F.D.; CHAPMAN, P.C., WADA, B.K.
Comparison of Modal Test Results: Multipoint Sine Versus Single-Point Random
SAE Paper Number 760879, 1976, 15 pp.
- LEWIS, R.C.; WRISLEY, D.L.
A System for the Excitation of Pure Natural Modes of Complex Structures
Journal of Aeronautical Sciences, Volume 17, Number 11, 1950, pp. 705-722
- LINK, M.; VOLLAN, A.
Identification of Structural System Parameters from Dynamic Response Data
Zeitschrift für Flugwissenschaften, Volume 2, Number 3, 1978, pp. 165-174
- LINSCOTT, B.S.; SHAPTON, W.R.; BROWN, D.L.
Tower and Rotor Blade Vibration Test Results for a 100-Kilowatt Wind Turbine
NASA-TM-X-3426, 1976, 38 pp.
- MARTZ, J.W.; LEIST, T.
Application of Modal Testing Techniques to Solve Vibration Problems in Machinery Supporting Structures
ASME Paper Number 77-DET-16, 1977, 12 pp.
- MEIROVITCH, L.
Analytical Methods in Vibration
The Macmillan Company, 555 pp.
- MIRIMAND, N.; BILLAUD, J.F.; LELEUX, F.; KRENEVEZ, J.P.
Identification of Structural Modal Parameters by Dynamic Tests at a Single Point
Shock and Vibration Bulletin, Volume 46, Part 5, 1976, pp. 197-212
- MITCHELL, L.D.
Signal Processing with the Fast Fourier Transform Analyzer
Proceedings of the Society for Experimental Stress Analysis, 1983
- MITCHELL, L.D.
Improved Methods for the FFT Calculations of the Frequency Response Function
Journal of Mechanical Design, April 1982, Vol. 104
- NIEDBAL, N.
State of the Art of Modal Survey Test Techniques
Modal Survey, SP-121, European Space Agency, 1976, pp. 126-128
- OLSEN, N.L.; WALTER, M.J.
747 Shuttle Carrier Aircraft/Space Shuttle Orbiter Mated Ground Vibration Test: Data via Transient Excitation and Fast Fourier Transform Analysis
SAE Paper Number 770970, 1977, 12 pp.
- PETERSON, E.L.; KLOSTERMAN, A.L.
Obtaining Good Results from an Experimental Modal Survey
Society of Environmental Engineers, Symposium, London, England, 1977, 22 pp.
- POTTER, D.K.
Flight Flutter and Vibration Testing
Institute of Mechanical Engineers, Conference Publication 1976-2, 1976, pp. 9-16
- POTTER, R.W.
Matrix Formulation of Multiple and Partial Coherence
Journal of the Acoustic Society of America, Volume 61, Number 3, 1977, pp. 776-781
- POTTER, R.W.; RICHARDSON, M.
Mass, Stiffness, and Damping Matrices from Measured Modal Properties
Instrument Society of America. ISA-74-630, 1974, 5 pp.
- POTTER, R.W.
A General Theory of Modal Analysis for Linear Systems
Shock and Vibration Digest, Volume 7, Number 11, 1975, 8 pp.
- POTTER, R.W.
Compilation of Time Windows and Line Shapes for Fourier Analysis
Hewlett-Packard Company, 1972, 26 pp.
- RAMSEY, K.
Effective Measurements for Structural Dynamics Testing: Part I
Sound and Vibration, November 1975
- RAMSEY, K.
Effective Measurements for Structural Dynamics Testing: Part II
Sound and Vibration, April 1976
- RAMSEY, K.A.; RICHARDSON, M.
Making Effective Transfer Function Measurements for Modal Analysis
Hewlett-Packard Company, 1975
- RICHARDSON, M.
Modal Analysis Using Digital Test Systems
Seminar on Understanding Digital Control and Analysis in Vibration Test Systems (Part 2), 1975, pp. 43-64
- RICHARDSON, M.; POTTER, R.
Identification of the Modal Properties of an Elastic Structure from Measured Transfer Function Data
Instrument Society of America, ISA ASI 74250, 1974, pp. 239-246
- RICHARDSON, M.; POTTER, R.
Viscous vs. Structural Damping in Modal Analysis
46th Shock and Vibration Symposium, 1975, 8 pp.
- RICHARDSON, M.; KNISKERN, J.
Identifying Modes of Large Structures from Multiple Input and Response Measurements
SAE Paper Number 760875, 1976, 12 pp.
- RUSSELL, R.H.; DEEL, J.C.
Modal Analysis: Trouble-Shooting to Product Design
Sound and Vibration, November 1977, pp. 22-28
- SMITH, S.; STROUD, R.C.; HAMMA, G.A.; HALLAUER, W.L.; YEE, R.C.
MODALAB - A Computerized Data Acquisition and Analysis System for Structural Dynamic Testing
Instrument Society of America Proceedings, Volume 12, 1975, pp. 183-189

SNOEYS, R.; ROESEMS, D.; VANDEURZEN, U.;
 VANHONACKER, P.
Surveys of Modal Analysis Applications
Annals of the CIRP, Volume 28, Number 2, 1979, 14 pp.

SNYDER, V.W.
Structural Modification and Modal Analyses.
Proceedings of the Society for Experimental Stress Analysis, 1983.

SPRINGER, W.T.; LAWRENCE, K.L.
Fracture Healing Estimates Based on the Structural Frequency Response Function.
Proceedings of the Society for Experimental Stress Analysis, 1983.

STAHLE, C.V.; FORLIFER, W.R.
Ground Vibration Testing of Complex Structures
Flight Flutter Testing Symposium, NASA-SP-385, 1958, pp. 83-90

STAHLE, C.V., JR.
Phase Separation Technique for Ground Vibration Testing
Aerospace Engineering, July 1962, 8 pp.

STAHLE, C.V.
Modal Test Methods and Applications
Journal of Environmental Sciences, Jan/Feb 1978, 4 pp.

STRESAU, S.S.
Mode Test of a Wing Pair of the HARM Missile.
Proceedings of the Society for Experimental Stress Analysis, 1983.

STROUD, R.C.; BONNER, C.J.; CHAMBERS, G.J.
Modal Testing Options for Spacecraft Developments
SAE Paper Number 781043, 1978, pp. 3922-3936

STROUD, R.C.; SMITH, S.; HAMMA, G.A.
MODALAB - A New System for Structural Dynamic Testing
Shock and Vibration Bulletin. Volume 46, 1976, pp. 153-175

STRUCTURAL MEASUREMENT SYSTEMS
An Introduction to Structural Dynamics Modification
Structural Measurement Systems, November 1979, 56 pp.

SU, Y.W.T.; CRAIG, R.R.
A Simulation Study of Multiple-Shaker Resonance Testing
University of Texas at Austin, Engineering Mechanics Research Laboratory, EMRL Report Number 1094, 1972, 77 pp.

TAYLOR, G.A.; GAUKROGER, D.R.; SKINGLE, C.W.
MAMA - A Semi-Automatic Technique for Exciting the Principal Modes of Vibration of Complex Structures
Aeronautical Research Council, ARC-R/M-3590, 1967, 20 pp.

VAN BRUSSEL, H.
Comparative Assessment of Harmonic, Random, Swept Sine, and Shock Excitation Methods for the Identification of Machine Tool Structures with Rotating Spindles
Catholic University of Leuven, Leuven, Belgium, 1975, 6 pp.

VAN KARSSEN, C.; ALLEMANG, R. J.
Single and Multiple Input Modal Analysis for Automotive Structures.
Proceedings of the Society for Experimental Stress Analysis, 1983.

VARIOUS AUTHORS.
Proceedings of the 1st International Modal Analysis Conference. Union College, New York, 1982.

VARIOUS AUTHORS.
Proceedings of the 2nd International Modal Analysis Conference Vols I & II. Union College, New York, 1984.

WALGRAVE, S.C.; EHLBECK, J.M.
Understanding Modal Analysis.
SAE Paper No. 780695, 1978.

YOUNG, J.P.; ON, F.J.
Mathematical Modeling via Direct Use of Vibration Data
SAE Paper Number 690615, 1969

ZAVERI, K.
Modal Analysis of Large Structures - Multiple Exciter Systems
Brüel & Kjær, 1984, 124 pp.

ZIMMERMAN, H.; COLLMANN, D.; NATKE, H.G.
Experience Gained in Adjusting the Mathematical Model of the VFW 614 Short Haul Aircraft by Use of Measured Eigenfrequencies
Zeitschrift für Flugwissenschaften, Volume 25, Number 5, 1977, pp. 278-285

Compiled September 1984



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