

2002 AIAA Journal Index

How to Use the Index

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J02-233 Local Time-Stepping Algorithm for Solving Probability Density Function Turbulence Model Equations
J02-317 Numerical Investigation of High-Enthalpy Flows Generated by Expansion Tube
J02-237 Spectrally Resolved Measurement of Flame Radiation to Determine Soot Temperature and Concentration
J02-297 Structure and Extinction of Heptane/Air Partially Premixed Flames

Separated Flows

J02-180 Active Flow Separation Control on Wall-Mounted Hump at High Reynolds Numbers
J02-289 Altering Turbulence in a Compressible Base Flow Using Axisymmetric Sub-Boundary-Layer Disturbances
J02-209 Application of Large-Eddy Simulation to Supersonic Compression Ramps
J02-261 Computation of Subsonic Inviscid Flow past a Cone Using High-Order Schemes
J02-240 Detachment of the Dynamic-Stall Vortex Above a Moving Surface
J02-269 Flow Control of Circular Cylinders with Longitudinal Grooved Surfaces
J02-320 Large Eddy Simulation of a Road Vehicle with Drag-Reduction Devices
J02-149 Large Eddy Simulation of Flow Around an Airfoil Near Stall
J02-117 Large-Eddy Simulation of the Flow Around a Bluff Body

J02-018 Models of Secondary Vorticity Evolution During Normal Vortex-Cylinder Interaction
J02-316 Relationship Between Upstream Turbulent Boundary-Layer Velocity Fluctuations and Separation Shock Unsteadiness
J02-027 Role of Actuation Frequency in Controlled Flow Reattachment over a Stalled Airfoil
J02-315 Surface Topology on the Wheels of a Generic Four-Wheel Landing Gear
J02-226 Vortical Substructures in the Shear Layers Forming Leading-Edge Vortices
J02-026 Wall-Normal-Free Reynolds-Stress Model for Rotating Flows Applied to Turbomachinery

Shock Waves and Detonations

J02-163 Computation of Shock-Sound Interaction Using Finite Volume Essentially Nonoscillatory Scheme
J02-321 Control of an Oblique Shock/Boundary-Layer Interaction with Aeroelastic Mesoflaps
J02-208 Effect of Surface Roughness on Unseparated Shock-Wave/Turbulent Boundary-Layer Interactions
J02-267 Forward-Running Detonation Drivers for High-Enthalpy Shock Tunnels
J02-258 Large Eddy Simulation of Shock/Boundary-Layer Interaction
J02-068 Neural Network Detection of Shockwaves
J02-230 Numerical Simulation of Sonic Boom Focusing
J02-238 Numerical Study of Blast-Wave Propagation in a Double-Bent Duct
J02-298 Planar Blast/Vortex Interaction and Sound Generation
J02-239 Vibrational Excitation, Thermal Nonuniformities and Unsteady Effects on Supersonic Blunt Bodies

Subsonic Flow

J02-138 Air Photolysis and Recombination Tracking : A New Molecular Tagging Velocimetry Scheme
J02-172 Effect of Upstream Conditions on the Outer Flow of Turbulent Boundary Layers
J02-081 Unsteady Force on Slender Aircraft with Free Vortices in Inviscid Flow

Supersonic Flow

J02-209 Application of Large-Eddy Simulation to Supersonic Compression Ramps
J02-321 Control of an Oblique Shock/Boundary-Layer Interaction with Aeroelastic Mesoflaps
J02-257 Development and Characterization of Hartmann Tube Fluidic Actuators for High-Speed Flow Control
J02-323 Dilatation and Vortex Stretching Effects on Turbulence in One-Dimensional/Axisymmetric Flows
J02-208 Effect of Surface Roughness on Unseparated Shock-Wave/Turbulent Boundary-Layer Interactions
J02-080 Experimental and Computational Investigation of Supersonic Impinging Jets
J02-080 Experimental and Computational Investigation of Supersonic Impinging Jets
J02-106 Experimental Characterization of the Sound Power Radiated by Impinging Supersonic Jets

J02-313 Exploring Noise Sources Using Simultaneous Acoustic Measurements and Real-Time Flow Visualizations in a Jet
J02-111 High-Order Semi-Implicit Schemes for Unsteady Compressible Flow Simulations
J02-132 Influence of Spike Shape at Supersonic Flow Past Blunt-Nosed Bodies: Experimental Study
J02-258 Large Eddy Simulation of Shock/Boundary-Layer Interaction
J02-152 Large-Scale Structures and Growth of a Flat Plate Compressible Wake
J02-096 Mixer-Ejector Wall Pressure and Temperature Measurements Based on Photoluminescence
J02-139 Molecular Tagging Velocimetry Measurements in Supersonic Microjets
J02-294 Numerical Investigations on the Dynamics and Heat Transfer in a Turbulent Underexpanded Jet
J02-137 Particle Image Velocimetry in Mach 3.5 and 4.5 Shock-Tunnel Flows
J02-107 Temporal Turbulent Flow Structure for Supersonic Rough-Wall Boundary Layers
J02-003 Three-Dimensional Numerical Simulation of the Jet Screech Phenomenon
J02-173 Velocity Measurements in a Pressure-Driven Three-Dimensional Compressible Turbulent Boundary Layer
J02-239 Vibrational Excitation, Thermal Nonuniformities and Unsteady Effects on Supersonic Blunt Bodies

Transonic Flow

J02-033 Aperture Effects on the Aerooptical Distortions Produced by a Compressible Shear Layer
J02-112 Computation of Unsteady Nonlinear Flows in Cascades Using a Harmonic Balance Technique
J02-102 Inverse Transonic Airfoil Design Using Parallel Simulated Annealing and Computational Fluid Dynamics
J02-322 Mechanism of Dynamic Instability of a Reentry Capsule at Transonic Speeds
J02-314 Numerical Investigation of Transonic Resonance with a Convergent-Divergent Nozzle
J02-181 Scaling Aerooptic Aberrations Produced by High-Subsonic-Mach Shear Layers
J02-026 Wall-Normal-Free Reynolds-Stress Model for Rotating Flows Applied to Turbomachinery

Unsteady Flows

J02-302 Balanced Model Reduction via the Proper Orthogonal Decomposition
J02-288 Computation of Trailing-Edge Noise Due to Turbulent Flow over an Airfoil
J02-112 Computation of Unsteady Nonlinear Flows in Cascades Using a Harmonic Balance Technique
J02-282 Computational Simulation of the Air Wake over a Naval Transport Vessel
J02-052 Computational Study of Intake Duct Effects on Fan Flutter Stability
J02-240 Detachment of the Dynamic-Stall Vortex Above a Moving Surface
J02-053 Experimental and Theoretical Study of Gust Response for a High-Aspect-Ratio Wing
J02-193 General Second-Order Projection Formulas for Unsteady Flows
J02-322 Mechanism of Dynamic Instability of a Reentry Capsule at Transonic Speeds
J02-018 Models of Secondary Vorticity Evolution During Normal Vortex-Cylinder Interaction

J02-227 Nonlinear Aeroelasticity and Unsteady Aerodynamics
J02-084 Nonlinear Inviscid Aerodynamic Effects on Transonic Divergence, Flutter, and Limit-Cycle Oscillations
J02-060 Numerical Simulation of Two-Dimensional Blade-Vortex Interactions Using Unstructured Adaptive Meshes
J02-268 Numerical Simulation of Unsteady Turbulent Flow Around a Maneuvering Prolate Spheroid
J02-238 Numerical Study of Blast-Wave Propagation in a Double-Bent Duct
J02-300 Optimum Thickness of Pressure-Sensitive Paint for Unsteady Measurements
J02-113 Parallelization of Rotorcraft Aerodynamics Navier-Stokes Codes
J02-316 Relationship Between Upstream Turbulent Boundary-Layer Velocity Fluctuations and Separation Shock Unsteadiness
J02-029 Study of the Error and Efficiency of Numerical Schemes for Computational Aeroacoustics
J02-171 Time-Accurate Simulations and Acoustic Analysis of Slat Free Shear Layer
J02-001 Turbulence Ingestion Noise, Part I: Experimental Characterization of Grid-Generated Turbulence
J02-069 Turbulence Models in Pulsating Flows
J02-081 Unsteady Force on Slender Aircraft with Free Vortices in Inviscid Flow
J02-226 Vortical Substructures in the Shear Layers Forming Leading-Edge Vortices

Viscous Non-Boundary-Layer Flows

J02-136 Advanced Algorithms for Microscale Particle Image Velocimetry
J02-236 Higher Mean-Flow Approximation for a Solid Rocket Motors with Radially Regressing Walls
J02-250 Pressure Gradients in the Regenerator and Overall Pulse-Tube Refrigerator Performance

Vortices

J02-051 Aerodynamics of a Jet in the Vortex Wake of a Wing
J02-289 Altering Turbulence in a Compressible Base Flow Using Axisymmetric Sub-Boundary-Layer Disturbances
J02-085 Assessment of the Accuracy of Representing a Helical Vortex by Straight Segments
J02-194 Atmospheric Stability Effects in Aircraft Near-Wake Modeling
J02-240 Detachment of the Dynamic-Stall Vortex Above a Moving Surface
J02-323 Dilatation and Vortex Stretching Effects on Turbulence in One-Dimensional/Axisymmetric Flows
J02-066 Dynamics of Slender Bodies Separating from Rectangular Cavities
J02-324 Elliptic Instability of Counter-Rotating Vortices: Experiment and Direct Numerical Simulation
J02-270 Experimental Study of the Three-Dimensionality of Orthogonal Blade-Vortex Interaction
J02-269 Flow Control of Circular Cylinders with Longitudinal Grooved Surfaces
J02-161 Induced Velocity in the Plane of an Elliptically Loaded Lifting Line
J02-117 Large-Eddy Simulation of the Flow Around a Bluff Body
J02-177 Mixing Process in a Lobed Jet Flow

J02-036 Nonlinear Fluctuation-Dissipation Theory to the Second Order
J02-202 Novel Approach for Reducing Rotor Tip-Clearance Induced Noise in Turbofan Engines
J02-207 Numerical Investigation of the Turbulent Mixing Performance of a Cantilevered Ramp Injector
J02-259 Numerical Method for Vorticity Confinement in Compressible Flow
J02-241 Numerical Prediction of Fluid-Resonant Oscillation at Low Mach Number
J02-238 Numerical Study of Blast-Wave Propagation in a Double-Bent Duct
J02-168 Subcritical Flow Around Bluff Bodies
J02-075 Symmetry Properties of the Transitional Sphere Wake
J02-293 Two-Dimensional Simulations of Wake Vortex Detection Using Radio Acoustic Sounding Systems
J02-226 Vortical Substructures in the Shear Layers Forming Leading-Edge Vortices
J02-092 Wake Alleviation Properties of Triangular-Flapped Wings
J02-135 Wavelet Multiresolution Analysis of Stereoscopic Particle-Image-Velocimetry Measurements in Lobed Jet

Wave Motion and Sloshing

J02-324 Elliptic Instability of Counter-Rotating Vortices: Experiment and Direct Numerical Simulation

Guidance, Control, and Dynamics Technology

Aircraft Stability and Control

J02-097 Higher-Order Eigensensitivity Analysis of a Defective Matrix
J02-301 QR-Based Algorithm for Eigenvalue Derivatives

Artificial Intelligence

J02-246 Damage Detection for Composite Plates Using Lamb Waves and Projection Genetic Algorithm

Control System Design

J02-301 QR-Based Algorithm for Eigenvalue Derivatives

Control System Sensors

J02-331 Experimental Aerodynamics of Mesoscale Trailing Edge Actuators

Information Processing

J02-181 Scaling Aerooptic Aberrations Produced by High-Subsonic-Mach Shear Layers

Intelligent Control

J02-222 Modal Actuator/Sensor by Modulating Thickness of Piezoelectric Layers for Smart Plates

Missile Dynamics

J02-066 Dynamics of Slender Bodies Separating from Rectangular Cavities

Optimization Techniques

J02-184 Structural Damage Detection by Genetic Algorithms

Soft Computing

J02-312 Health Monitoring of a Helicopter Rotor in Forward Flight Using Fuzzy Logic

Spacecraft Dynamics

J02-221 Motion of Variable Geometry Truss for Momentum Management in Spacecraft

Structural Control

J02-245 Control Stability Analysis of Smart Beams with Debonded Piezoelectric Actuator Layer

System Identification

J02-184 Structural Damage Detection by Genetic Algorithms
J02-155 System Identification of a Vortex Lattice Aerodynamic Model

UAVs

J02-068 Neural Network Detection of Shockwaves

Interdisciplinary Topics

Analytical and Numerical Methods

J02-271 Dynamic Flexibility Method with Hybrid Shifting Frequency For Eigenvector Derivatives
J02-133 Equivalence Between the Combined Approximations Technique and Krylov Subspace Methods
J02-013 Fuzzy Finite Element Method for Frequency Response Function Analysis of Uncertain Structures
J02-233 Local Time-Stepping Algorithm for Solving Probability Density Function Turbulence Model Equations
J02-218 Prediction of Residual Strength and Curvilinear Crack Growth in Aircraft Fuselages
J02-234 Probabilistic Approach to Free-Form Airfoil Shape Optimization Under Uncertainty
J02-094 Reliability-Based Optimization of Uncertain Systems In Structural Dynamics
J02-167 Stability of Tapered Columns Under End-Concentrated and Variably Distributed Lower Forces

Atmospheric and Space Sciences

J02-182 Acoustic Noise-Source Identification in Aircraft-Based Atmospheric Temperature Measurements

CAD/CAM

J02-062 Direct Surface Triangulation Using Stereolithography Data

Lasers and Laser Applications

J02-299 Ablative Laser Propulsion: Specific Impulse and Thrust Derived from Force Measurements
J02-033 Aperture Effects on the Aerooptical Distortions Produced by a Compressible Shear Layer
J02-134 Comparative Study of Image Compression Techniques for Digital Particle Image Velocimetry
J02-038 Diode Laser-Driven Microthrusters: A New Departure for Micropropulsion
J02-183 Mixing of Transversely Injected Jets into a Crossflow Under Low-Density Conditions
J02-177 Mixing Process in a Lobed Jet Flow

J02-055 Quantitative Interferometry in the Severe Acoustic Environment of Resonant Supersonic Jets

J02-119 Specific Impulse and Other Characteristics of Elementary Propellants for Ablative Laser Propulsion

Multidisciplinary Design Optimization

J02-189 Coevolutionary Architecture for Distributed Optimization of Complex Coupled Systems

J02-272 Computationally Inexpensive Meta-model Assessment Strategies

J02-078 Topology Optimization for Maximum Natural Frequency Using Simulated Annealing and Morphological Representation

Reliability, Maintainability, and Logistics Support

J02-304 Free Vibration of Unsymmetrically Laminated Beams Having Uncertain Ply Orientations

J02-234 Probabilistic Approach to Free-Form Airfoil Shape Optimization Under Uncertainty

J02-329 Structural System Reliability Quantification Using Multipoint Function Approximations

Research Facilities and Instrumentation

J02-136 Advanced Algorithms for Microscale Particle Image Velocimetry

J02-138 Air Photolysis and Recombination Tracking : A New Molecular Tagging Velocimetry Scheme

J02-144 Characterization of a Silicon Micromachined Thermal Shear-Stress Sensor

J02-134 Comparative Study of Image Compression Techniques for Digital Particle Image Velocimetry

J02-145 Determining Aerodynamic Loads Based on Optical Deformation Measurements

J02-242 Effects of Pressure-Sensitive Paint on Experimentally Measured Wing Forces and Pressures

J02-142 Filtered Thomson Scattering in an Argon Plasma

J02-140 Investigation of Gaseous Acoustic Damping Rates by Transient Grating Spectroscopy

J02-210 Microfabricated Shear Stress Sensors, Part 3: Reducing Calibration Uncertainty

J02-096 Mixer-Ejector Wall Pressure and Temperature Measurements Based on Photoluminescence

J02-139 Molecular Tagging Velocimetry Measurements in Supersonic Microjets

J02-170 More Photogrammetry for Wind Tunnel Testing

J02-076 New Self-Referencing Pressure-Sensitive-Paint Measurement

J02-300 Optimum Thickness of Pressure-Sensitive Paint for Unsteady Measurements

J02-137 Particle Image Velocimetry in Mach 3.5 and 4.5 Shock-Tunnel Flows

J02-143 Porous Pressure Sensitive Paint for Characterizing Unsteady Flow Fields

J02-079 Progress in Hypersonic Studies Using Electron-Beam-Excited X-Ray Detection

J02-055 Quantitative Interferometry in the Severe Acoustic Environment of Resonant Supersonic Jets

J02-326 Spectrally Filtered Raman/Thomson Scattering Using a Rubidium Vapor Filter

J02-141 Stark Broadening and Stimulated Raman Pumping in High-Resolution N₂ Coherent Anti-Stokes Raman Scattering Spectra

J02-135 Wavelet Multiresolution Analysis of Stereoscopic Particle-Image-Velocimetry Measurements in Lobed Jet

Sensor Systems

J02-076 New Self-Referencing Pressure-Sensitive-Paint Measurement

J02-300 Optimum Thickness of Pressure-Sensitive Paint for Unsteady Measurements

Launch Vehicle and Missile (LV/M) Technology

Aerodynamics

J02-132 Influence of Spike Shape at Supersonic Flow Past Blunt-Nosed Bodies: Experimental Study

J02-130 Minimum Drag Power-Law Shapes for Rarefied Flow

J02-168 Subcritical Flow Around Bluff Bodies

Missile Systems

J02-305 Nonisotropic Model of Microdebris from Impacts with Complex Targets

Testing, Flight and Ground

J02-132 Influence of Spike Shape at Supersonic Flow Past Blunt-Nosed Bodies: Experimental Study

Vibration

J02-077 Quasi-Failure Analysis on Resonant Demolition of Random Structural Systems

Propulsion

Advanced Space Propulsion

J02-114 Numerical Modeling of Axisymmetric and Three-Dimensional Flows in Microelectromechanical Systems Nozzles

J02-119 Specific Impulse and Other Characteristics of Elementary Propellants for Ablative Laser Propulsion

Combustion and Combustor Designs

J02-162 Assessment of Reaction Mechanisms for Counterflow Methane-Air Partially Premixed Flames

J02-237 Spectrally Resolved Measurement of Flame Radiation to Determine Soot Temperature and Concentration

J02-297 Structure and Extinction of Heptane/Air Partially Premixed Flames

Combustion Instability

J02-110 Numerical Simulation of Adaptive Control: Application to Unstable Solid Rocket Motors

Emissions and Noises

J02-148 Mean Flow Development in Dual-Stream Compressible Jets

Gas Turbine Engines

J02-176 Nozzle Performance Modeling

Ramjets and Scramjets

J02-008 Magnetohydrodynamic Control of Hypersonic Flows and Scramjet Inlets Using Electron Beam Ionization

J02-207 Numerical Investigation of the Turbulent Mixing Performance of a Cantilevered Ramp Injector

Solid Rocket Motors

J02-110 Numerical Simulation of Adaptive Control: Application to Unstable Solid Rocket Motors

J02-292 Sensitivity of Turbulence in a Transpired Channel to Injection Velocity Small-Scale Nonuniformity

J02-119 Specific Impulse and Other Characteristics of Elementary Propellants for Ablative Laser Propulsion

Turbomachinery

J02-091 Accurate Numerical Simulation of Compressible Transitional Flows in Turbomachinery

J02-026 Wall-Normal-Free Reynolds-Stress Model for Rotating Flows Applied to Turbomachinery

Space Technology

Aerobraking

Configurations/Aerothermodynamics

J02-130 Minimum Drag Power-Law Shapes for Rarefied Flow

Space Experiments

J02-211 Flight Test, Modal Analysis, and Model Refinement of the Mir Space Station

J02-101 Modeling of Infrared Radiation in a Space Transportation System Environment

Spacecraft Structural Configuration, Design, and Analysis

J02-196 Extension of a Method for Determination of Flight Equipment Acceleration

J02-221 Motion of Variable Geometry Truss for Momentum Management in Spacecraft

J02-305 Nonisotropic Model of Microdebris from Impacts with Complex Targets

Structural Mechanics and Materials

Aeroelasticity and Control

J02-227 Nonlinear Aeroelasticity and Unsteady Aerodynamics

J02-083 Structural and Aeroelastic Modeling of General Planform Wings with Morphing Airfoils

Dynamic Model Analysis

J02-105 Aeroelastic Response of Nonlinear Wing Sections Using a Functional Series Technique

J02-302 Balanced Model Reduction via the Proper Orthogonal Decomposition

J02-159 Boundary Condition Effects in Free Vibrations of Higher-Order Soft Sandwich Beams

J02-327 Chaos in a Thermally Stressed Space Arc

J02-273 Derivative of Eigensolutions of Non-viscously Damped Linear Systems

J02-039 Dynamic Analysis of Flexible Beams Undergoing Free Overall Motion Employing-Linear Strain Measures
J02-271 Dynamic Flexibility Method with Hybrid Shifting Frequency For Eigenvector Derivatives
J02-156 Enforcing Structural Connectivity to Update Damped Systems Using Frequency Response
J02-098 Estimating Natural Frequencies and Mode Shapes from Forced Response Calculations
J02-196 Extension of a Method for Determination of Flight Equipment Acceleration
J02-244 Finite Element Modeling of Thermopiezomagnetic Smart Structures
J02-211 Flight Test, Modal Analysis, and Model Refinement of the Mir Space Station
J02-120 Free In-Plane Vibration of Rectangular Plates
J02-097 Higher-Order Eigensensitivity Analysis of a Defective Matrix
J02-165 Hybrid Reanalysis Method for Eigenproblems of Topological Modifications
J02-253 Large Amplitude Vibrations of Spring-Hinged Beams
J02-248 Midfrequency Vibrations of a Complex Structure: Experiments and Comparison with Numerical Simulations
J02-274 Nanometer-Scale Spontaneous Vibrations in a Deployable Truss Under Mechanical Loading
J02-308 Near-Exact Analytical Solutions of Linear Time-Variant Systems
J02-301 QR-Based Algorithm for Eigenvalue Derivatives
J02-077 Quasi-Failure Analysis on Resonant Demolition of Random Structural Systems
J02-184 Structural Damage Detection by Genetic Algorithms
J02-155 System Identification of a Vortex Lattice Aerodynamic Model
J02-185 Transcendental Eigenvalue Problem and Its Applications
J02-275 Using Intentional Mistuning in the Design of Turbomachinery Rotors

Flexible and Active Structures

J02-071 Asymptotic Theory for Laminated Piezoelectric Circular Cylindrical Shells
J02-212 Closed-Loop Neurocontroller Tests on Piezoactuated Smart Rotor Blades in Hover
J02-122 Compressive Response of Honeycombs Under In-plane Uniaxial Static and Dynamic Loading, Part 1: Experiments
J02-123 Compressive Response of Honeycombs Under In-plane Uniaxial Static and Dynamic Loading, Part 2: Simulations
J02-245 Control Stability Analysis of Smart Beams with Debonded Piezoelectric Actuator Layer
J02-244 Finite Element Modeling of Thermopiezomagnetic Smart Structures
J02-276 Impact Response of Adaptive Piezoelectric Laminated Plates
J02-328 Interlaminar Stress Analysis of Shell Structures with Piezoelectric Patch Including Thermal Loading
J02-222 Modal Actuator/Sensor by Modulating Thickness of Piezoelectric Layers for Smart Plates
J02-221 Motion of Variable Geometry Truss for Momentum Management in Spacecraft
J02-007 Numerical Simulation of the Interaction of Microactuators and Boundary Layers

J02-157 Piezoelectric Sensor and Actuator Spatial Design for Shape Control of Piezolaminated Plates
J02-311 Review of State of Art of Smart Structures and Integrated Systems
J02-213 Simultaneous Modeling of Mechanical and Electrical Response of Smart Composite Structures
J02-083 Structural and Aeroelastic Modeling of General Planform Wings with Morphing Airfoils
J02-166 Toward More Effective Genetic Algorithms for the Optimization of Piezoelectric Actuator Locations

Materials Structural Properties

J02-124 Delamination Analysis of Sandwich Beam: High Order Theory
J02-050 Evaluation of Finite Element Predictions of Analog Specimen Residual Stress Bond-line Failures
J02-010 Higher-Order Piezoelectric Plate Theory Derived from a Three-Dimensional Variational Principle
J02-254 Material Property Identification of Composite Plates Using Neural Network and Evolution Algorithm
J02-247 Modeling of Tapered Sandwich Panels Using a High-Order Sandwich Theory Formulation
J02-043 Prediction of Compressive Failure in Laminated Composites at Room and Elevated Temperature
J02-160 Thermal-Stresses in Functionally Graded Beams
J02-215 Viscoelastic Analysis of Multiphase Composites Using the Generalized Method of Cells

Structural Composite Materials

J02-217 Analytical Evaluation of Damping in Composite and Sandwich Structures
J02-127 Anisotropy-Induced Spiral Buckling in Compression-Loaded Cylindrical Shells
J02-159 Boundary Condition Effects in Free Vibrations of Higher-Order Soft Sandwich Beams
J02-303 Buckling and Initial Postbuckling Behavior of Sandwich Beams Including Transverse Shear
J02-042 Buckling of Composite Plates with Local Damage, and Thermal Residual Stresses
J02-125 Cantilever Boundary Condition, Deflections, and Stresses of Sandwich Beams
J02-246 Damage Detection for Composite Plates Using Lamb Waves and Projection Genetic Algorithm
J02-158 Damping Analysis of Composite Plates with Zig-Zag Triangular Element
J02-124 Delamination Analysis of Sandwich Beam: High Order Theory
J02-277 Energy-Dissipating Composite Members with Progressive Failure: Concept Development and Analytical Modeling
J02-188 Exact Solution for Thermoelastic Deformations of Functionally Graded Thick Rectangular Plates
J02-224 Experimental Nonlinear Response of Tapered Ceramic Matrix Composite Plates to Base Excitation
J02-072 Feasible Region in General Design Space of Lamination Parameters for Laminated Composites
J02-216 Finite Element Formulation for Thick Sandwich Plates on an Elastic Foundation

J02-187 Flexural Failure Behavior of Laminated Composites Reinforced with Braided Fabrics
J02-304 Free Vibration of Unsymmetrically Laminated Beams Having Uncertain Ply Orientations
J02-276 Impact Response of Adaptive Piezoelectric Laminated Plates
J02-044 Large-Scale Structural Analysis by Parallel Multifrontal Solver Through Internet-Based Personal Computers
J02-283 Layer-by-Layer Analysis of a Simply Supported Thick Flexible Sandwich Beam
J02-254 Material Property Identification of Composite Plates Using Neural Network and Evolution Algorithm
J02-247 Modeling of Tapered Sandwich Panels Using a High-Order Sandwich Theory Formulation
J02-310 Modified Short Beam Shear Test for Measuring Interlaminar Shear Strength of Composites
J02-284 Optimal Fiber Angles to Resist the Brazier Effect in Orthotropic Tubes
J02-309 Predicting Ballistic Penetration and the Ballistic Limit in Composite Material Structures
J02-223 Prediction and Design of Metal Plate Vibration with Bonded Composite Sheets
J02-043 Prediction of Compressive Failure in Laminated Composites at Room and Elevated Temperature
J02-186 Probabilistic Analysis of Composite Structure Ultimate Strength
J02-011 Refined Structural Model for Thin-and Thick-Walled Composite Rotor Blades
J02-280 Secondary Buckling of Compression-Loaded Composite Plates
J02-121 Single- and Multicelled Composite Thin-Walled Beams
J02-214 Static Shape Control of Composite Plates Using a Slope-Displacement-Based Algorithm
J02-099 Structural Similitude and Scaling Laws for Sandwich Beams
J02-249 Temperature Profile Influence on Layered Plates Response Considering Classical and Advanced Theories
J02-017 Thermal Buckling of Functionally Graded Plates
J02-160 Thermal-Stresses in Functionally Graded Beams
J02-215 Viscoelastic Analysis of Multiphase Composites Using the Generalized Method of Cells

Structural Design

J02-125 Cantilever Boundary Condition, Deflections, and Stresses of Sandwich Beams
J02-164 Configuration Design Sensitivity Analysis for Dynamic Systems Using CAD-Based Velocity Field
J02-273 Derivative of Eigensolutions of Non-viscously Damped Linear Systems
J02-015 Design Optimization of Springback in a Deepdrawing Process
J02-095 Determination of an Optimal Topology with a Predefined Number of Cavities
J02-277 Energy-Dissipating Composite Members with Progressive Failure: Concept Development and Analytical Modeling
J02-253 Large Amplitude Vibrations of Spring-Hinged Beams
J02-044 Large-Scale Structural Analysis by Parallel Multifrontal Solver Through Internet-Based Personal Computers

J02-283 Layer-by-Layer Analysis of a Simply Supported Thick Flexible Sandwich Beam
J02-046 Multiobjective Topology Optimization of a Beam Under Torsion and Distortion
J02-309 Predicting Ballistic Penetration and the Ballistic Limit in Composite Material Structures
J02-223 Prediction and Design of Metal Plate Vibration with Bonded Composite Sheets
J02-094 Reliability-Based Optimization of Uncertain Systems In Structural Dynamics
J02-279 Shaping Optimal Design of Elastic Planar Frames with Frequency Constraints
J02-225 Stability of Spring-Hinged Cantilever Column Under Combined Concentrated and Distributed Loads
J02-329 Structural System Reliability Quantification Using Multipoint Function Approximations
J02-285 Thermal Postbuckling of Uniform Columns: A Simple Intuitive Method
J02-078 Topology Optimization for Maximum Natural Frequency Using Simulated Annealing and Morphological Representation
J02-019 Two-Step Method for Static Topological Reanalysis

Structural Durability (Including Fatigue, Fracture, and Environmental Degradation)

J02-122 Compressive Response of Honeycombs Under In-plane Uniaxial Static and Dynamic Loading, Part 1: Experiments
J02-123 Compressive Response of Honeycombs Under In-plane Uniaxial Static and Dynamic Loading, Part 2: Simulations
J02-305 Nonisotropic Model of Microdebris from Impacts with Complex Targets
J02-218 Prediction of Residual Strength and Curvilinear Crack Growth in Aircraft Fuselages
J02-118 Probabilistic Methods for Design Assessment of Reliability with Inspection
J02-073 Residual Strength Prediction of Aircraft Fuselages Using Crack-Tip Opening Angle Criterion

Structural Dynamics and Characterization

J02-217 Analytical Evaluation of Damping in Composite and Sandwich Structures
J02-330 Can Harmonic Functions Constitute a Closed-Form Buckling Modes of an Inhomogeneous Columns?
J02-327 Chaos in a Thermally Stressed Space Arc
J02-273 Derivative of Eigensolutions of Nonviscously Damped Linear Systems
J02-039 Dynamic Analysis of Flexible Beams Undergoing Free Overall Motion Employing-Linear Strain Measures
J02-271 Dynamic Flexibility Method with Hybrid Shifting Frequency For Eigenvector Derivatives
J02-045 Efficient Method for Dynamic Condensation of Nonclassically Damped Vibration Systems
J02-156 Enforcing Structural Connectivity to Update Damped Systems Using Frequency Response
J02-098 Estimating Natural Frequencies and Mode Shapes from Forced Response Calculations
J02-196 Extension of a Method for Determination of Flight Equipment Acceleration

J02-072 Feasible Region in General Design Space of Lamination Parameters for Laminated Composites
J02-211 Flight Test, Modal Analysis, and Model Refinement of the Mir Space Station
J02-229 Forward Flight Stability Characteristics for Composite Hingeless Rotors with Transverse Shear Deformation
J02-120 Free In-Plane Vibration of Rectangular Plates
J02-013 Fuzzy Finite Element Method for Frequency Response Function Analysis of Uncertain Structures
J02-010 Higher-Order Piezoelectric Plate Theory Derived from a Three-Dimensional Variational Principle
J02-253 Large Amplitude Vibrations of Spring-Hinged Beams
J02-248 Midfrequency Vibrations of a Complex Structure: Experiments and Comparison with Numerical Simulations
J02-040 Model Reduction for Dynamical Systems with Local Nonlinearities
J02-274 Nanometer-Scale Spontaneous Vibrations in a Deployable Truss Under Mechanical Loading
J02-308 Near-Exact Analytical Solutions of Linear Time-Variant Systems
J02-024 Periodic Vibration of Plates with Large Displacements
J02-157 Piezoelectric Sensor and Actuator Spatial Design for Shape Control of Piezolaminated Plates
J02-223 Prediction and Design of Metal Plate Vibration with Bonded Composite Sheets
J02-275 Using Intentional Mistuning in the Design of Turbomachinery Rotors

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