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C04-089 Flying Qualities Applications of Frequency Responses Identified from Flight Data

Optimization Techniques

C04-010 Minimum-Induced Power Loss of a Helicopter Rotor via Circulation Optimization

Structural Control

C04-113 Durability Characterization of Active Fiber Composite Actuators for Helicopter Rotor Blade Applications

System Identification

C04-089 Flying Qualities Applications of Frequency Responses Identified from Flight Data
C04-086 Aerodynamic Modeling and System Identification from Flight Data–Recent Applications at DLR
C04-087 Nonlinear Model Development from Flight-Test Data for F/A-18E Super Hornet
C04-091 Ground-Effect Identification and Autoland System Validation from Flight Data
C04-014 In-Flight Weight and Balance Identification Using Neural Networks
C04-094 Retrospective and Recent Examples of Aircraft Parameter Identification at NASA Dryden Flight Research Center
C04-092 Rapid Frequency-Domain Modeling Methods for Unmanned Aerial Vehicle Flight Control Applications
C04-093 Application of System Identification Techniques to the F-111C and PC 9/A Aircraft
C04-090 Time-Domain System Identification Methods for Aeromechanical and Aircraft Structural Modeling

Trajectory Optimization

C04-173 Momentum Vector Control for Spin Recovery

UAVs

C04-156 Mechanization and Control Concepts for Biologically Inspired Micro Air Vehicles
C04-025 Tilt Duct Vertical Takeoff and Landing Uninhabited Aerial Vehicle Concept Design Study
C04-092 Rapid Frequency-Domain Modeling Methods for Unmanned Aerial Vehicle Flight Control Applications

INTERDISCIPLINARY TOPICS

Aerospace Technology Utilization

C04-005 From Farther, Faster, Higher To Leaner, Meaner, Greener: Future Directions in Aeronautics

Analytical and Numerical Methods

C04-150 Uncertainty Quantification in Aeroelasticity: Recent Results and Research Challenges
C04-014 In-Flight Weight and Balance Identification Using Neural Networks
C04-012 New Roughness Computation Method and Geometric Accretion Model for Airfoil Icing
C04-048 Incorrectness of the *k*-method for Flutter Calculations
C04-100 Iterative Inverse Design Method Based on Streamline Equations
C04-080 Strength Analysis of Ceramics Under Different Constraints by Movable Cellular Automata Method

Atmospheric and Space Sciences

C04-070 Concept of Wake Vortex Behavior Classes
C04-137 Probabilistic Two-Phase Aircraft Wake Vortex Model: Application and Assessment

Environmental Effects

C04-097 Aircraft Optimization for Minimal Environmental Impact
C04-131 Continuous Descent Approach: Design and Flight Test for Louisville International Airport

Multidisciplinary Design Optimization

C04-065 High-Fidelity Aerostructural Design Optimization of a Supersonic Business Jet
C04-063 A Survey of Recent Developments in Rotorcraft Design Optimization
C04-097 Aircraft Optimization for Minimal Environmental Impact
C04-039 Mode Acceleration Based Random Gust Stresses in Aeroservoelastic Optimization
C04-077 Study on the Use of High-Fidelity Methods in Aeroelastic Optimization
C04-112 Analysis, Design, and Optimization of Noncylindrical Fuselage for Blended-Wing-Body Vehicle

Reliability, Maintainability, and Logistics Support

C04-079 Development of a Fuzzy Probabilistic Methodology for Multiple-Site Fatigue Damage

Research Facilities and Instrumentation

C04-064 NASA Langley Research Center Impact Dynamics Research Facility Research Survey

Safety

C04-070 Concept of Wake Vortex Behavior Classes

Sensor Systems

C04-167 Level Estimation of Extended Acoustic Sources Using a Parametric Method

LAUNCH VEHICLE AND MISSILE (LV/M) TECHNOLOGY

Aerodynamics

C04-031 Rotation and Curvature Correction Assessment for One-and Two-Equation Turbulence Models

Structural Design (Including Loads)

C04-042 Elastic Analysis of A Pin Loaded Lug

Thermal Protection Systems

C04-124 High Speed Flight Vehicle Structures: An Overview

PROPULSION

Airbreathing Propulsion

C04-016 Isomer Energy Source in Hybrid Jet Engines for High Altitude Reconnaissance Flight

Emissions and Noises

C04-097 Aircraft Optimization for Minimal Environmental Impact

Engine Cooling and Heat Transfer

C04-124 High Speed Flight Vehicle Structures: An Overview

Gas Turbine Engines

C04-016 Isomer Energy Source in Hybrid Jet Engines for High Altitude Reconnaissance Flight

STRUCTURAL MECHANICS AND MATERIALS

Aeroelasticity and Control

C04-155 Transpiration Boundary Condition for Computational Fluid Dynamics Solutions in a Noninertial Reference Frames
C04-035 Study of Reduced-Order Models for Gust–Respnse Analysis of Flexible Fixed Wings
C04-074 Application of Active-Aeroelastic-Wing Technology to a Joined-Wing Sensorcraft
C04-037 Alleviation of Vertical Tail Buffeting of F/A-18 Aircraft
C04-038 Robust Wing Flutter Suppression Considering Aerodynamic Uncertainty
C04-050 Application of Fiber Optic Sensor and Piezoelectric Actuator to Flutter Suppression
C04-157 Modeling Viscous Transonic Limit Cycle Oscillation Behavior Using a Harmonic Balance Approach
C04-071 Limit-Cycle Oscillations of Aircraft Caused by Flutter-Induced Drag
C04-036 Models for Aeroservoelastic Analysis with Smart Structures
C04-072 Aeroelastic Analysis of Helicopter Rotor Blades on Deformable Chimera Grids
C04-176 A Static/Dynamic Correction Approach for Reduced-Order Modeling of Unsteady Aerodynamics
C04-039 Mode Acceleration Based Random Gust Stresses in Aeroservoelastic Optimization
C04-148 Nonlinear Flutter Aspects of the Flexible High-Speed Civil Transport Semispan Model
C04-048 Incorrectness of the k-method for Flutter Calculations
C04-108 Flutter Analysis of Aircraft with External Stores Using Modal Coupling
C04-019 Aeroelastic Optimization of Adaptive Bumps for Yaw Control
C04-111 Linear/Nonlinear Supersonic Panel Flutter in a High-Temperature Field

Dynamic Model Analysis

C04-064 NASA Langley Research Center Impact Dynamics Research Facility Research Survey
C04-178 Influence of Nonlinear Elastomer on Isolated Lag Dynamics and Rotor/Fuselage Aeromechanical Stability

Flexible and Active Structures

C04-075 Active Flow Control Using High-Frequency Compliant Structures
C04-146 Method for Steerable Clustered Round Parachutes

Materials Structural Properties

C04-080 Strength Analysis of Ceramics Under Different Constraints by Movable Cellular Automata Method
C04-113 Durability Characterization of Active Fiber Composite Actuators for Helicopter Rotor Blade Applications
C04-046 Corrosion Fatigue in 7075-T6 Aluminum: Life Prediction Issues for Carrier Based Operations

Structural Composite Materials

C04-184 HELIPLAT: Design, Aerodynamic, Structural Analysis of Long-Endurance Solar-Powered Stratospheric Platform

Structural Design

C04-042 Elastic Analysis of A Pin Loaded Lug
C04-151 Preliminary Design of a Structural Wing Box Under a Twist Constraint Part I
C04-123 History of Flight Vehicle Structures 1903-1990

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

C04-079 Development of a Fuzzy Probabilistic Methodology for Multiple-Site Fatigue Damage
C04-080 Strength Analysis of Ceramics Under Different Constraints by Movable Cellular Automata Method
C04-082 Comparison of Residual Strength Estimates for Bolted Lap-Joint Panels
C04-041 Linkup Strength of 2024-T3 Bolted Lap Joint Panels with Multiple Site Damage

Structural Dynamics and Characterization

C04-183 Thermal Buckling Suppression of Supersonic Vehicle Surface Panels Using Shape Memory Alloy
C04-126 Comparison Between Dedicated Model Updating Methods and Hybrid Method
C04-178 Influence of Nonlinear Elastomer on Isolated Lag Dynamics and Rotor/Fuselage Aeromechanical Stability

Structural Finite Elements

C04-183 Thermal Buckling Suppression of Supersonic Vehicle Surface Panels Using Shape Memory Alloy
C04-112 Analysis, Design, and Optimization of Noncylindrical Fuselage for Blended-Wing-Body Vehicle
C04-042 Elastic Analysis of A Pin Loaded Lug

Structural Modeling

C04-183 Thermal Buckling Suppression of Supersonic Vehicle Surface Panels Using Shape Memory Alloy

Structural Optimization

C04-077 Study on the Use of High-Fidelity Methods in Aeroelastic Optimization
C04-065 High-Fidelity Aerostructural Design Optimization of a Supersonic Business Jet

Structural Stability

C04-117 Limit Cycle Oscillations of Swept-Back Trapezoidal Wings at Low Subsonic Flow
C04-162 Numerical Analysis of Store-Induced Limit-Cycle Oscillation

THERMOPHYSICS AND HEAT TRANSFER

Melting/Solidification

C04-104 Novel Two-Dimensional Modeling Approach for Aircraft Icing

Thermal Modeling and Analysis

C04-104 Novel Two-Dimensional Modeling Approach for Aircraft Icing
C04-159 Three-Dimensional Integrated Thermodynamic Simulation for Wing Anti-Icing System