

Subject Index

Aircraft Technology, Conventional, STOL/VTOL

Aerodynamics

- Evaluation of Euler Solvers for Transonic Wing-Fuselage Geometries C91-127
- Flight Test of a Half-Scale Unmanned Air Vehicle C91-121
- Flow Separation Patterns over an F-14A Aircraft Wing C91-118
- Four Decades of Transonic Fighter Design C91-116
- Direct-Inverse Transonic Wing-Design Method in Curvilinear Coordinates Including Viscous Interaction C91-115
- Poststall Airfoil Response to a Periodic Freestream C91-113
- Fickle Effect of Nose Microasymmetry on the High-Alpha Aerodynamics C91-112
- Analysis of Flexible-Membrane and Jet-Flapped Airfoils Using Velocity Singularities C91-111
- Analysis of Unsteady Pressures Induced on a Body by a Rotor C91-107
- Probe Systems for Static Pressure and Cross-Stream Turbulence Intensity C91-106
- Probe Shapes for Streamwise Momentum and Cross-Stream Turbulence Intensity C91-105
- Lift Development of Delta Wings Undergoing Constant Acceleration from Rest C91-104
- Wind-Tunnel and Flight Tests of a Delta-Wing Remotely Piloted Vehicle C91-103
- Supersonic Boundary-Layer Stability Analysis on an Aircraft Wing C91-102
- Experimental Investigation on the Effect of Crescent Planform on Lift and Drag C91-101
- Computation of Three-Dimensional Turbulent Vortical Flows on Bodies at High Incidence C91-098
- Euler Code Evaluation of a Transatmospheric Vehicle at Supersonic Speeds C91-097
- Aircraft Configurations with Outboard Horizontal Stabilizers C91-095
- Adaptive Control of Grid Quality for Computational Fluid Dynamics C91-094
- Flight-Test Investigation of Certification Requirements for Laminar-Flow General Aviation Airplanes C91-092
- Low-Speed Aerodynamic Characteristics of Close-Coupled Canard Configuration at Incidence and Sideslip C91-091
- Navier-Stokes Simulation of Burst Vortex Flowfields for Fighter Aircraft at High Incidence C91-090
- Performance of the Internal Configuration of a Prototype True Airspeed Sensor C91-087
- Numerical Simulation of High-Incidence Flow over the Isolated F-18 Fuselage Forebody C91-086
- Further Studies of Harmonic Gradient Method for Supersonic Aeroelastic Applications C91-084

- Another Look at High-Alpha Support Interference in Rotary Tests C91-082
- Fortified LEWICE with Viscous Effects C91-079
- Consistent Rational-Function Approximation for Unsteady Aerodynamics C91-076
- Flight Tests of External Modifications Used to Reduce Blunt Base Drag C91-071
- Surface Panel Method for Installed Multiple Rotor Flows C91-068
- Wing Leading-Edge Droop/Slot Modification for Stall Departure Resistance C91-060
- Total Incidence Plane Aerodynamics: The Key to Understanding High Incidence Flight Dynamics? C91-059
- Transonic Navier-Stokes Solutions About a Generic Hypersonic Configuration C91-052
- Calculation of Transonic Flows by a Field Integral Equation Method C91-049
- Proposed Modifications to Ice Accretion/Icing Scaling Theory C91-048
- Methods for Obtaining and Reducing Experimental Droplet Impingement Data on Arbitrary Bodies C91-045
- Visualization Measurements of Vortex Flows C91-044
- Effect of Thickness on the Unsteady Aerodynamics of Closely Coupled Oscillating Airfoils C91-043
- New Airfoil Design Concept C91-042
- In-Flight Measurement of Static Pressures and Boundary-Layer State with Integrated Sensors C91-041
- Static Measurements of Slender Delta Wing Rolling Moment Hysteresis C91-038
- Experiments on the Unsteadiness Associated with a Ground Vortex C91-035
- Aerodynamic Characteristics of Crescent and Elliptic Wings at High Angles of Attack C91-034
- Euler Analysis of a High-Speed Civil Transport Concept at Mach 3 C91-032
- Aerodynamic Characteristics of Scissor-Wing Geometries C91-031
- Airfoil Design Method Using the Navier-Stokes Equations C91-029
- Optimization of Rotor Performance in Hover Using a Free Wake Analysis C91-027
- Effects of Horizontal Tail Ice on Longitudinal Aerodynamic Derivatives C91-026
- Tip Vortex/Airfoil Interaction for a Low Reynolds Number Canard/Wing Configuration C91-024
- Water Droplet Impingement on Airfoils and Aircraft Engine Inlets for Icing Analysis C91-022
- Numerical Investigation of Airfoil/Jet/Fuselage-Undersurface Flowfields in Ground Effect C91-020
- Equation Decoupling—A New Approach to the Aerodynamic Identification of Unstable Aircraft C91-017
- Simplification of Nonlinear Indicial Response Models: Assessment for the Two-Dimensional Airfoil Case C91-015

- Forward Sweep—A Favorable Concept for a Laminar Flow Wing C91-011
- Aerodynamic and Structural Studies of Joined-Wing Aircraft C91-008

Aeroelasticity and Aeroservoelasticity

- Flutter Analysis of Anisotropic Panels with Patched Cracks C91-129
 - Static Aeroelastic Analysis for Generic Configuration Wing C91-114
 - Aeroelastic Analysis of Wings Using the Euler Equations with a Deforming Mesh C91-110
 - Application of XTRAN3S and CAP-TSD to Fighter Aircraft C91-093
 - Further Studies of Harmonic Gradient Method for Supersonic Aeroelastic Applications C91-084
 - Hybrid Doublet Lattice/Doublet Point Method for Lifting Surfaces in Subsonic Flow C91-080
 - Modified Exponential Series Approximation for the Theodorsen Function C91-077
 - Insights on the Whirl-Flutter Phenomena of Advanced Turboprops and Propfans C91-064
 - Calculating Time-Related Gust Loads Using Matched Filter and Random Process Theories C91-047
 - Effect of Thickness on the Unsteady Aerodynamics of Closely Coupled Oscillating Airfoils C91-043
 - Calculation of Steady and Unsteady Pressures on Wings at Supersonic Speeds with a Transonic Small-Disturbance Code C91-023
 - Analytical Studies on Static Aeroelastic Behavior of Forward-Swept Composite Wing Structures C91-018
 - ACT Wind-Tunnel Experiments of a Transport-Type Wing C91-016
 - Reduction of Aerodynamic Augmented States in Active Flutter Suppression Systems C91-009
 - Optimum Aeroelastic Design of Helicopter Rotors for Longitudinal Handling Qualities Improvement C91-005
 - Helicopter Rotor Dynamics Optimization with Experimental Verification C91-004
 - Aeroelastic Optimization of a Helicopter Rotor Using an Efficient Sensitivity Analysis C91-003
 - Helicopter Vibration Reduction Using Structural Optimization with Aeroelastic/Multidisciplinary Constraints—A Survey C91-001
- ### Aerospace Plane
- Metallic Thermal Protection Concept for Hypersonic Vehicles C91-056
 - Thermostructural Concepts for Hypervelocity Vehicles C91-046

Cabin Environment, Crew Training, and Life Support

- Full-Scale Demonstration Tests of Cabin Noise Reduction Using Active Vibration Control C91-028

Configuration Design

- Four Decades of Transonic Fighter Design C91-116
Aircraft Configurations with Outboard Horizontal Stabilizers C91-095
New Airfoil Design Concept C91-042
Aircraft Design for Maintainability C91-025
Aerodynamic and Structural Studies of Joined-Wing Aircraft C91-008

Deceleration Systems

- Aircraft Landing-Induced Tire Spinup C91-122
Slotted-Wall Blockage Corrections for Disks and Parachutes C91-083
Unsteady Flow About Porous Cambered Shells C91-069
Visual Study on Wakes Behind Solid and Slotted Axisymmetric Bluff Bodies C91-058

Economics

- Funding—A Unified Approach C91-057

Flight Mechanics

- Poststall Airfoil Response to a Periodic Freestream C91-113
Wind-Tunnel and Flight Tests of a Delta-Wing Remotely Piloted Vehicle C91-103
Two Complementary Approaches to Estimate Downwash Lag Effects from Flight Data C91-074
Total Incidence Plane Aerodynamics: The Key to Understanding High Incidence Flight Dynamics? C91-059

General Aviation

- Aircraft Configurations with Outboard Horizontal Stabilizers C91-095
Performance of the Internal Configuration of a Prototype True Airspeed Sensor C91-087
Wing Leading-Edge Droop/Slot Modification for Stall Departure Resistance C91-060

Landing Dynamics

- Aircraft Landing-Induced Tire Spinup C91-122
Numerical Simulation of the Actuation System for the ALDF's Propulsion Control Valve C91-099

Lighter-Than-Air-Systems

- Oscillation of High-Altitude Balloons C91-085
Control Configuration of a Relaxed Stability Airship C91-078
Optimization of Rotor Performance in Hover Using a Free Wake Analysis C91-027
One-on-One Helicopter Combat Simulated by Chess-Type Lookahead C91-019
Aeroelastic Optimization of a Helicopter Rotor Using an Efficient Sensitivity Analysis C91-003

Man/Machine Interface

- Range, Energy, and Heat of Motion in an NBC Anti-G Anthropomorphic Tank Suit C91-123

Military Missions

- Four Decades of Transonic Fighter Design C91-116
One-on-One Helicopter Combat Simulated by Chess-Type Lookahead C91-019

Noise

- Full-Scale Demonstration Tests of Cabin Noise Reduction Using Active Vibration Control C91-028

Performance

- Flight Test of a Half-Scale Unmanned Air Vehicle C91-121
Performance Improvements of an F-15 Airplane with an Integrated Engine-Flight Control System C91-117
Aerodynamic Characteristics of Scissor-Wing Geometries C91-031
Tip Vortex/Airfoil Interaction for a Low Reynolds Number Canard/Wing Configuration C91-024

Powerplant Integration

- Low-Order Panel Method for Internal Flows C91-040

Propeller and Rotor Systems

- Two Methods for Calculating the Velocities Induced by a Constant Diameter Far-Wake C91-072
Surface Panel Method for Installed Multiple Rotor Flows C91-068
Insights on the Whirl-Flutter Phenomena of Advanced Turboprops and Propfans C91-064
Impact Ice Stresses in Rotating Airfoils C91-062
Helicopter Vibration Reduction Using Structural Optimization with Aeroelastic/Multidisciplinary Constraints—A Survey C91-001

Rotorcraft

- Experimental Investigation of Periodically Excited Rotating Composite Rotor Blades C91-126
Analysis of Unsteady Pressures Induced on a Body by a Rotor C91-107
Boundary-Layer and Wake Measurements on a Swept, Circulation-Control Wing C91-100
Prediction of Unsteady Pressure and Velocity over a Rotorcraft in Forward Flight C91-070
Computational and Experimental Evaluation of Helicopter Rotor Tips for High-Speed Flight C91-055
Numerical Solutions of Forward-Flight Rotor Flow Using an Upwind Method C91-051
Optimization of Helicopter Airframe Structures for Vibration Reduction—Considerations, Formulations, and Applications C91-007
Integrated Aerodynamic Load/Dynamic Optimization of Helicopter Rotor Blades C91-006
Optimum Aeroelastic Design of Helicopter Rotors for Longitudinal Handling Qualities Improvement C91-005
Helicopter Rotor Dynamics Optimization with Experimental Verification C91-004
Integrated Multidisciplinary Design Optimization of Rotorcraft C91-002

Safety

- Range, Energy, and Heat of Motion in an NBC Anti-G Anthropomorphic Tank Suit C91-123
Analysis of Aircraft Performance During Lateral Maneuvering for Microburst Avoidance C91-120

Simulation

- Computed Euler Flowfield for a Transonic Aircraft with Stores C91-053

STOL/VTOL/STOVL

- Flight Test of the Japanese Upper Surface Blowing STOL Experimental Aircraft ASKA C91-089
Experiments on the Unsteadiness Associated with a Ground Vortex C91-035
Numerical Investigation of Airfoil/Jet/Fuselage-Undersurface Flowfields in Ground Effect C91-020

Structural Design (Including Loads)

- Static Aeroelastic Analysis for Generic Configuration Wing C91-114
Calculating Time-Related Gust Loads Using Matched Filter and Random Process Theories C91-047
Thermostructural Concepts for Hypervelocity Vehicles C91-046
Integrated Aerodynamic Load/Dynamic Optimization of Helicopter Rotor Blades C91-006
Integrated Multidisciplinary Design Optimization of Rotorcraft C91-002

System Effectiveness

- Aircraft Landing-Induced Tire Spinup C91-122

Testing, Flight and Ground

- Heat Transfer Measurements from a Smooth NACA 0012 Airfoil C91-128
Flight Test of a Half-Scale Unmanned Air Vehicle C91-121
Performance Improvements of an F-15 Airplane with an Integrated Engine-Flight Control System C91-117
Wall Interference Assessment/Correction for Transonic Airfoil Data C91-109
Wind-Tunnel and Flight Tests of a Delta-Wing Remotely Piloted Vehicle C91-103
Two-Dimensional Adaptive-Wall Tests in the NASA Ames Two-by-Two-Foot Transonic Wind Tunnel C91-096
Flight Test of the Japanese Upper Surface Blowing STOL Experimental Aircraft ASKA C91-089
Techniques Used in the F-14 Variable-Sweep Transition Flight Experiment C91-088
Slotted-Wall Blockage Corrections for Disks and Parachutes C91-083
Another Look at High-Alpha Support Interference in Rotary Tests C91-082
Flight Tests of External Modifications Used to Reduce Blunt Base Drag C91-071
In-Flight Measurement of Static Pressures and Boundary-Layer State with Integrated Sensors C91-041
Airfoil Transition and Separation Studies Using an Infrared Imaging System C91-030
Full-Scale Demonstration Tests of Cabin Noise Reduction Using Active Vibration Control C91-028
Effects of Horizontal Tail Ice on Longitudinal Aerodynamic Derivatives C91-026

- Equation Decoupling—A New Approach to the Aerodynamic Identification of Unstable Aircraft C91-017
Moving Surface Boundary-Layer Control as Applied to Two-Dimensional Airfoils C91-012

Vibration

- Integrated Aerodynamic Load/Dynamic Optimization of Helicopter Rotor Blades C91-006
Helicopter Rotor Dynamics Optimization with Experimental Verification C91-004

Weather Hazards

- Response of an Airplane to Non-Gaussian Atmospheric Turbulence C91-081
Impact Ice Stresses in Rotating Airfoils C91-062

Energy

Wind Power

- Two Methods for Calculating the Velocities Induced by a Constant Diameter Far-Wake C91-072

Fluid Dynamics

Aeroacoustics

- Roughness Effects on Heat Transfer from a NACA 0012 Airfoil C91-130
High-Intensity Acoustic Tests of a Thermally Stressed Plate C91-037

Boundary Layers and Heat Transfer—Laminar

- Roughness Effects on Heat Transfer from a NACA 0012 Airfoil C91-130
Heat Transfer Measurements from a Smooth NACA 0012 Airfoil C91-128
Numerical Solution of the Boundary-Layer Equations for a General Aviation Fuselage C91-124
Performance of an Aerospace Plane Propulsion Nozzle C91-013
Forward Sweep—A Favorable Concept for a Laminar Flow Wing C91-011

Boundary Layers and Heat Transfer—Turbulent

- Probe Systems for Static Pressure and Cross-Stream Turbulence Intensity C91-106
Probe Shapes for Streamwise Momentum and Cross-Stream Turbulence Intensity C91-105

Boundary-Layer Stability and Transition

- Supersonic Boundary-Layer Stability Analysis on an Aircraft Wing C91-102
Flight-Test Investigation of Certification Requirements for Laminar-Flow General Aviation Airplanes C91-092
Techniques Used in the F-14 Variable-Sweep Transition Flight Experiment C91-088
In-Flight Measurement of Static Pressures and Boundary-Layer State with Integrated Sensors C91-041
Calculation of Low Reynolds Number Flows at High Angles of Attack C91-033
Airfoil Transition and Separation Studies Using an Infrared Imaging System C91-030
Moving Surface Boundary-Layer Control as Applied to Two-Dimensional Airfoils C91-012

- Forward Sweep—A Favorable Concept for a Laminar Flow Wing C91-011

Computational Fluid Dynamics

- Evaluation of Euler Solvers for Transonic Wing-Fuselage Geometries C91-127
Inviscid Drag Prediction for Transonic Transport Wings Using a Full-Potential Method C91-125
Flow Separation Patterns over an F-14A Aircraft Wing C91-118
Direct-Inverse Transonic Wing-Design Method in Curvilinear Coordinates Including Viscous Interaction C91-115
Aeroelastic Analysis of Wings Using the Euler Equations with a Deforming Mesh C91-110
Wall Interference Assessment/Correction for Transonic Airfoil Data C91-109
Computation of Vectoring Nozzle Performance C91-108
Supersonic Boundary-Layer Stability Analysis on an Aircraft Wing C91-102
Computation of Three-Dimensional Turbulent Vortical Flows on Bodies at High Incidence C91-098
Euler Code Evaluation of a Transatmospheric Vehicle at Supersonic Speeds C91-097
Adaptive Control of Grid Quality for Computational Fluid Dynamics C91-094
Application of XTRAN3S and CAP-TSD to Fighter Aircraft C91-093
Navier-Stokes Simulation of Burst Vortex Flowfields for Fighter Aircraft at High Incidence C91-090
Numerical Simulation of High-Incidence Flow over the Isolated F-18 Fuselage Forebody C91-086
Fortified LEWICE with Viscous Effects C91-079
Two Methods for Calculating the Velocities Induced by a Constant Diameter Far-Wake C91-072
Prediction of Unsteady Pressure and Velocity over a Rotorcraft in Forward Flight C91-070
Unsteady Flow About Porous Cambered Shells C91-069
Surface Panel Method for Installed Multiple Rotor Flows C91-068
Accuracy of an Unstructured-Grid Upwind-Euler Algorithm for the ONERA M6 Wing C91-054
Computed Euler Flowfield for a Transonic Aircraft with Stores C91-053
Transonic Navier-Stokes Solutions About a Generic Hypersonic Configuration C91-052
Numerical Solutions of Forward-Flight Rotor Flow Using an Upwind Method C91-051
Calculation of Transonic Flows by a Field Integral Equation Method C91-049
Calculation of Low Reynolds Number Flows at High Angles of Attack C91-033
Aerodynamic Characteristics of Scissor-Wing Geometries C91-031
Airfoil Design Method Using the Navier-Stokes Equations C91-029
Numerical Investigation of Airfoil/Jet/Fuselage-Undersurface Flowfields in Ground Effect C91-020
Conical Euler Simulation of Wing Rock for a Delta Wing Planform C91-010

Hypersonic Flow

- Analytical and Computational Study of Unsteady Shock Motion on Hypersonic

- Forebodies C91-073
Metallic Thermal Protection Concept for Hypersonic Vehicles C91-056

Inlet, Nozzle, Diffusor, and Channel Flows

- Computation of Vectoring Nozzle Performance C91-108
Performance of the Internal Configuration of a Prototype True Airspeed Sensor C91-087
Analytical and Computational Study of Unsteady Shock Motion on Hypersonic Forebodies C91-073
Effect of Exhaust Plume/Afterbody Interaction on Installed Scramjet Performance C91-014
Performance of an Aerospace Plane Propulsion Nozzle C91-013

Jets, Wakes, and Viscid-Inviscid Flow Interactions

- Boundary-Layer and Wake Measurements on a Swept, Circulation-Control Wing C91-100
Separated Flowfield on a Slender Wing Undergoing Transient Pitching Motions C91-067
Visual Study on Wakes Behind Solid and Slotted Axisymmetric Bluff Bodies C91-058
Experimental and Numerical Study of the Propeller/Fixed Wing Interaction C91-050
Mapping Flowfields with a Heated Wire and an Infrared Imaging System C91-039
Experiments on the Unsteadiness Associated with a Ground Vortex C91-035

Separated Flows

- Flow Separation Patterns over an F-14A Aircraft Wing C91-118
Fickle Effect of Nose Microasymmetry on the High-Alpha Aerodynamics C91-112
Boundary-Layer and Wake Measurements on a Swept, Circulation-Control Wing C91-100
Low-Speed Aerodynamic Characteristics of Close-Coupled Canard Configuration at Incidence and Sideslip C91-091
New Device for Controlling Asymmetric Flowfields on Forebodies at Large Alpha C91-063

Subsonic Flow

- Incompressible Steady Aerodynamics Using a Standard Finite Element Code C91-131
Analysis of Flexible-Membrane and Jet-Flapped Airfoils Using Velocity Singularities C91-111
Experimental Investigation on the Effect of Crescent Planform on Lift and Drag C91-101
Low-Speed Aerodynamic Characteristics of Close-Coupled Canard Configuration at Incidence and Sideslip C91-091
Separated Flowfield on a Slender Wing Undergoing Transient Pitching Motions C91-067
New Device for Controlling Asymmetric Flowfields on Forebodies at Large Alpha C91-063
Methods for Obtaining and Reducing Experimental Droplet Impingement Data on Arbitrary Bodies C91-045
Low-Order Panel Method for Internal Flows C91-040
Tip Vortex/Airfoil Interaction for a Low Reynolds Number Canard/Wing Configuration C91-024

Water Droplet Impingement on Airfoils and Aircraft Engine Inlets for Icing Analysis C91-022

Supersonic Flow

Euler Code Evaluation of a Transatmospheric Vehicle at Supersonic Speeds C91-097

Further Studies of Harmonic Gradient Method for Supersonic Aeroelastic Applications C91-084

Euler Analysis of a High-Speed Civil Transport Concept at Mach 3 C91-032

Calculation of Steady and Unsteady Pressures on Wings at Supersonic Speeds with a Transonic Small-Disturbance Code C91-023

Effect of Exhaust Plume/Afterbody Interaction on Installed Scramjet Performance C91-014

Transonic Flow

Evaluation of Euler Solvers for Transonic Wing-Fuselage Geometries C91-127

Inviscid Drag Prediction for Transonic Transport Wings Using a Full-Potential Method C91-125

Direct-Inverse Transonic Wing-Design Method in Curvilinear Coordinates Including Viscous Interaction C91-115

Wall Interference Assessment/Correction for Transonic Airfoil Data C91-109

Two-Dimensional Adaptive-Wall Tests in the NASA Ames Two- by Two-Foot Transonic Wind Tunnel C91-096

Accuracy of an Unstructured-Grid Upwind-Euler Algorithm for the ONERA M6 Wing C91-054

Computed Euler Flowfield for a Transonic Aircraft with Stores C91-053

Transonic Navier-Stokes Solutions About a Generic Hypersonic Configuration C91-052

Calculation of Transonic Flows by a Field Integral Equation Method C91-049

New Airfoil Design Concept C91-042

Unsteady Flows

Poststall Airfoil Response to a Periodic Freestream C91-113

Fickle Effect of Nose Microasymmetry on the High-Alpha Aerodynamics C91-112

Aeroelastic Analysis of Wings Using the Euler Equations with a Deforming Mesh C91-110

Analysis of Unsteady Pressures Induced on a Body by a Rotor C91-107

Lift Development of Delta Wings Undergoing Constant Acceleration from Rest C91-104

Application of XTRAN3S and CAP-TSD to Fighter Aircraft C91-093

Oscillation of High-Altitude Balloons C91-085

Hybrid Doublet Lattice/Doublet Point Method for Lifting Surfaces in Subsonic Flow C91-080

Consistent Rational-Function Approximation for Unsteady Aerodynamics C91-076

Analytical and Computational Study of Unsteady Shock Motion on Hypersonic Forebodies C91-073

Prediction of Unsteady Pressure and Velocity over a Rotorcraft in Forward Flight C91-070

Separated Flowfield on a Slender Wing Undergoing Transient Pitching Motions C91-067

Visual Study on Wakes Behind Solid and Slotted Axisymmetric Bluff Bodies C91-058

Accuracy of an Unstructured-Grid Upwind-Euler Algorithm for the ONERA M6 Wing C91-054

Numerical Solutions of Forward-Flight Rotor Flow Using an Upwind Method C91-051

Experimental and Numerical Study of the Propeller/Fixed Wing Interaction C91-050

Effect of Thickness on the Unsteady Aerodynamics of Closely Coupled Oscillating Airfoils C91-043

Static Measurements of Slender Delta Wing Rolling Moment Hysteresis C91-038

Calculation of Steady and Unsteady Pressures on Wings at Supersonic Speeds with a Transonic Small-Disturbance Code C91-023

Simplification of Nonlinear Indicial Response Models: Assessment for the Two-Dimensional Airfoil Case C91-015

Conical Euler Simulation of Wing Rock for a Delta Wing Planform C91-010

Viscous Non-Boundary-Layer Flows

Modified Exponential Series Approximation for the Theodorsen Function C91-077

Vortices

Lift Development of Delta Wings Undergoing Constant Acceleration from Rest C91-104

Computation of Three-Dimensional Turbulent Vortical Flows on Bodies at High Incidence C91-098

Navier-Stokes Simulation of Burst Vortex Flowfields for Fighter Aircraft at High Incidence C91-090

Numerical Simulation of High-Incidence Flow over the Isolated F-18 Fuselage Forebody C91-086

Another Look at High-Alpha Support Interference in Rotary Tests C91-082

Unsteady Flow About Porous Cambered Shells C91-069

New Device for Controlling Asymmetric Flowfields on Forebodies at Large Alpha C91-063

Conical Euler Simulation of Wing Rock for a Delta Wing Planform C91-010

Guidance, Control, and Dynamics Technology

Aircraft Dynamics

Total Incidence Plane Aerodynamics: The Key to Understanding High Incidence Flight Dynamics? C91-059

Aircraft Stability and Control

Flight-Test Investigation of Certification Requirements for Laminar-Flow General Aviation Airplanes C91-092

Control Configuration of a Relaxed Stability Airship C91-078

Two Complementary Approaches to Estimate Downwash Lag Effects from Flight Data C91-074

Aerodynamic Characteristics of Crescent and Elliptic Wings at High Angles of Attack C91-034

Effects of Horizontal Tail Ice on Longitudinal Aerodynamic Derivatives C91-026

Velocity Sensor for an Airborne Optical Air Data System C91-021

ACT Wind-Tunnel Experiments of a Transport-Type Wing C91-016

Optimum Aeroelastic Design of Helicopter Rotors for Longitudinal Handling Qualities Improvement C91-005

Avionics Systems

Velocity Sensor for an Airborne Optical Air Data System C91-021

Control System Sensors

Pneumatic Distortion Compensation for Aircraft Surface Pressure Sensing Devices C91-119

Fiber Optics

Manufacturing Processes and Molding of Fiber-Reinforced Polyetheretherketone C91-036

Flight Mechanics

Control Configuration of a Relaxed Stability Airship C91-078

Handling Qualities

Aerodynamic Characteristics of Crescent and Elliptic Wings at High Angles of Attack C91-034

Signal Processing

Pneumatic Distortion Compensation for Aircraft Surface Pressure Sensing Devices C91-119

System Identification

Two Complementary Approaches to Estimate Downwash Lag Effects from Flight Data C91-074

Interdisciplinary Topics

Aerospace Management

Funding—A Unified Approach C91-057

Analytical and Numerical Methods

Analysis of Flexible-Membrane and Jet-Flapped Airfoils Using Velocity Singularities C91-111

Optimization of Helicopter Airframe Structures for Vibration Reduction—Considerations, Formulations, and Applications C91-007

Atmospheric and Space Sciences

Analysis of Aircraft Performance During Lateral Maneuvering for Microburst Avoidance C91-120

Human Factors

Range, Energy, and Heat of Motion in an NBC Anti-G Anthropomorphic Tank Suit C91-123

Lasers and Laser Applications

Methods for Obtaining and Reducing Experimental Droplet Impingement Data on Arbitrary Bodies C91-045

Water Droplet Impingement on Airfoils and Aircraft Engine Inlets for Icing Analysis C91-022

Reliability, Maintainability, and Logistics Support

Aircraft Design for Maintainability C91-025

Research Facilities and Instrumentation

- Probe Systems for Static Pressure and Cross-Stream Turbulence Intensity C91-106
- Probe Shapes for Streamwise Momentum and Cross-Stream Turbulence Intensity C91-105
- Numerical Simulation of the Actuation System for the ALDF's Propulsion Control Valve C91-099
- Ballistic Range and Aerothermodynamic Testing C91-061
- Mapping Flowfields with a Heated Wire and an Infrared Imaging System C91-039
- Airfoil Transition and Separation Studies Using an Infrared Imaging System C91-030

Sensor Systems

- Velocity Sensor for an Airborne Optical Air Data System C91-021

Launch Vehicle and Missile (LV/M) Technology**Aerodynamics**

- Ballistic Range and Aerothermodynamic Testing C91-061

Mission Studies and Economics

- Funding—A Unified Approach C91-057

Testing, Flight and Ground

- Pneumatic Distortion Compensation for Aircraft Surface Pressure Sensing Devices C91-119

Propulsion**Airbreathing Propulsion**

- Computation of Vectoring Nozzle Performance C91-108
- Performance of an Aerospace Plane Propulsion Nozzle C91-013

Structural Mechanics and Materials**Aeroelasticity and Control**

- Modified Exponential Series Approximation for the Theodorsen Function C91-077
- Semianalytical Technique for Sensitivity Analysis of Unsteady Aerodynamic Computations C91-066
- Insights on the Whirl-Flutter Phenomena of Advanced Turboprops and Propfans C91-064
- Aeroelastic Optimization of a Helicopter Rotor Using an Efficient Sensitivity Analysis C91-003

Dynamic Model Analysis

- Calculating Time-Correlated Gust Loads Using Matched Filter and Random Process Theories C91-047

Structural Composite Materials

- Experimental Investigation of Periodically Excited Rotating Composite Rotor Blades C91-126
- Supersonic Flutter of Laminated Circular Cylindrical Shell Panels C91-075
- Postbuckling Behavior of Laminated Composite Stiffeners and Stiffened Panels Under Cyclic Loading C91-065
- Thermostructural Concepts for Hypervelocity Vehicles C91-046
- Analytical Studies on Static Aeroelastic Behavior of Forward-Swept Composite Wing Structures C91-018

Structural Design

- Static Aeroelastic Analysis for Generic Configuration Wing C91-114
- Integrated Multidisciplinary Design Optimization of Rotorcraft C91-002
- Helicopter Vibration Reduction Using Structural Optimization with Aeroelastic/Multidisciplinary Constraints—A Survey C91-001

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

- Postbuckling Behavior of Laminated Composite Stiffeners and Stiffened Panels Under Cyclic Loading C91-065

Structural Dynamics and Characterization

- Supersonic Flutter of Laminated Circular Cylindrical Shell Panels C91-075
- Optimization of Helicopter Airframe Structures for Vibration Reduction—Considerations, Formulations, and Applications C91-007

Structural Finite Elements

- Incompressible Steady Aerodynamics Using a Standard Finite Element Code C91-131

Structural Optimization

- Semianalytical Technique for Sensitivity Analysis of Unsteady Aerodynamic Computations C91-066

Structural Stability

- Supersonic Flutter of Laminated Circular Cylindrical Shell Panels C91-075
- Postbuckling Behavior of Laminated Composite Stiffeners and Stiffened Panels Under Cyclic Loading C91-065

Thermal Effects

- Manufacturing Processes and Molding of Fiber-Reinforced Polyetheretherketone C91-036

Thermophysics and Heat Transfer**Forced Convection**

- Roughness Effects on Heat Transfer from a NACA 0012 Airfoil C91-130
- Heat Transfer Measurements from a Smooth NACA 0012 Airfoil C91-128