

- Matuk, C., C83-104
 May, R. J., Jr., C83-055, C83-065
 McAvoy, J., C83-042
 McCarty, R. E., C83-112
 McDevitt, J. B., C83-088
 McGeer, T., C83-160
 McKnight, R. L., C83-078
 McMasters, J. H., C83-004
 Melton, R. G., C83-128
 Meyerhoff, N. J., C83-062
 Miller, D. S., C83-072
 Miller, G. D., C83-114
 Miller, R. H., C83-043
 Mixson, J. S., C83-084, C83-127
 Morgan, W. R., C83-080
 Morris, S. J., C83-085
 Mosher, M., C83-154
 Muehlbauer, J. C., C83-085
 Murphy, P. C., C83-077
 Myers, L. P., C83-022
 Nagabhushan, B. L., C83-041
 Nair, S., C83-012
 Narasimha, R., C83-118
 Nguyen, D. T., C83-131
 Nishida, M., C83-120
 Nissim, E., C83-111
 Novick, A. S., C83-010
 Obara, C. J., C83-161
 O'Brien, P. J., C83-110
 Orlik-Ruckemann, K. J., C83-121
 Ortiz, V. M., C83-032
 Palazotto, A. N., C83-125
 Parks, S. E., C83-166
 Paulson, J. W., Jr., C83-026, C83-156
 Peach, L. L., C83-110
 Peterson, C. W., C83-006
 Pickerell, D. J., C83-002
 Pilkey, W. D., C83-146
 Pittman, J. L., C83-126
 Polek, T. E., C83-088
 Poth, G. E., C83-137
 Powers, S. A., C83-172
 Prabhu, A., C83-118
 Preisser, J. S., C83-048
 Prydz, R., C83-127
 Prydz, R. A., C83-071
 Purvis, J. W., C83-122, C83-153
 Putnam, L. E., C83-024
 Quinto, P. F., C83-026, C83-156
 Ransom, S., C83-100
 Rao, D. M., C83-086, C83-171
 Ratwani, M. M., C83-136
 Rauch, F. J., Jr., C83-116
 Reitz, M. D., C83-055, C83-065
 Rembold, J. P., C83-022
 Renshaw, T., C83-089
 Revell, J. D., C83-071, C83-127
 Ricketts, R. H., C83-134
 Ringland, R. F., C83-070
 Riviere, W. P., Jr., C83-038
 Rizk, M. H., C83-016
 Rocks, J. K., C83-044
 Rogers, W. A., C83-036
 Rokhsaz, K., C83-094
 Ross, R., C83-029, C83-157
 Roussos, L. A., C83-084
 Ruhlin, C. L., C83-116, C83-134
 Ruijgrok, G. J. J., C83-155
 Sagdeo, P. M., C83-118
 Sankaran, L., C83-118
 Sarrantonio, A., C83-089
 Schetz, J. A., C83-159
 Schmidt, W., C83-021
 Schoenster, J. A., C83-048
 Schweitzer, J. K., C83-067
 Scott, H. C., C83-023
 Sears, W. R., C83-158
 Seidel, D. A., C83-147
 Selberg, B. P., C83-094
 Shankar, V., C83-075
 Shaw, L., C83-042
 Shinar, J., C83-003
 Shirk, M. H., C83-036
 Shivashankara, B. N., C83-040
 Shruster, I., C83-145
 Siclari, M. J., C83-076
 Sim, A. G., C83-091
 Sinha, A., C83-060
 Slazak, M., C83-084
 Smeltzer, D. B., C83-133
 Smith, R. A., C83-112
 Smithers, O. L., C83-113
 Snead, J. M., C83-125
 Soeder, R. H., C83-050
 Soudak, U., C83-129
 Spaid, F. W., C83-049
 Spain, C. V., C83-149
 Speir, D. W., C83-037
 Stager, R. P., C83-052
 Stakolich, E. G., C83-108
 Starnes, J. H., Jr., C83-012
 Stevens, G. W. H., C83-096
 Stewart, V. R., C83-133
 Stone, J., C83-029
 Storaasli, O. O., C83-117
 Strauch, R. G., C83-058
 Stromberg, W. J., C83-108
 Stumbo, P. B., C83-055, C83-065
 Sullerey, R. K., C83-119
 Szodrich, J., C83-101
 Thompson, C. E., C83-051, C83-064
 Thompson, D. E., C83-030
 Tischler, M. B., C83-070, C83-169
 Tobias, L., C83-110
 Tomlinson, J. G., C83-010
 Torenbeek, E., C83-103
 Trebble, W. J. G., C83-005
 Triplett, W. E., C83-150
 Trunzo, R., C83-030
 Uhuad, G. C., C83-034
 Unruh, J. F., C83-011
 Vaatstra, W., C83-132
 Vaicaitis, R., C83-084
 Valori, R., C83-090
 van den Broek, G. J., C83-105
 Velger, M., C83-003
 Verhaagen, N. G., C83-132
 Vignevic, N. P., C83-038
 Viswanath, P. R., C83-118
 Vogel, R. E., C83-010
 Walters, M. M., C83-074
 Wang, B. P., C83-146
 Warwick, T., C83-035
 Waskiewicz, J., C83-109
 Waskiewicz, J. D., C83-025
 Waters, C., C83-116, C83-162
 Watson, J. J., C83-134
 Weeks, T. C., C83-034
 Weisshaar, T. A., C83-163
 Whitfield, D., C83-021
 Whitlow, W., Jr., C83-147
 Widdows, G. W. H., C83-013
 Widynski, T. C., C83-032
 Willett, F. M., Jr., C83-110
 Williams, J., C83-005
 Willshire, W. L., Jr., C83-056
 Wingrove, R. C., C83-140
 Wittenberg, H., C83-103
 Wittlin, G., C83-123
 Wongwiwat, K., C83-089
 Woodward, R. P., C83-008
 Woollett, R. R., C83-066
 Wykes, J. H., C83-114
 Wynne, E. C., C83-135
 Yang, J. N., C83-165
 Yang, T. Y., C83-115
 Yates, E., Jr., C83-135
 Zeiler, T. A., C83-163
 Zislin, A. M., C83-162

Chronological Index

C82-128 Design Allowables for T300/5208 Graphite/Epoxy Composite Materials. J. C. Ekvall and C. F. Griffin, *Lockheed-California Company* (JA 19, 8, p. 661) Article based on AIAA Paper 81-0541 CP811

Errata (JA 20, 6, p. 576)

C83-001 A New Concept for Aircraft Dynamic Stability Testing. Martin E. Beyers, *National Research Council of Canada* (JA 20, 1, p. 5) Article based on AIAA Paper 81-0158

C83-002 Rolls-Royce RB 211-535 Power Plant. D. J. Pickerell, *Rolls-Royce Limited (England)* (JA 20, 1, p. 15) Article based on AIAA Paper 81-0807

C83-003 Cross-Coupling Between Longitudinal and Lateral Aircraft Dynamics in a Spiral Dive. M. Velger and J. Shinar, *Technion-Israel Institute of Technology* (JA 20, 1, p. 21) Article

C83-004 Some Recent Applications of High-Lift Computational Methods at Boeing. J. H. McMasters and M. L. Henderson, *Boeing Commercial Airplane Company* (JA 20, 1, p. 27) Article based on AIAA Paper 81-1657

C83-005 Propeller Noise at Model- and Full-Scale. W. J. G. Trebble and J. Williams, *Royal Aircraft Establishment (Great Britain)*; and R. P. Donnelly, *Dowty-Rotol Limited (Great Britain)* (JA 20, 1, p. 34) Article based on AIAA Paper 81-2004

C83-006 Reductions in Parachute Drag to Forebody Wake Effects. Carl W. Peterson and Donald W. Johnson, *Sandia National Laboratories* (JA 20, 1, p. 42) Article based on AIAA Paper 81-1939

C83-007 Novel Airborne Technique for Aircraft Noise Measurements Above the Flight Path. T. A. Holbeche and A. F. Hazell, *Royal Aircraft Establishment (Great Britain)* (JA 20, 1, p. 50) Article based on AIAA Paper 81-2028

C83-008 Wind Tunnel Measurements of Blade/Vane Ratio and Spacing Effects on Fan Noise. Richard P. Woodward and Frederick W. Glaser, *NASA Lewis Research Center* (JA 20, 1, p. 58) Article based on AIAA Paper 81-2032

C83-009 Cast Transage 175 Titanium Alloy for Durability Critical Structural Components. F. A. Crossley, *Lockheed Missiles & Space Company*; and W. J. Barice, *Precision Castparts Corporation* (JA 20, 1, p. 66) Article based on AIAA Paper 81-0535 CP811

C83-010 TF41/Lamilloy Accelerated Mission Test. D. J. Essman, *Wright Patterson Air Force Base*; R. E. Vogel, J. G. Tomlinson and A. S. Novick, *Detroit Diesel Allison, Division of General Motors Corporation* (JA 20, 1, p. 70) Article based on AIAA Paper 81-1394

C83-011 Procedure for Evaluation of Engine Isolators for Reduced Structure-Borne Noise Transmission. J. F. Unruh, *Southwest Research Institute* (JA 20, 1, p. 76) Article based on AIAA Paper 81-1970

C83-012 Design for Global Damage Tolerance and Associated Mass Penalties. Raphael T. Haftka, *Virginia Polytechnic Institute and State University*; James H. Starnes Jr., *NASA Langley Research Center*; and Sudhakar, Nair, *Illinois Institute of Technology* (JA 20, 1, p. 83) Article

C83-013 Modular Asymmetric Parachute for Wind Tunnel Testing. P. C. Klimas, H. E. Widdows and R. H. Croll, *Sandia National Laboratories* (JA 20, 1, p. 89) Engineering Note based on AIAA Paper 81-1933

C83-014 Meteorological Inputs to Flight Simulators. John T. Klehr, *Singer Company* (JA 20, 1, p. 91) Engineering Note based on AIAA Paper 82-0216

C83-015 Aerodynamic Characteristics of a Slotted vs Smooth-Skin Supercritical Wing Model. William F. Grosser, *Lockheed-Georgia Company* (JA 20, 1, p. 92) Engineering Note

C83-016 A New Approach to Optimization for Aerodynamic Applications. Magdi H. Rizk, *Flow Industries, Inc.* (JA 20, 1, p. 94) Engineering Note

C83-017 Spin Prediction Techniques. William Bihrl Jr. and Billy Barnhart, *Bihrl Applied Research, Inc.* (JA 20, 1, p. 97) Article based on AIAA Paper 80-1564 CP806

C83-018 Fatigue Sensitivity of Composite Structure for Fighter Aircraft. L. L. Jeans, G. C. Grimes and H. P. Kan, *Northrop Corporation* (JA 20, 2, p. 102) Article based on AIAA Paper 81-0495 CP811

C83-019 Aerodynamic Penalties of Heavy Rain on Landing Airplanes. P. Haines and J. Luers, *University of Dayton Research Institute* (JA 20, 2, p. 111) Article

C83-020 Aerodynamic Estimation Techniques for Aerostats and Airships. S. P. Jones and J. D. DeLaurier, *TCOM Corporation* (JA 20, 2, p. 120) Article based on AIAA Paper 81-1339 CP815

C83-021 Finite-Volume Solutions to the Euler Equations in Transonic Flow. Wolfgang Schmidt, *Dornier GmbH, (FRG)*; Antony Jameson, *Princeton University*; and David Whitfield, *Mississippi State University* (JA 20, 2, p. 127) Article based on AIAA Paper 81-1265

C83-022 Digital Electronic Engine Control System--F-15 Flight Test. W. J. Barrett and J. P. Rembold, *Pratt & Whitney Aircraft*; F. W. Burcham Jr. and L. P. Myers, *Hugh L. Dryden Flight Research Center* (JA 20, 2, p. 134) Article based on AIAA Paper 81-1501

C83-023 NAPC Gyroscopic Moment Test Facility. H. C. Scott, *Naval Air Propulsion Center* (JA 20, 2, p. 142) Article based on AIAA Paper 81-1480

C83-024 Comparison of Subsonic/Transonic Aftbody Flow Prediction Methods. Lawrence E. Putnam, *NASA Langley Research Center*; and James Mace, *Air Force Wright Aeronautical Laboratories* (JA 20, 2, p. 146) Article based on AIAA Paper 81-1694

C83-025 Application of Panel Methods to External Stores at Supersonic Speeds. J. D. Waskiewicz and J. E. DeJongh, *Flight Dynamics Laboratory, WPAFB*; and A. Cenko, *Grumman Aerospace Company* (JA 20, 2, p. 153) Article based on AIAA Paper 81-1653

C83-026 Effects of Spanwise Blowing and Reverse Thrust on Fighter Low-Speed Aerodynamics. J. W. Paulson Jr., D. W. Banks and P. F. Quinto, *NASA Langley Research Center* (JA 20, 2, p. 159) Article based on AIAA Paper 81-2612

C83-027 Trailing Edge Flap Influence on Leading Edge Vortex Flap Aerodynamics. Arthur C. Grantz and J. F. Marchman 111, *Virginia Polytechnic Institute and State University* (JA 20, 2, p. 165) Article based on AIAA Paper 82-0128

C83-028 Airborne Operation of an Infrared Low-Level Wind Shear Prediction System. Peter M. Kuhn and Richard L. Kurkowski, *NASA Ames Research Center*; and Fernando Caracena, *NOAA-ERL-OWRM* (JA 20, 2, p. 170) Article based on AIAA Paper 82-0153

C83-029 Icing Analysis of an Unprotected Aircraft Radome. J. Stone and R. Ross, *Ross Aviation Associates* (JA 20, 2, p. 174) Article based on AIAA Paper 82-0281

C83-030 Strut or Guide Vane Secondary Flows and Their Effect on Turbomachinery Noise. B. Lakshminarayana, D. E. Thompson and R. Trunzo, *The Pennsylvania State University* (JA 20, 2, p. 178) Article based on AIAA Paper 82-0125

C83-031 Heavy Rain Influence on Airplane Accidents. J. Luers and P. Haines, *University of Dayton Research Institute* (JA 20, 2, p. 187) Engineering Note

C83-032 Effect of Swirl on the Potential Core in Two-Dimensional Ejector Nozzles. Chong-Wei Chu, Joe Der Jr., Vincent M. Ortiz and Thomas C. Widynski, *Northrop Corporation* (JA 20, 2, p. 191) Engineering Note

C83-033 Embedded Flow Characteristics of Sharp-Edged Rectangular Wings. Erik S. Larson, *Aeronautical Research Institute of Sweden* (JA 20, 3, p. 193) Synoptic

C83-034 Wind Tunnel Investigation of the Transonic Aerodynamic Characteristics of Forward Swept Wings. G. C. Uhuad, T. M. Weeks and R. Large, *Air Force Wright Aeronautical Laboratories (WPAFB)* (JA 20, 3, p. 195) Article

C83-035 Setting Design Goals for Advanced Propulsion Systems. Tom Warwick, *United Technologies Corporation* (JA 20, 3, p. 203) Article based on AIAA Paper 81-1505

C83-036 Design, Analyses, and Model Tests of an Aeroelastically Tailored Lifting Surface. W. A. Rogers and W. W. Braymen, *General Dynamics*; and M. H. Shirk, *AFWAL, Flight Dynamics Laboratory (WPAFB)* (JA 20, 3, p. 208) Article based on AIAA Paper 81-1673

C83-037 Internal Performance Prediction for Advanced Exhaust Systems. Donald W. Speir and Jack T. Blozy, *General Electric Company* (JA 20, 3, p. 216) Article based on AIAA Paper 81-1490

C83-038 CTOL, STOAL, V/STOL: An Operational Comparison for Forward Deployed CVNs. W. P. Riviere Jr. and N. P. Vignevic, *Naval Air Engineering Center* (JA 20, 3, p. 222) Article based on AIAA Paper 81-1621

C83-039 Compact Installation for Testing Vectored-Thrust Engines. W. H. Cunningham and J. F. Boytos, *Naval Air Propulsion Center* (JA 20, 3, p. 229) Article based on AIAA Paper 81-1592

C83-040 High Bypass Ratio Engine Noise Component Separation by Coherence Technique. Belur N. Shivashankara, *The Boeing Commercial Airplane Company* (JA 20, 3, p. 236) Article based on AIAA Paper 81-2054

C83-041 Dynamic Stability of a Buoyant Quad-Rotor Aircraft. B. L. Nagabhushan, *Goodyear Aerospace Corporation* (JA 20, 3, p. 243) Article based on AIAA Paper 82-0242

C83-042 Acoustic Environment in Large Enclosures With a Small Opening Exposed to Flow. Leonard Shaw, *Flight Dynamics Laboratory (WPAFB)*; Harold Bartel and James McAvoy, *Lockheed-Georgia Company* (JA 20, 3, p. 250) Article based on AIAA Paper 82-0121

C83-043 Rotor Hovering Performance Using the Method of Fast Free Wake Analysis. R. H. Miller, *Massachusetts Institute of Technology* (JA 20, 3, p. 257) Article based on AIAA Paper 82-0094

C83-044 Microwave Ice Accretion Measurement Instrument (MIAMI). B. Magenheimer and J. K. Rocks, *Ideal Research Inc.* (JA 20, 3, p. 262) Article based on AIAA Paper 82-0285

C83-045 Flight Test Results of an Active Flutter Suppression System. John W. Edwards, *NASA Langley Research Center* (JA 20, 3, p. 267) Article based on AIAA Paper 81-0655 CP812

C83-046 Characterization of Particle Rebound Phenomena in the Erosion of Turbomachinery. Jonathan A. Laitone, *University of Michigan* (JA 20, 3, p. 275) Article

C83-047 Sonic Fatigue of Advanced Composite Panels. M. J. Jacobson, *Northrop Corporation* (JA 20, 3, p. 282) Article based on AIAA Paper 81-1699

C83-048 Turbofan Engine Blade Pressure and Acoustic Radiation at Simulated Forward Speed. J. S. Preisser, J. A. Schoenster and R. A. Golub, *NASA Langley Research Center*; and C. Horne, *NASA Ames Research Center* (JA 20, 4, p. 289) Article based on AIAA Paper 81-0096

C83-049 Supercritical Airfoil Boundary-Layer and Near-Wake Measurements. D. A. Johnson, *NASA Ames Research Center*; and F. W. Spaid, *McDonnell Douglas Corporation* (JA 20, 4, p. 298) Article based on AIAA Paper 81-1242

C83-050 Effect of Variable Guide Vanes on the Performance of a High-Bypass Turbofan Engine. George A. Bobula, Ronald H. Soeder and Leo A. Burkardt, *NASA Lewis Research Center* (JA 20, 4, p. 306) Article based on AIAA Paper 81-1362

C83-051 Design and Development of a Mixer Compound Exhaust System. Walter L. Blackmore and Craig E. Thompson, *Garrett Turbine Engine Company* (JA 20, 4, p. 312) Article based on AIAA Paper 81-1494

C83-052 Investigation of Landing Gear Alternatives for High Performance Aircraft. A. R. DeWispelare and R. P. Stager, *Air Force Institute of Technology (WPAFB)* (JA 20, 4, p. 319) Article based on AIAA Paper 81-1639

C83-053 Stability of Steady Sideslip Equilibria for High Alpha. R. A. Calico Jr., *Air Force Institute of Technology (WPAFB)*; and S. G. Fuller, *Air Force Wright Aeronautical Laboratories* (JA 20, 4, p. 327) Article based on AIAA Paper 81-1884 CP816

C83-054 Analysis of Circulation-Controlled Airfoils in Transonic Flow. F. A. Dvorak and D. H. Choi, *Analytical Methods, Inc.* (JA 20, 4, p. 331) Article based on AIAA Paper 81-1270

C83-055 Tactical Aircraft Engine Usage--A Statistical Study. Robert J. May Jr., David R. Chaffee, Paul B. Stumbo and Mark D. Reitz, *Air Force Wright Aeronautical Laboratories* (JA 20, 4, p. 338) Article based on AIAA Paper 81-1652

C83-056 Ground Effects on Aircraft Noise for a Wide-Body Commercial Airplane. William L. Willshire Jr., *NASA Langley Research Center* (JA 20, 4, p. 345) Article based on AIAA Paper 81-1988

C83-057 Degradation and Characterization of Antimisting Kerosene. R. J. Mannheimer, *Southwest Research Institute* (JA 20, 4, p. 350) Article based on AIAA Paper 81-1423

C83-058 Automated Profiling of the Troposphere. R. G. Strauch, M. T. Decker and D. C. Hogg, *NOAA/ERL/Wave Propagation Laboratory* (JA 20, 4, p. 359) Article based on AIAA Paper 82-0014

C83-059 Optimum Siting of NEXRAD to Detect Hazardous Weather at Airports. Pravas R. Mahapatra, *National Severe Storms Laboratory* (JA 20, 4, p. 363) Article

C83-060 Friction Damping of Flutter in Gas Turbine Engine Airfoils. A. Sinha and J. H. Griffin, *Carnegie-Mellon University* (JA 20, 4, p. 372) Article

C83-061 Modifying a General Aviation Airfoil for Supercritical Flight. Gary B. Cosentino, *University of Colorado* (JA 20, 4, p. 377) Engineering Note

C83-062 Modeling the Spatial Distribution of Aircraft on Visual Flight Rules. Norman J. Meyerhoff and Jeffrey Garlitz, *U. S. Department of Transportation* (JA 20, 4, p. 380) Engineering Note

C83-063 Ground Contamination by Fuel Jettisoned from Aircraft in Flight. Harvey J. Clewell III, *Air Force Engineering and Services Center (Tyndall AFB)* (JA 20, 4, p. 382) Engineering Note

C83-064 Three-Dimensional Viscous Analysis of Ducts and Flow Splitters. Walter L. Blackmore and Craig E. Thompson, *Garrett Turbine Engine Company* (JA 20, 5, p. 385) Article based on AIAA Paper 81-0277

C83-065 Analysis of Engine Usage Data for Tactical Systems. Robert J. May Jr., David R. Chaffee, Paul B. Stumbo and Mark D. Reitz, *Air Force Wright Aeronautical Laboratories* (JA 20, 5, p. 390) Article based on AIAA Paper 81-1370

C83-066 Zero-Length Inlets for Subsonic V/STOL Aircraft. E. R. Glasgow and W. E. Beck, *Lockheed-California Company*; and R. R. Woollett, *NASA Lewis Research Center* (JA 20, 5, p. 397) Article based on AIAA Paper 81-1396

C83-067 18:1 Pressure Ratio Axial/Centrifugal Compressor Demonstration Program. Jeffrey K. Schweitzer, *Pratt & Whitney Aircraft*; and John W. Fairbanks, *U. S. Department of Energy* (JA 20, 5, p. 404) Article based on AIAA Paper 81-1479

C83-068 Propulsion System Installation Design for High-Speed Prop-Fans. B. H. Little Jr., *Lockheed-Georgia Company* (JA 20, 5, p. 411) Article based on AIAA Paper 81-1649

C83-069 Design and Development of the RF-5E Aircraft. Ronald M. Gibb, *Northrop Corporation* (JA 20, 5, p. 418) Article based on AIAA Paper 81-1664

C83-070 Heavy-Lift Airship Dynamics. Mark B. Tischler, Robert F. Ringland and Henry R. Jex, *Systems Technology, Inc.* (JA 20, 5, p. 425) Article

C83-071 Single- and Double-Wall Cylinder Noise Reduction. F. J. Balena, R. A. Prydz and J. D. Revell, *Lockheed-California Company* (JA 20, 5, p. 434) Article based on AIAA Paper 81-1968

C83-072 Influence of Leading-Edge Thrust on Twisted and Cambered Wing Design for Supersonic Cruise. Harry W. Carlson and David S. Miller, *NASA Langley Research Center* (JA 20, 5, p. 440) Article based on AIAA Paper 81-1656

C83-073 Aeroballistic Characteristics of 3-ft-long Parachute Decelerators. Carl T. Caliano, *Naval Air Development Center* (JA 20, 5, p. 446) Article based on AIAA Paper 81-1950

C83-074 Development and Validation of the V/STOL Aerodynamics and Stability and Control Manual. M. M. Walters and C. Henderson, *Naval Air Development Center* (JA 20, 5, p. 450) Article based on AIAA Paper 81-2611

C83-075 Computational Treatment of Three-Dimensional Transonic Canard-Wing Interactions. Vijaya Shankar and Norman Malmuth, *Rockwell International Science Center* (JA 20, 5, p. 456) Article based on AIAA Paper 82-0161

C83-076 Computation of Nonlinear Supersonic Potential Flow over Three-Dimensional Surfaces. M. J. Siclari, *Grumman Aerospace Corporation* (JA 20, 5, p. 462) Article based on AIAA Paper 82-0167

C83-077 Airplane Model Structure Determination from Flight Data. V. Klein, *JIAFS/GWU Langley Research Center*; J. G. Batterson and P. C. Murphy, *NASA Langley Research Center* (JA 20, 5, p. 469) Article based on AIAA Paper 81-1866 CP816

C83-078 Turbine Blade Nonlinear Structural and Life Analysis. R. L. McKnight and J. H. Laflen, *General Electric Company*; G. R. Halford and A. Kaufman, *NASA Lewis Research Center* (JA 20, 5, p. 475) Article based on AIAA Paper 82-1056

C83-079 All-Electric vs Conventional Aircraft: The Production/Operational Aspects. Michael J. Cronin, *Lockheed-California Company* (JA 20, 6, p. 481) Article based on AIAA Paper 81-0848

C83-080 Sun-Powered Aircraft Designs. P. B. MacCready, P. B. S. Lissaman and W. R. Morgan, *AeroVironment Inc.*; and J. D. Burke, *Jet Propulsion Laboratory, California Institute of Technology* (JA 20, 6, p. 487) Article based on AIAA Paper 81-0916

C83-081 The Definition of Short-Period Flying Qualities Characteristics via Equivalent Systems. David E. Bischoff, *Naval Air Development Center* (JA 20, 6, p. 494) Article based on AIAA Paper 81-1775 CP816

C83-082 New Thermal and Trajectory Model for High-Altitude Balloons. Leland A. Carlson and Walter J. Horn, *Texas A&M University* (JA 20, 6, p. 500) Article based on AIAA Paper 81-1926

C83-083 Type A V/STOL: One Aircraft for All Support Missions?. Wilfried H. Adelt, *McDonnell Aircraft Company* (JA 20, 5, p. 508) Article based on AIAA Paper 81-2661

C83-084 Laboratory Study of Add-On Treatments for Interior Noise Control in Light Aircraft. John S. Mixson, Louis A. Roussos and C. Kearney Barton, *NASA Langley Research Center*; Rimas Vaicaitis and Mario Slazak, *Columbia University* (JA 20, 6, p. 516) Article

C83-085 Advanced Turboprop Cargo Aircraft Systems Study. J. C. Muehlbauer, *Lockheed-Georgia Company*; and S. J. Morris, *NASA Langley Research Center* (JA 20, 5, p. 523) Article based on AIAA Paper 81-1684

C83-086 Alleviation of the Subsonic Pitch-Up of Delta Wings. Dhanvada M. Rao, *Vigyan Research Associates, Inc.*; and Thomas D. Johnson Jr., *Kentron International, Inc.* (JA 20, 6, p. 530) Article based on AIAA Paper 82-0129

C83-087 An Axisymmetric Nacelle and Turboprop Inlet Analysis Including Power Simulation. D. P. Golden, T. J. Barber and W. C. Chin, *Pratt & Whitney Aircraft* (JA 20, 6, p. 536) Article based on AIAA Paper 82-0256

C83-088 A New Facility and Technique for Two-Dimensional Aerodynamic Testing. John B. McDevitt, Thomas E. Polek and Lawrence A. Hand, *NASA Ames Research Center* (JA 20, 6, p. 543) Article based on AIAA Paper 82-0608 CP822

C83-089 Comparison of Properties of Joints Prepared by Ultrasonic Welding and Other Means. T. Renshaw, K. Wongiwat and A. Sarrantonio, *Fairchild Republic Company* (JA 20, 6, p. 552) Article based on AIAA Paper 82-0661 CP823

C83-090 Development of Counter-Rotating Intershaft Support Bearing Technology. William L. Gamble, *Pratt & Whitney Aircraft*; and Raymond Valori, *Naval Air Propulsion Center* (JA 20, 6, p. 557) Article based on AIAA Paper 82-1054

C83-091 Unique Flight Characteristics of the AD-1 Oblique-Wing Research Airplane. Robert E. Curry and Alex G. Sim, *NASA Ames Research Center* (JA 20, 6, p. 564) Article based on AIAA Paper 82-1329

C83-092 Performance Estimation for Light Propeller Airplanes. E. V. Laitone, *University of California* (JA 20, 6, p. 569) Engineering Note

C83-093 Transonic Shock/Turbulent Boundary-Layer Interaction on Curved Surfaces. George R. Inger, *University of Colorado* (JA 20, 6, p. 571) Engineering Note based on AIAA Paper 81-1244

C83-094 Disadvantages of Thin Airfoil Formulations for Closely Coupled Airfoils. Kamran Rokhsaz and Bruce P. Selberg, *University of Missouri-Rolla* (JA 20, 6, p. 574) Engineering Note

C83-096 Net-Skirt Addition to a Parachute Canopy to Prevent Inversion. Geoffrey W. H. Stevens, *Mytchett (England)* (JA 20, 7, p. 578) Synoptic based on AIAA Paper 81-1927

C83-097 V/STOL Status from the Engine Technology Viewpoint. G. M. Lewis and W. J. Lewis, *Rolls-Royce Limited (England)* (JA 20, 7, p. 580) Synoptic based on AIAA Paper 81-2648

C83-098 A Technique to Determine Lift and Drag Polars in Flight. A. Knaus, *Messerschmitt-Bolkow-Blohm GmbH (FRG)* (JA 20, 7, p. 587) Article based on AIAA Paper 81-2420

C83-099 Dynamics of Air Combat. W. B. Herbst, *Messerschmitt-Bolkow-Blohm GmbH (FRG)* (AIAAJ 20, 7, p. 594) Article

C83-100 Configuration Development of a Research Aircraft with Post-Stall Maneuverability. Stephen Ransom, *Messerschmitt-Bolkow-Blohm/Vereinigte Flugtechnische Werke (FRG)* (JA 20, 7, p. 599) Article

C83-101 Wind Tunnel Tests of Over-the-Wing Nacelles. J. Szodruch and J. Kotschote, *MBB/Vereinigte Flugtechnische Werke GmbH (FRG)* (JA 20, 7, p. 606) Article based on AIAA Paper 83-0538

C83-102 Improved Numerical Method for Unsteady Lifting Surfaces in Incompressible Flow. A. Ichikawa and S. Ando, *Nagoya University* (JA 20, 7, p. 612) Article

C83-103 Generalized Maximum Specific Range Performance. Egbert Torenbeek and Hans Wittenberg, *Delft University of Technology* (JA 20, 7, p. 617) Article

C83-104 Flight Tests of Tow Wire Forces while Flying a Racetrack Pattern. C. Matuk, *University of Lulea (Sweden)* (JA 20, 7, p. 623) Article

C83-105 Correction to the Wing Source Velocity Error in Woodward's USSAERO Code. Gerrit J. van den Broek, *National Institute for Aeronautics and Systems Technology (South Africa)* (JA 20, 7, p. 628) Article

C83-106 In-Flight Computation of Helicopter Transmission Fatigue Life Expenditure. Kenneth F. Fraser, *Aeronautical Research Laboratories (Australia)* (JA 20, 7, p. 633) Article based on AIAA Paper 81-2434

C83-107 F/A-18 Inlet/Engine Compatibility Flight Test Results. Nasim F. Amin, *Northrop Corporation*; and David J. Hollweger, *McDonnell Douglas Corporation* (JA 20, 8, p. 641) Article based on AIAA Paper 81-1393

C83-108 JT9D Performance Deterioration Results from a Simulated Aerodynamic Load Test. Edward G. Stakolich, *NASA Lewis Research Center*; and William J. Stromberg, *Pratt & Whitney Aircraft Group, United Technologies Corporation* (JA 20, 8, p. 650) Article based on AIAA Paper 81-1588

C83-109 Recent Improvements in Prediction Techniques for Supersonic Weapon Separation. A. Cenko, *Grumman Aerospace Corporation*; and J. Waskiewicz, *Flight Dynamics Laboratory (WPAFB)* (JA 20, 8, p. 659) Article based on AIAA Paper 82-0170

C83-110 Helicopter IFR Approaches into Major Terminals Using RNAV, MLS, and CDTI. L. Tobias, H. Q. Lee and L. L. Peach, *NASA Ames Research Center*; F. M. Willett Jr. and P. J. O'Brien, *Federal Aviation Administration Technical Center* (JA 20, 8, p. 666) Article based on AIAA Paper 82-0260

C83-111 Supersonic Three-Dimensional Oscillatory Piecewise Continuous Kernel Function Method. E. Nissim and I. Lottati, *Technion-Israel Institute of Technology* (JA 20, 8, p. 674) Article

C83-112 Finite-Element Analysis of the T-38 Aircraft Canopy. R. A. Smith and R. E. McCarty, *Air Force Wright Aeronautical Laboratories* (JA 20, 8, p. 682) Article based on AIAA Paper 82-0705 CP823

C83-113 Durability and Damage Tolerance Control Plans for U.S. Air Force Aircraft. Michael A. Landy and O. Lester Smithers, *Aeronautical Systems Division (WPAFB)* (JA 20, 8, p. 689) Article based on AIAA Paper 82-0679 CP824

C83-114 Rigid-Body Structural Mode Coupling on a Forward Swept Wing Aircraft. Gerald D. Miller, John H. Wykes and Michael J. Brosnan, *Rockwell International* (JA 20, 8, p. 696) Article based on AIAA Paper 82-0683 CP824

C83-115 Transonic Time-Response Analysis of 3-Degree-of-Freedom Conventional and Supercritical Airfoils. T. Y. Yang and J. T. Batina, *Purdue University* (JA 20, 8, p. 703) Article based on AIAA Paper 82-0680

C83-116 Transonic Flutter Model Study of a Supercritical Wing and Winglet. Charles L. Ruhlin, *NASA Langley Research*

Center; Frank J. Rauch Jr. and Catherine Waters, *Grumman Aerospace Corporation* (JA 20, 8, p. 711) Article based on AIAA Paper 82-0721 CP824

C83-117 The Role and Application of Data Base Management in Integrated Computer-Aided Design. C. L. Blackburn, *Kentron Technical Center*; O. O. Storaasli and R. E. Fulton, *NASA Langley Research Center* (JA 20, 8, p. 717) Article based on AIAA Paper 82-0681 CP824

C83-118 Injection Slot Location for Boundary-Layer Control in Shock-Induced Separation. P. R. Viswanath, *NASA Ames Research Center*; L. Sankaran, *Hindustan Aeronautics Limited (India)*; P. M. Sagdeo, *Georgia Institute of Technology*; R. Narasimha and A. Prabhu, *Indian Institute of Science* (JA 20, 8, p. 726) Article based on AIAA Paper 78-1168

C83-119 Freestream Turbulence Effects on Compressor Cascade Wake. R. K. Sullerey and A. Sayeed Khan, *Indian Institute of Technology* (JA 20, 8, p. 733) Engineering Note

C83-120 The Effect of Displacement Velocity on Propeller Performance. Michio Nishida, *Kyoto University (Japan)* (JA 20, 8, p. 734) Engineering Note

C83-121 Aerodynamic Aspects of Aircraft Dynamics at High Angles of Attack. K. J. Orlik-Ruckemann, *National Research Council of Canada* (JA 20, 9, p. 737) Survey Paper based on AIAA Paper 82-1363

C83-122 Aeroservoelasticity in the Time Domain. Malcolm Cutchins, *Auburn University*; James W. Purvis, *Sandia National Laboratories*; and Robert W. Bunton, *Eglin Air Force Base* (JA 20, 9, p. 753) Article based on AIAA Paper 81-0635 CP812

C83-123 Analysis of Aircraft Dynamic Behavior in a Crash Environment. Gil Wittlin, *Lockheed-California Company* (JA 20, 9, p. 762) Article based on AIAA Paper 82-0694 CP824

C83-124 Optimum Configuration for a 10-Passenger Business Turbofan Jet Airplane. Moses Aronson, *Aronson Industries* (JA 20, 9, p. 770) Article based on AIAA Paper 82-0365

C83-125 Moisture and Temperature Effects on the Instability of Cylindrical Composite Panels. James M. Snead and Anthony N. Palazotto, *U. S. Air Force (WPAFB)* (JA 20, 9, p. 777) Article based on AIAA Paper 82-0741 CP823

C83-126 Preliminary Supersonic Analysis Methods Including High Angle of Attack. Jimmy L. Pittman, *NASA Langley Research Center* (JA 20, 9, p. 784) Article based on AIAA Paper 82-0938

C83-127 Interior Noise Considerations for Advanced High-Speed Turboprop Aircraft. J. S. Mixson, F. Farassat and J. D. Leatherwood, *NASA Langley Research Center*; R. Prydz and J. D. Revell, *Lockheed California Company* (JA 20, 9, p. 791) Article based on AIAA Paper 82-1121

C83-128 Aircraft Trajectories for Reduced Noise Impact. Robert G. Melton, *The Pennsylvania State University*; and Ira D. Jacobson, *The University of Virginia* (JA 20, 9, p. 798) Article

C83-129 Bonded Aluminum Honeycomb--Aircraft Flight Surface Primary Structure Application. T. R. Logan, *Boeing Commercial Airplane Company*; and U. Soudak, *Israel Aircraft Industries, Ltd.* (JA 20, 9, p. 805) Article based on AIAA Paper 82-0676 CP824

C83-130 Apparent-Mass Coefficients for Isosceles Triangles and Cross Sections Formed by Two Circles. Ming-Ke Huang and Chuen-Yen Chow, *University of Colorado* (JA 20, 9, p. 810) Article

C83-131 Design Optimization Codes for Structures: DOCS Computer Program. D. T. Nguyen, *Northeastern University*; J. S. Arora and A. D. Belegundu, *The University of Iowa* (JA 20, 9, p. 817) Article

C83-132 Vortex Flow Over Delta and Double-Delta Wings. H. W. M. Hoeijmakers and W. Vaatstra, *National Aerospace Laboratory NLR (The Netherlands)*; and N. G. Verhaagen, *Delft University of Technology* (JA 20, 9, p. 825) Article based on AIAA Paper 82-0949

C83-133 Experimental Wing and Canard Jet-Flap Aerodynamics. D. B. Smeltzer and D. A. Durston, *NASA Ames Research Center*; and V. R. Stewart, *Rockwell International* (JA 20, 10, p. 833) Synoptic based on AIAA Paper 83-0081

C83-134 Evaluation of Four Subcritical Response Methods for On-Line Prediction of Flutter Onset in Wind Tunnel Tests. Charles L. Ruhlin, Judith J. Watson, Rodney H. Ricketts and Robert V. Doggett Jr., *NASA Langley Research Center* (JA 20, 10, p. 835) Article based on AIAA Paper 82-0644 CP824

C83-135 Effects of Angle of Attack on Transonic Flutter of a Supercritical Wing. E., Carson Yates Jr., Eleanor C. Wynne and Moses G. Farmer, *NASA Langley Research Center* (JA 20, 10, p. 841) Article based on AIAA Paper 82-0647 CP824

C83-136 Stress Analysis of Stepped-Lap Joints with Bondline Flaws. H. P. Kan and M. M. Ratwani, *Northrop Corporation* (JA 20, 10, p. 848) Article based on AIAA Paper 82-0737 CP823

C83-137 Subsonic/Supersonic Aeropropulsive Characteristics of Nonaxisymmetric Nozzles Installed on an F-18 Model. Francis J. Capone, *NASA Langley Research Center*; Brian L. Hunt, *Northrop Corporation*; and Greg E. Poth, *USAF Wright Aeronautical Laboratories* (JA 20, 10, p. 853) Article based on AIAA Paper 81-1445

C83-138 Strong Pressure Waves in Air-Breathing Engines. V. E. Haloulakos, *McDonnell Douglas Astronautics Company* (JA 20, 10, p. 859) Article based on AIAA Paper 81-1475

C83-139 Model Test and Full-Scale Checkout of Dry-Cooled Jet Runup Sound Suppressors. James L. Grunnet, *FuiDyne Engineering Corporation*; and Edward Ference, *Naval Facilities Engineering Command* (JA 20, 10, p. 866) Article based on AIAA Paper 82-1239

C83-140 Analysis of General Aviation Accidents Using ATC Radar Records. R. C. Wingrove and R. E. Bach Jr., *NASA Ames Research Center* (JA 20, 10, p. 872) Article based on AIAA Paper 82-1310

C83-141 Correlation of Flight Test and Analytic M-on-N Air Combat Exchange Ratios. D. S. Hague, *Aerophysics Research Corporation* (JA 20, 10, p. 877) Article based on AIAA Paper 82-1328

C83-142 Drag of Wings with Cambered Airfoils and Partial Leading-Edge Suction. James DeLaurier, *University of Toronto* (JA 20, 10, p. 882) Article

C83-143 PAN AIR Applications to Complex Configurations. A. Cenko, *Grumman Aerospace Corporation* (JA 20, 10, p. 887) Article

C83-144 Wave Drag Prediction Using a Simplified Supersonic Area Rule. E. J. Jumper, *Air Force Institute of Technology* (JA 20, 10, p. 893) Engineering Note

C83-145 Approximation to the Optimization of a Coast-Glide Trajectory. Israel Shruster and Israel Carpas, *Israel Aircraft Industries Ltd.* (JA 20, 10, p. 895) Engineering Note

C83-146 Optimal Frequency Response Modification by Added Passive Structures. L. Kitis, *Worcester Polytechnic Institute*; W. D. Pilkey and B. P. Wang, *University of Virginia* (JA 20, 11, p. 897) Synoptic

C83-147 Time-Marching Transonic Flutter Solutions Including Angle-of-Attack Effects. John W. Edwards, Robert M. Bennett, Woodrow Whitlow Jr. and David A. Seidel, *NASA Langley Research Center* (JA 20, 11, p. 899) Article based on AIAA Paper 82-0685 CP823

C83-148 Tensile Buckling of Advanced Turboprops. C. C. Chamis and R. A. Aiello, *NASA Lewis Research Center* (JA 20, 11, p. 907) Article based on AIAA Paper 82-0776 CP823

C83-149 Experiences in the Use of Composite Material for a Wing Skin. Clinton V. Eckstrom, *NASA Langley Research Center*; and Charles V. Spain, *Kentron Technical Center* (JA 20, 11, p. 913) Article based on AIAA Paper 82-0676 CP823

C83-150 Pressure Measurements on Twin Vertical Tails in Buffeting Flow. William E. Triplett, *McDonnell Aircraft Company* (JA 20, 11, p. 920) Article based on AIAA Paper 82-0641 CP823

C83-151 Investigation of Tangential Blowing Applied to a Subsonic V/STOL Inlet. Richard R. Burley and Danny P. Hwang, *NASA Lewis Research Center* (JA 20, 11, p. 926) Article based on AIAA Paper 82-1084

C83-152 An Assessment of the Safety of Hydrogen-Fueled Aircraft. G. Daniel Brewer, *Lockheed-California Company* (JA 20, 11, p. 935) Article based on AIAA Paper 82-1236

C83-153 Prediction of Parachute Line Sail During Lines-First Deployment. James W. Purvis, *Sandia National Laboratories* (JA 20, 11, p. 940) Article

C83-154 Acoustics of Rotors Utilizing Circulation Control. Marianne Mosher, *NASA Ames Research Center* (JA 20, 11, p. 946) Article

C83-155 Lateral Attenuation of Aircraft Noise. G. J. J. Ruijgrok, *Delft University of Technology* (JA 20, 11, p. 953) Article

C83-156 Trimming Advanced Fighters for STOL Approaches. J. W. Paulson Jr., G. M. Gatlin, P. F. Quinto and D. W. Banks, *NASA Langley Research Center* (JA 20, 11, p. 957) Article based on AIAA Paper 83-1068

C83-157 Analysis of an Airplane Windshield Anti-Icing System Using Hot Air. R. Ross, *Ross Aviation Associates* (JA 20, 11, p. 963) Article based on AIAA Paper 82-1372

C83-158 Adaptable Wind Tunnel for Testing V/STOL Configurations at High Lift. W. R. Sears, *University of Arizona* (JA 20, 11, p. 968) Article based on AIAA Paper 82-0541 CP822

C83-159 Jet Trajectories and Surface Pressures Induced on a Body of Revolution with Various Dual Jet Configurations. J. A. Schetz and A. K. Jakubowski, *Virginia Polytechnic Institute and State University*; and K. Aoyagi, *NASA Ames Research*

Center (JA 20, 11, p.975) Article based on AIAA Paper 83-0080

C83-160 A Fundamental Comparison of Canard and Conventional Configurations. Tad McGeer and Ilan Kroo, *Stanford University* (JA 20, 11, p.983) Article

C83-161 Observations and Implications of Natural Laminar Flow on Practical Airplane Surfaces. B. J. Holmes, *NASA Langley Research Center*; and C. J. Obara, *Kentron International, Inc.* (JA 20, 12, p.993) Survey Paper

C83-162 Control of Aeroelastic Divergence. Richard R. Chipman, Alex M. Zislin and Catherine Waters, *Grumman Aerospace Corporation* (JA 20, 12, p.1007) Article based on AIAA Paper 82-0684 CP824

C83-163 Dynamic Stability of Flexible Forward Swept Wing Aircraft. Terrence A. Weisshaar and Thomas A. Zeiler, *Purdue University* (JA 20, 12, p.1014) Article

C83-164 A Root Locus-Based Flutter Synthesis Procedure. Prabhat Hajela, *Stanford University* (JA 20, 12, p.1021) Article based on AIAA Paper 83-0063

C83-165 Statistical Crack Propagation in Fastener Holes Under Spectrum Loading. Jann N. Yang, *The George Washington University*; and Robert C. Donath, *Air Force Wright Aeronautical Laboratories* (JA 20, 12, p.1028) Article

C83-166 Transient Flow Analysis of an Aircraft Refueling System. S. E. Parks, *U.S. Air Force*; and M. E. Franke, *Air*

Force Institute of Technology (JA 20, 12, p.1033) Article based on AIAA Paper 81-1641

C83-167 Aircraft Carrier--Surface Effect Ship. Donald P. Germeraad, *Lockheed Missiles and Space Company* (JA 20, 12, p.1037) Article based on AIAA Paper 82-0808

C83-168 Uses of Parameter Estimation in Flight Test. Kenneth W. Iliff and Richard E. Maine, *NASA Ames Research Center* (JA 20, 12, p.1043) Article based on AIAA Paper 82-1373

C83-169 Effects of Atmospheric Turbulence on a Quadrotor Heavy Lift Airship. Mark B. Tischler, *U. S. Army Research and Technology Laboratories*; and Henry R. Jex, *Systems Technology, Inc.* (JA 20, 12, p.1050) Article based on AIAA Paper 82-1542 CP825

C83-170 Computations of Unsteady Transonic Aerodynamics Using Prescribed Steady Pressures. K.-Y. Fung and A. W. Chung, *University of Arizona* (JA 20, 12, p.1058) Article based on AIAA Paper 82-0956

C83-171 An Exploratory Study of Area-Efficient Vortex Flap Concepts. Dhanvanda M. Rao, *Vigyan Research Associates, Inc.* (JA 20, 12, p.1062) Article

C83-172 Application of Energy Saving Concepts to Fighter/Attack Design. S. A. Powers, H. H. Driggers and T. E. Krieg, *Vought Corporation* (JA 20, 12, p.1068) Article based on AIAA Paper 83-0092