


**AIRCRAFT TECHNOLOGY, CONVENTIONAL, STOL/VTOL**

- Design and Testing of a Subsonic All-Moving Adaptive Flight Control Surface (TN) . . . . .** R. M. Barrett, R. S. Gross, F. T. Brozoski **1217**

**FLUID DYNAMICS**

|  |  |             |
|--|--|-------------|
| <b>Active Control of Turbomachine Discrete Frequency Noise Utilizing Oscillating Flaps and Pistons . . . . .</b>                 | J. A. Minter and S. Fleeter                | <b>1105</b> |
| <b>Sound Transmission Through an Aeroelastic Plate into a Cavity . . . . .</b>   | K. D. Frampton and R. L. Clark             | <b>1113</b> |
| <b>Screech Tones of Supersonic Jets from Bevelled Rectangular Nozzles . . . . .</b>  | C. K. W. Tam, H. Shen, G. Raman            | <b>1119</b> |
| <b>Numerically Nonreflecting Boundary and Interface Conditions for Compressible Flow and Aeroacoustic Computations . . . . .</b> | T. Colonius                                | <b>1126</b> |
| <b>High-Resolution Finite Volume Computation of Turbulent Transonic Flow Past Airfoils . . . . .</b>                             | Y. T. Jiang, M. Damodaran, K. H. Lee       | <b>1134</b> |
| <b>Calculations of Swirl Combustors Using Joint Velocity–Scalar Probability Density Function Method . . . . .</b>                | M. S. Anand, A. T. Hsu, S. B. Pope         | <b>1143</b> |
| <b>Nonequilibrium Effects in Near-Wake Ionizing Flows . . . . .</b>  | F. Grasso and S. Pirozzoli                 | <b>1151</b> |
| <b>Effects of Coriolis Force on Flow in Rotating Diffusers . . . . .</b>   | H. S. Koyama, K. Uchikawa, H. H. Nigim     | <b>1164</b> |
| <b>Natural Coherent Structure Dynamics in Near Field of Fully Turbulent Axisymmetric Jet . . . . .</b>                           | S. Aydore and P. J. Disimile               | <b>1171</b> |
| <b>Unsteady Transonic Flow: Flow About a Suddenly Deflected Wedge . . . . .</b>  | J. D. Cole, L. P. Cook, G. Schleiniger     | <b>1179</b> |
| <b>Interface Wavelength Between Confined Supersonic Two-Dimensional Jets and Subsonic Streams (TN) . . . . .</b>                 | L. J. De Chant, J. A. Caton, M. J. Andrews | <b>1219</b> |
| <b><math>k-\zeta</math> (Enstrophy) Compressible Turbulence Model for Mixing Layers and Wall Bounded Flows (TN) . . . . .</b>    | G. A. Alexopoulos and H. A. Hassan         | <b>1221</b> |
| <b>Motion of a Body Through Large-Scale Inhomogeneity in the Stratified Atmosphere (TN) . . . . .</b>                            | V. U. Nabiev and S. V. Utyuzhnikov         | <b>1224</b> |
| <b>New Conservative Formulations of Full-Potential Equation in Streamline-Aligned Coordinates (TN) . . . . .</b>                 | A. M. Latypov                              | <b>1226</b> |
| <b>Vorticity Jump in Surface Coordinates Across a Shock in Nonsteady Flow (TN) . . . . .</b>                                     | Z. U. A. Warsi                             | <b>1228</b> |
| <b>Generalized Vortex Lattice Method for Planar Supersonic Flow (TN) . . . . .</b>   | P. A. O. Soviero and H. B. Resende         | <b>1230</b> |
| <b>Effect of Yaw on Pressure Oscillation Frequency Within Rectangular Cavity at Mach 2 (TN) . . . . .</b>                        | P. J. Disimile and P. D. Orkwas            | <b>1233</b> |
| <b>Computations of Unsteady Separating Flows over an Oscillating Airfoil (TN) . . . . .</b>                                      | S. Ko and W. J. McCroskey                  | <b>1235</b> |

Table of Contents continued on back cover

## CONTENTS—continued

## GUIDANCE, CONTROL, AND DYNAMICS TECHNOLOGY

- Extraction of Normal Modes and Full Modal Damping from Complex Modal Parameters** ..... K. F. Alvin, L. D. Peterson, K. C. Park 1187

## INTERDISCIPLINARY TOPICS

- Freestream Velocity Corrections for Two-Dimensional Testing with Splitter Plates** ..... P. Giguère and M. S. Selig 1195
- Holographic Diffraction Image Velocimetry for Measurement of Three-Dimensional Velocity Fields** ..... J. S. Slepicka and S. S. Cha 1201
- Freestream Parameter Estimation Using Heat Flux Measurements (TN)** ..... A. K. Alekseev 1238
- Limiting Mach Number for Quantitative Pressure-Sensitive Paint Measurements (TN)** ..... D. R. Mendoza 1240
- Resolution Effects in Chaotic Velocity Field Reconstruction from Passive Scalar Data (TN)** ..... J. D. Chamberlain and J. M. McDonough 1241

## STRUCTURAL MECHANICS AND MATERIALS

- Modal Parameter Identification Using Simulated Evolution** ..... D.-Y. Chiang and S.-T. Huang 1204
- Sequentially Decomposed Programming** ..... S. A. Nelson II and P. Y. Papalambros 1209
- Torsional Instability of Moderately Thick Composite Cylindrical Shells by Various Shell Theories (TN)** ..... A. Tabiei and G. Simitses 1243
- Final Solution of Duffing Equation of Mixed Parity (TN)** ..... M. S. Sarma, B. Nageswara Rao, H. R. Nataraja 1246
- Singularities in Polynomial Representations of Transverse Shear in Finite Elements (TN)** ..... J. M. Greer Jr. and A. N. Palazotto 1248
- Vibration Analysis of Arbitrary Quadrilateral Unsymmetrically Laminated Thick Plates (TN)** ..... K. M. Liew, W. Karunasena, S. Kitipornchai, C. C. Chen 1251

## BOOK REVIEW

- Review of *Research Trends in Fluid Dynamics*** ..... R. Seebass 1254

## INTERNATIONAL AEROSPACE LITERATURE

- Russian Abstracts: Transonic Flows** ..... 1255
- Japanese Abstracts: Transonic Flows** ..... 1258
- French Abstracts: Transonic Flows** ..... 1262
- German Abstracts: Transonic Flows** ..... 1265
- Italian Abstracts: Transonic Flows** ..... 1268
- United Kingdom Abstracts: Transonic Flows** ..... 1270