

Dynamics and Control

- Analysis of Samara-Wing Decelerator
Steady-State Characteristics C88-006

Missile Systems

- Influence Function Method Applications to
Tow Target Trajectory Predictions C88-183

Testing, Flight and Ground

- Flow Unsteadiness Considerations in High-
Alpha Testing C88-170

Vibration

- Efficient Vibration Mode Analysis of Air-
craft with Multiple External Store Con-
figurations C88-123

Propulsion**Airbreathing Propulsion**

- Review of Liquid-Cooled Aircraft Engine
Installation Aerodynamics C88-034
Potential Application of Advanced Propul-
sion Systems to Civil Aircraft C88-021

Environmental Effects

- Numerical Analysis of an NACA 0012
Airfoil with Leading-Edge Ice Accretions C88-029

Spacecraft Technology**Electric Power**

- Parametric Weight Evaluation of Joined
Wings by Structural Optimization C88-185

Entry Vehicle Aerodynamic Heating

- Thermal Environment of Transatmospheric
Vehicles C88-055

Structural Mechanics and Materials**Aeroelasticity and Hydroelasticity**

- Static Aeroelastic Characteristics of Circu-
lation Control Wings C88-154
Circular Cylinder Response to Kármán Vor-
tex Shedding C88-128
Divergence Study of a High-Aspect-Ratio,
Forward Swept Wing C88-077
Flutter Prediction Involving Trailing-Edge
Control Surfaces C88-061
General Formulation for the Aeroelastic
Divergence of Composite Swept-Forward
Wing Structures C88-056
Effect of Density Ratio on Binary Wing
Flutter C88-043

- Aeroelastic Tailoring of a Composite Wing
with a Decoupler Pylon as a Wing/Store
Flutter Suppressor C88-041
Improved Exponential Time Series Approx-
imation of Unsteady Aerodynamic Oper-
ators C88-018
Integrated Aeroservoelastic Tailoring of Lift-
ing Surfaces C88-011
Aeroelastic Oscillations Caused by Transi-
tional Boundary Layers and Their Attenu-
ation C87-069

Materials, Properties of

- Evaluation of Aluminum-Lithium Alloys in
Compression-Stiffened Aircraft Structures C88-166
Fatigue Crack Growth Predictions in Aramid
Reinforced Aluminum Laminates
(ARALL) C88-020
Control and Use of Residual Stresses in
Aircraft Structural Parts C88-007
Residual Stresses in 2024-T81 Aluminum
Using Caustics and Moiré Interferometry C87-072

Structural Composite Materials

- Design Studies of Primary Aircraft Structures
in ARALL Laminates C88-169
Buckling and Failure of Sandwich Plates
with Graphite-Epoxy Faces and Various
Cores C88-057
General Formulation for the Aeroelastic
Divergence of Composite Swept-Forward
Wing Structures C88-056
Aeroelastic Tailoring of a Composite Wing
with a Decoupler Pylon as a Wing/Store
Flutter Suppressor C88-041
Effect of Bolt Load Proportioning on the
Capacity of Multiple-Bolt Composite
Joints C88-027
Fatigue Crack Growth Predictions in Aramid
Reinforced Aluminum Laminates
(ARALL) C88-020

Structural Design

- Parametric Weight Evaluation of Joined
Wings by Structural Optimization C88-185
Design Studies of Primary Aircraft Structures
in ARALL Laminates C88-169
Simulation of a Birdstrike Impact on Aircraft
Canopy Material C88-107
Preliminary Weight Estimation of Conventional
and Joined Wings Using Equivalent
Beam Models C88-094
Buckling and Failure of Sandwich Plates
with Graphite-Epoxy Faces and Various
Cores C88-057
Effect of Bolt Load Proportioning on the
Capacity of Multiple-Bolt Composite
Joints C88-027

- Static Test of an Ultralight Airplane C88-005
Residual Stresses in 2024-T81 Aluminum
Using Caustics and Moiré Interferometry C87-072

Structural Durability (including Fatigue and Fracture)

- New Design Procedures Applied to Landing
Gear Development C88-148
Helicopter Transmission Fatigue Life Es-
timation C88-073
Fatigue Crack Growth Predictions in Aramid
Reinforced Aluminum Laminates
(ARALL) C88-020
Control and Use of Residual Stresses in
Aircraft Structural Parts C88-007
Residual Stresses in 2024-T81 Aluminum
Using Caustics and Moiré Interferometry C87-072

Structural Dynamics

- Flutter Modes of High Aspect Ratio Tailless
Aircraft C88-075
Topics in Landing Gear Dynamics Research
at NASA Langley C88-012

Structural Stability

- Parametric Weight Evaluation of Joined
Wings by Structural Optimization C88-185
Divergence Study of a High-Aspect-Ratio,
Forward Swept Wing C88-077
Buckling and Failure of Sandwich Plates
with Graphite-Epoxy Faces and Various
Cores C88-057

Structural Statics

- Effect of Bolt Load Proportioning on the
Capacity of Multiple-Bolt Composite
Joints C88-027

Thermal Stresses

- Coupled Flow, Thermal, and Structural
Analysis of Aerodynamically Heated
Panels C88-173
Control and Use of Residual Stresses in
Aircraft Structural Parts C88-007

Thermophysics and Thermochemistry**Thermal Modeling and Analysis**

- Efficient Numerical Simulation of a One-
Dimensional Electrothermal Deicer Pad C88-179
Coupled Flow, Thermal, and Structural
Analysis of Aerodynamically Heated
Panels C88-173
Thermal Environment of Transatmospheric
Vehicles C88-055

Author Index

Abu-Abdou, K., C88-182
Adelman, H. G., C88-055
Agarwal, R. K., C88-180
Agnes, A., C88-133
Akishita, S., C88-035
Alemdaroglu, N., C88-147
An, J., C88-033
Ashill, P. R., C87-069
Atta, E., C88-149
Back, L. H., C88-042
Banerjee, J. R., C88-075
Bao, Y., C88-089
Barbi, C., C88-133

Batina, J. T., C88-040, C88-098,
C88-156
Batson, R. G., C88-015
Baughn, T. V., C88-107
Bennett, R. M., C88-156
Bera, R. K., C88-059
Beyers, M. E., C88-026
Billet, M. L., C88-151
Birckelbaw, L., C88-149
Blythe, A., C88-021
Bodapati, S., C88-121
Bragg, M. B., C88-139
Brand, A. G., C88-187

Brandon, J. M., C88-097
Branstetter, J. R., C88-084
Brase, L. O., C88-174
Brendel, M., C88-100
Brentner, K. S., C88-066
Brown, P. C., C88-106
Brown, P. W., C88-017
Bruce, R. A., C88-017
Caracena, F., C88-086
Carlson, L. A., C88-167
Carr, L. W., C88-001
Carta, F. O., C88-090
Caughlin, D. J., C88-032

Cebeci, T., C88-147
Celik, Z. Z., C88-121
Cenko, A., C88-071, C88-183
Chang, K. C., C88-147
Chastain, P. A., C88-027
Chellman, D. J., C88-166
Chen, J. L., C88-094
Chen, P. C., C88-083
Chiu, Y. D., C88-115
Cho, Y. I., C88-042
Chopra, I., C88-154
Chu, J., C88-010
Cimbala, J. M., C88-151

- Clark, B. J., C88-023
 Clark, R., C88-022
 Clayton, R. M., C88-042
 Clessas, G., C88-183
 Cleveland, J. I., II, C88-025
 Cockrell, D. J., C88-050
 Cole, S. R., C88-077
 Compton, M., C88-091
 Cooley, D., C88-061
 Cottrell, C. J., C88-136
 Crawford, D. J., C88-025
 Crawley, E. F., C88-018
 Crimi, P., C88-006
 Cunningham, H. J., C88-156
 De Remer, D., C88-126
 Debbeler, F. J., C88-178
 Dechaumphai, P., C88-173
 Deese, J. E., C88-180
 DeSanti, A. J., C88-141
 DeWitt, K. J., C88-179
 Dittmar, J. H., C88-122
 Doblele, S. S., C88-129
 Dovi, A. R., C88-103
 Drela, M., C88-120
 Dugundji, J., C88-057
 Dutt, H. N. V., C88-014
 Ekvall, J. C., C88-166
 Englar, R. J., C88-051
 Eppard, W. M., C88-140
 Er-El, J., C88-002, C88-030, C88-031
 Ericsson, L. E., C87-069, C88-128, C88-162, C88-170
 Eriksson, L. -E., C88-135
 Etherington, R. E., C88-146
 Eversman, W., C88-174
 Farokhi, S., C88-119
 Farr, N., C88-135
 Favier, D., C88-133
 Flores, J., C88-144
 Flueck, J. A., C88-086
 Fraser, K. F., C88-073
 Frassinelli, M. C., C88-047
 French, M., C88-061
 Freymuth, P., C88-158
 Fuller, C. R., C88-145
 Fung, K. Y., C88-003
 Gallman, J. W., C88-040
 Gally, T. A., C88-167
 Garcia-Fogeda, P., C88-083
 Gielda, T. P., C88-118
 Gielen, H., C88-178
 Giessler, F. J., C88-118
 Giles, G. L., C88-186
 Goorjian, P. M., C88-155
 Gounet, H., C88-067
 Graham, L. W., C88-107
 Gray, R. B., C88-038, C88-181
 Gregorek, G. M., C88-112
 Groeneweg, J. F., C88-023
 Grossman, B., C88-140
 Grosveld, F. W., C88-153
 Guenther, A. D., C88-084
 Gundy, K., C88-144
 Gunnink, J. W., C88-169
 Gupta, S. C., C88-093, C88-127
 Gurdal, Z., C88-140
 Guruswamy, G. P., C88-155
 Haas, D. J., C88-154
 Haftka, R. T., C88-140
 Haftmann, B., C88-178
 Hajela, P., C88-094
 Hall, K., C88-149
 Hankey, W. L., C88-118
 Hansman, R. J., Jr., C88-087
 Hardin, J. C., C88-009
 Harrison, J. R., C88-109
 Hartwich, P.-M., C88-069
 Hartwich, P. -M., C88-113
 Hawkins, B. D., C88-109
 Hemsch, M. J., C88-102
 Henderson, C., C88-183
 Hess, G. D., C88-008, C88-142
 Hicks, R. M., C88-112
 Hitzel, S. M., C88-063
 Hoadley, A. W., C88-058
 Hoffler, K. D., C88-047
 Holmes, B. J., C88-099, C88-117, C88-129
 Holst, T. L., C88-144, C88-177
 Horstmann, K. H., C88-096
 Houck, J. A., C88-084
 Hounjet, M. H. L., C88-062
 Howard, R. M., C88-099
 Hsu, C.-H., C88-069
 Hsu, C. -H., C88-113
 Humes, R. L., C88-087
 Huson, G. G., C88-112
 Hyer, M. W., C88-027
 Jaensson, B., C88-007
 Jambunathan, V., C88-116
 Jenkinson, L. R., C88-101
 Jianying, L., C88-028
 Johnson, T. D., Jr., C88-017
 Jones, J. D., C88-145
 Jones, R., C88-105
 Jun, Y., C88-134
 Jung, Y., C88-076
 Kao, Y. F., C88-003
 Karpel, M., C88-123
 Katz, J., C88-048
 Keen, J. M., C88-019
 Keith, T. G., Jr., C88-179
 Kemmerly, G. T., C88-091
 Keshock, E. G., C88-053
 Kessler, E., C88-070
 King, C. N., C88-073
 Kirby, M. S., C88-087
 Komerath, N. M., C88-038, C88-181, C88-187
 Köster, H., C88-096
 Krispin, J., C88-004
 Kuhlman, J. M., C88-152
 Kwon, O. J., C88-038
 Lagace, P. A., C88-057
 Lamar, J. E., C88-010, C88-017
 Landy, M. A., C87-072
 Lange, R. H., C88-060
 Larson, E. S., C88-157
 Larsson, S., C88-007
 Laschka, B., C88-082
 Lee, C. S., C88-049
 Leftheris, B. P., C87-072
 Leishman, J. G., C88-108, C88-150
 Lewy, S., C88-067
 Liaw, P., C88-152
 Librescu, L., C88-056
 Lijewski, L. E., C88-136
 Liu, C. H., C88-113
 Liu, D. D., C88-003, C88-083
 Llorens, R., C88-183
 Lorber, P. F., C88-090
 Lottati, I., C86-091, C88-041
 Love, R. M., C88-015
 Lowe, J. D., C88-074
 Luo, S., C88-089
 Mabey, D. G., C87-069
 Malone, J. B., C86-094
 Maresca, C., C88-133
 Marissen, R., C88-020
 Martin, R. M., C88-009
 Maruyama, Y., C88-035
 Maskew, B., C88-048
 McComb, H. G., Jr., C88-012
 McCroskey, W. J., C88-143
 McKernan, J. F., C88-163
 McKnight, R. C., C88-087
 Mehta, U., C88-147
 Meier, W. H., C88-088
 Metzger, F. B., C88-106
 Miley, S. J., C88-034, C88-099
 Miller, D. S., C88-064
 Miller, E. H., C88-072
 Minguet, P., C88-057
 Miura, H., C88-185
 Modi, V. J., C88-024, C88-159
 Mokhtarian, F., C88-159
 Mokhtarian, F., C88-024
 Moore, R., C88-061
 Mueller, T. J., C88-100
 Murman, E. M., C88-064
 Murthy, A. V., C88-037
 Murthy, V. R., C88-131
 Nahon, M. A., C88-104
 Naik, D., C88-016
 Nakamura, A., C88-035
 Nallasamy, M., C88-023
 Nävert, U. G., C88-114
 Nelson, R. C., C88-134, C88-163, C88-175
 Ng, T. T., C88-175
 Nguyen, L. T., C88-097
 Niblett, L. T., C88-043
 Noll, T., C88-061
 Obara, C. J., C88-080
 Olsen, J. J., C88-065
 Olson, J. R., C88-088
 Om, D., C88-138
 Ostowari, C., C88-016, C88-176
 Pais, M. R., C88-184
 Pamadi, B. N., C88-116
 Paulson, J. W., Jr., C88-091
 Payne, F. M., C88-163
 Peters, D. A., C88-115
 Peterson, L. D., C88-018
 Pi, W. S., C88-171
 Portnoy, H., C88-004
 Potapczuk, M. G., C88-029
 Powell, K. G., C88-064
 Pride, J. D., Jr., C88-017
 Qiu, C., C88-033
 Quast, A., C88-096
 Raghunathan, S., C88-109
 Rahman, A., C88-116
 Raj, P., C88-019
 Rajeswari, B., C88-014
 Rao, D. M., C88-047
 Reddy, C. S., C88-013
 Redeker, G., C88-096
 Reid, L. D., C88-104
 Reznick, S. G., C88-144
 Roberts, L., C88-036, C88-049
 Rodden, W. P., C86-094
 Roelke, R. J., C88-179
 Ross, R., C88-081
 Rossow, V. J., C88-079, C88-137
 Ru, S. Y., C88-068
 Sankar, L. N., C86-094, C88-068
 Schippers, H., C88-062
 Schlichting, U.-J., C88-046
 Schmidt, D. K., C88-092
 Schwarz, R., C87-072
 Scott, J. N., C88-118
 Seath, D. D., C88-076
 Sedin, Y. C.-J., C88-114
 Send, W., C88-164
 Shakkottai, P., C88-042
 Shaw, L., C88-022
 Shen, C. Q., C88-050
 Shyu, A. T., C88-185
 Sigal, A., C88-168
 Sikora, J. S., C88-019
 Simos, D., C88-101
 Simovich, J., C88-056
 Singh, S. N., C88-184
 Skow, A. M., C88-130
 Smith, H. W., C88-005
 Smith, R. E., C88-135
 Smith, R. H., C88-017
 Sotomayer, W. A., C86-094
 Spencer, B., Jr., C88-054
 Spillane, K. T., C88-008, C88-142
 Sri-Jayantha, M., C88-132
 Srinivasan, G. R., C88-143
 Stang, D. B., C88-122
 Staufenbiel, R. W., C88-046
 Stengel, R. F., C88-132
 Stinebring, D. R., C88-151
 Strauch, G. J., C88-140
 Suh, Y. B., C88-176
 Suikat, R., C88-119
 Sun, X., C88-033
 Sundberg, W. D., C88-172
 Tabrizi, A. H., C88-053
 Tai, T. C., C88-112
 Talmadge, D., C88-022
 Talty, P. K., C88-032
 Tanner, J. A., C88-012
 Tatum, K. E., C88-186
 Tauber, M. E., C88-055
 Tavella, D. A., C88-049, C88-085
 Taylor, J. H., C88-130
 Tessitore, F., C88-071
 Thompson, B. E., C88-052
 Thompson, T. L., C88-038, C88-181
 Thornton, E. A., C88-173
 Tinling, B. E., C88-079
 Treaster, A. L., C88-151
 Tseng, W., C88-183
 Unruh, J. F., C88-124, C88-125
 van Dam, C. P., C88-117, C88-129
 VanderBok, R. S., C88-058
 Veaux, J., C88-148
 Vijgen, P. M. H. W., C88-129
 Visser, K. D., C88-175
 Viswanath, P. R., C88-039
 Walters, M. M., C88-151
 Ware, G. M., C88-054
 Waszak, M. R., C88-092
 Wei, F., C88-105
 Weisshaar, T. A., C88-011
 Welsh, B. L., C87-069
 Whitelaw, J. H., C88-052
 Wiese, M. R., C88-135
 Wolkovitch, J., C88-185
 Woo, J., C88-131
 Wood, N. J., C88-036, C88-049
 Wood, R. M., C88-064
 Wrenn, G. A., C88-103
 Wright, W. B., C88-179
 Xinzhi, Y., C88-028
 Yan, M., C88-033
 Yan, Z., C88-033
 Yang, T. Y., C88-040
 Yang, X. T., C88-082
 Yavuz, T., C88-165
 Yechout, T. R., C88-095
 Yitzhak, Z., C88-030
 Yokomizo, T., C88-159
 Yongnian, Y., C88-028
 Zapata, F., C88-061
 Zedan, M. F., C88-182
 Zeiler, T. A., C88-011
 Zhang, Z. Y., C88-082
 Zhou, W., C88-033
 Zohar, Y., C88-031
 Zongdong, W., C88-028
 Zou, L., C88-184