

16th AIAA/CEAS Aeroacoustics Conference 2010

31st AIAA Aeroacoustics Conference

**Stockholm, Sweden
7-9 June 2010**

Volume 1 of 5

ISBN: 978-1-61738-854-5

The contents of this work are copyrighted and additional reproduction in whole or in part are expressly prohibited without the prior written permission of the Publisher or copyright holder. The resale of the entire proceeding as received from CURRAN is permitted.

For reprint permission, please contact AIAA's Business Manager, Technical Papers.
Contact by phone at 703-264-7500; fax at 703-264-7551 or by mail at
1801 Alexander Bell Drive, Reston, VA 20191, USA.

TABLE OF CONTENTS

VOLUME 1

Reduction of Flow Induced Tonal Noise Through Leading Edge Tuberle Modifications	1
<i>K. Hansen, R. Kelso, C. Doolan</i>	
Numerical Investigation of Tonal Airfoil Self-Noise Generated by an Acoustic Feedback-Loop	11
<i>L. Jones, R. Sandberg</i>	
Noise Radiated by a Rod-Airfoil Configuration.....	24
<i>S. Galdeano, S. Barre, N. Reau</i>	
Numerical Investigation of Airfoil Self-Noise Reduction by Addition of Trailing-Edge Serrations.....	36
<i>L. Jones, R. Sandberg</i>	
Airfoil Trailing Edge Noise Prediction from Large-Eddy Simulation: Influence of Grid Resolution and Noise Model Formulation	59
<i>J. Winkler, S. Moreau, T. Carolus</i>	
Numerical Insight into Sound Sources of a Rod-Airfoil Flow Configuration Using Direct Noise Calculation	76
<i>J. Berland, P. Lafon, F. Crouzet, F. Daude, C. Bailly</i>	
An Acoustic Analogy Formulation for Uniformly Moving Media: Formulation 1C	85
<i>A. Najafi-Yazdi, L. Mongeau, G. Bres</i>	
A Fast Procedure for Computations of Acoustic Fields Given by Retarded-Potential Integrals.....	101
<i>F. Margnat</i>	
On the Numerical Prediction of Aerodynamic Noise via a Hybrid Approach.....	111
<i>S. Redonnet</i>	
Ffowcs Williams & Hawkings Formulation for the Convective Wave Equation and Permeable Data Surface.....	132
<i>C. Weckmuller, J. Wellner, S. Guerin, R. Schnell</i>	
A Ffowcs Williams – Hawkings Solver for Lattice-Boltzmann Based Computational Aeroacoustics.....	145
<i>G. Bres, F. Perot, D. Freed</i>	
Fast Acoustic Scattering Simulations with Non-Uniform Potential Flow Effects.....	160
<i>W. Wolf, S. Lele</i>	
On Acoustic Source Specification for Rotor-Stator Interaction Noise Prediction.....	172
<i>D. Nark, E. Envia, C. Burley</i>	
Multiple Pure Tone Noise Prediction for Acoustically Treated Aircraft Engines	189
<i>F. Han, C. Shieh, U. Paliath, A. Sharma</i>	
Predicted and Measured Modal Sound Power Levels for a Fan Ingesting Distorted Inflow	200
<i>L. Koch</i>	
Computational AeroAcoustics of a Realistic Co-Axial Engine, Possibly Equipped with Acoustic Liners	214
<i>S. Redonnet, D. Mincu, G. Delattre</i>	
Algorithmic Improvements to a Frequency-Domain Linearized Euler Solver for Turbomachinery Noise Radiation	226
<i>Y. Ozyoruk</i>	
Time-Domain Broadband Liner Optimization.....	236
<i>X. Zhang, X. Chen</i>	
Fan Trailing-Edge Noise Prediction Using RANS Simulations.....	259
<i>Y. Rozenberg, S. Moreau, M. Henner, S. Morris</i>	
A Computational Study of Wind Turbine Blade Configurations on Aerodynamics and Noise	274
<i>K. Vellyiyur Ramacha, Z. Webster, M. Zhuang</i>	
An Experimental Study of Airfoil Instability Noise with Trailing Edge Serrations.....	287
<i>T. Chong, P. Joseph, M. Gruber</i>	
Direct Aeroacoustics Prediction of Ducts and Vents Noise	298
<i>F. Perot, M. Kim, D. Freed, D. Lee, M. Lee, K. Ih</i>	
Aeroacoustic Source Identification Using a Weighted Pseudo Inverse Method	309
<i>F. Preseznik, P. Guillaume</i>	
High-Frequency Acoustic Fields Solved Based on Geometrical Acoustics: Direct Waves, Reflected Waves, Creeping Waves, Diffracted Waves and Caustics	314
<i>T. Suzuki</i>	
Flow and Acoustic Fields of Reynolds Number 10^5, Subsonic Jets with Tripped Exit Boundary Layers	340
<i>C. Bogey, O. Marsden, C. Bailly</i>	

Continuation of Near-Acoustic Fields of Jets to the Far Field: Part I	358
<i>C. Tam, N. Pastouchenko, K. Viswanathan</i>	
Continuation of Near-Acoustic Fields of Jets to the Far Field: Part II	388
<i>C. Tam, B. Tam, K. Viswanathan, N. Pastouchenko</i>	
The Prediction of Broadband Shock-Associated Noise from Dualstream and Rectangular Jets Using RANS CFD	417
<i>S. Miller, P. Morris</i>	
DNS of Sound Radiation by a Diffusion Flame in a Shear Layer	441
<i>A. Najafi-Yazdi, P. Lew, L. Mongeau</i>	
Direct Noise Computation of a Shocked and Heated Jet at a Mach Number of 3.30	459
<i>N. de Cacqueray, C. Bogey, C. Bailly</i>	
Application of a Truncated Navier-Stokes Approach to Study Sound Radiation from Subsonic Jets	477
<i>V. Suponitsky, N. Sandham, C. Morfey, A. Agarwal</i>	
Systematic Comparison of Microphone Array Measurements in Open and Closed Wind Tunnels	496
<i>S. Kroeker, K. Ehrenfried, L. Koop, A. Lauterbach, A. Henning</i>	
Shear Layer Correction Validation Using A Non-Intrusive Acoustic Point Source	511
<i>C. Bahr, N. Zawodny, T. Yardihi, F. Liu, L. Cattafesta, D. Wetzel, B. Bertolucci</i>	
Locating and Quantifying Broadband Fan Sources Using In-Duct Microphones	531
<i>R. Dougherty, B. Walker, D. Sutliff</i>	
Optimization of Microphone Array Wall-Mountings in Closed-Section Wind Tunnels	550
<i>V. Fleury, L. Coste, R. Davy, A. Mignosi, J. Prosper, C. Cariou</i>	
Phased Array Transformation Methods to Estimate Non-Compact Noise Source Characteristics	566
<i>B. Tester, S. Glegg</i>	
Monopole and Dipole Identification Using Generalized Inverse Beamforming	604
<i>P. Zavala, W. De Roeck, K. Janssens, J. Arruda, P. Sas, W. Desmet</i>	
The Simulation of Turbomachinery Tone Noise Based on In-Duct Mode Matching Method	614
<i>Z. Lei, Q. Weiyang, M. Zhongqiang, C. Pingping</i>	
Sound Generation and Scattering from a Rotor in Nonuniform Flow	622
<i>M. Logue, H. Atassi</i>	
Linearized Navier-Stokes Analysis for Rotor-Stator Interaction Tone Noise Prediction	642
<i>H. Chen, A. Sharma, C. Shieh, S. Richards</i>	
Turbulence Modeling for Rotor Stator Interaction Noise	661
<i>S. Glegg, W. Devendorf</i>	
Effect of Rotor Wake Structure on Fan Interaction Noise	669
<i>J. Maunus, S. Grace, D. Sondak</i>	
A Body-Force Based Methodology For Predicting Multiple-Pure-Tone Noise: Validation	687
<i>J. Defoe, A. Narkaj, Z. Spakovszky</i>	
Aeroacoustic Measurements of a Scaled Half Model at High Reynolds Numbers	704
<i>T. Ahlefeldt, A. Lauterbach, L. Koop</i>	
Aerodynamic and Acoustic Corrections for A Kevlar-Walled Anechoic Wind Tunnel	718
<i>W. Devendorf, R. Burdisso, A. Borgoltz, P. Ravetta</i>	
Aerodynamic/Aeroacoustic testing in Anechoic Closed Test Sections of Low-Speed Wind Tunnels	742
<i>T. Ito, H. Ura, K. Nakakita, Y. Yokokawa, W. Ng, R. Burdisso, A. Iwasaki, T. Fujita, N. Ando, N. Shimada, K. Yamamoto</i>	
Establishing Consensus Turbulence Statistics for Hot Subsonic Jets	753
<i>J. Bridges, M. Wernet</i>	
Optical Acoustic Pressure Measurements In A Large-Scale Test Facility with Mean Flow	794
<i>E. Piot, F. Micheli, F. Simon</i>	
Causality Correlation Analysis on a Cold Jet by Means of Simultaneous PIV and Microphone Measurements	803
<i>A. Henning, A. Schroder, L. Koop</i>	
High Resolution Continuous Scan Acoustical Holography Applied to High-Speed Jet Noise	814
<i>H. Vold, P. Shah, J. Davis, P. Bremner, D. McLaughlin, P. Morris, J. Veltin, R. McKinley</i>	
Assessment of Numerical Methods for Computation of Automotive Rain Gutter Wind Noise	835
<i>H. Deciphre, M. Hartmann, R. Evert, J. Delfs</i>	
Flow Noise Predictions Using RANS/CAA Computations	848
<i>T. Le Garrec, E. Manoha, S. Redonnet</i>	
Effects of Topography in Time-Domain Simulations of Outdoor Sound Propagation	860
<i>D. Dragna, P. Blanc-Benon, F. Poisson</i>	

Noise Generation and Propagation Around a Wind Turbine Computed by a Hybrid Approach	876
<i>R. Szasz, L. Fuchs</i>	
A Synthetic Surface Pressure Model for the Efficient Simulation of Boundary Layer Induced Cabin Noise	887
<i>M. Siefert, R. Ewert, O. Heintze, O. Unruh</i>	
High-Fidelity Viscous Simulations of Airfoil Noise Radiation in Nonuniform Unsteady Flow	905
<i>V. Golubev, L. Nguyen, M. Visbal</i>	
Finite Element Solutions of a Third-Order Wave Equation for Sound Propagation in Sheared Flows	916
<i>D. Casalino</i>	
Effects of Flow Profile on Educated Acoustic Liner Impedance	931
<i>M. Jones, W. Watson, D. Nark</i>	

VOLUME 2

Validation of a New Procedure for Impedance Education in Flow	954
<i>W. Watson, M. Jones</i>	
Characterization of a Perforated Liner by Acoustic and Optical Measurements	971
<i>C. Heuwinkel, I. Rohle, L. Enghardt, F. Bake, E. Piot, F. Micheli, A. Fischer</i>	
Explanation of Anomalous Behavior Observed in Impedance Education Techniques Using Measured Data	986
<i>W. Watson, M. Jones</i>	
Numerical and Experimental Study of Resonant Liners Aeroacoustic Absorption Under Grazing Flow	998
<i>J. Roche, F. Vuillot, L. Leylekian, G. Delattre, E. Piot, F. Simon</i>	
Plate Thickness Effect on Orifice Impedance with Nonlinear Acoustic/Grazing Flow Interaction	1016
<i>X. Dai, X. Jing, X. Sun</i>	
Modeling Of Non-Locally Reacting Acoustic Treatments for Aircraft Ramp Noise Reduction	1034
<i>T. Node-Langlois, P. Sijtsma, S. Moal, F. Vieuelle</i>	
Experimental and Numerical Investigation of a Novel Acoustic Liner Concept	1050
<i>M. Burak, H. Hafsteinsson, L. Eriksson, M. Billson</i>	
Boundary-Layer Noise Induced by a Roughness Patch	1063
<i>Q. Yang, M. Wang</i>	
Directivity of Noise from Discrete Elements in a Turbulent Boundary Layer	1077
<i>W. Alexander, W. Devenport, S. Glegg, R. Van Buren</i>	
Sound from Boundary Layer Flow over Steps and Gaps	1096
<i>M. Catlett, W. Devenport, S. Glegg</i>	
Direct Noise Computation of the Flow over Cylindrical Cavities	1114
<i>J. Chicheportiche, X. Gloerfelt</i>	
Investigation of the Flow and the Acoustics Generated by a Cylindrical Cavity	1126
<i>F. Rodriguez Verdugo, A. Guittou, R. Camussi, A. Di Marco, M. Grottadarella</i>	
Connecting Shear Layer Dynamics with Unsteady Pressures Within a Resonating Cavity	1137
<i>G. Raman, S. Sarpotdar</i>	
Experimental Methodology for Aeroacoustic Source Localisation in Ducted Flows with Complex Geometry	1157
<i>S. Finnegan, C. Meskell, P. Oshkai</i>	
Farfield Filtering and Source-Imaging for the Study of Jet Noise	1170
<i>M. Koenig, A. Cavalieri, P. Jordan, J. Delville, Y. Gervais, D. Papamoschou, M. Samimy, S. Lele</i>	
Initial DAMAS Processing for a Phased Array Study in the NASA Langley Jet Noise Laboratory	1194
<i>T. Brooks, W. Humphreys Jr., G. Plassman</i>	
Two Component Velocity Correlations in Jets and Noise Source Modeling	1217
<i>P. Morris, K. Zaman</i>	
Distributions of Noise Sources in Heated and Cold Jets: Are They Different?	1236
<i>K. Viswanathan</i>	
Space-Time Correlation Measurements in Nearfields of Jets	1258
<i>K. Viswanathan, J. Underbrink, L. Brusniak</i>	
Temperature Effect on Acoustics of Supersonic Impinging Jet	1298
<i>J. Gustavsson, F. Alvi, P. Ragaller, R. Kumar</i>	
The Use of Blowing Flow Control to Reduce Bluff Body Interaction Noise	1316
<i>D. Angland, X. Zhang, M. Goodyer</i>	

Flow and Noise Predictions for a Tandem Cylinder Configuration Using Novel Hybrid RANS/LES Approaches.....	1336
<i>M. Weinmann, R. Sandberg, C. Doolan</i>	
Noise Reduction from Cylinders in a Tandem Configuration Using Plasma Flow Control: Experiment and Large-Eddy Simulation.....	1356
<i>F. Thomas, A. Kozlov, M. Wang, D. Kim, A. Eltawee</i>	
Tandem Cylinder Noise Predictions Using Lattice Boltzmann and Ffowcs Williams-Hawkins Methods	1371
<i>G. Bres, M. Wessels, S. Noelting</i>	
Engineering Approach for a Simplified Description of Rotor-Rotor Interaction Noise of a CROR Configuration.....	1383
<i>D. Redmann, A. Gundel, M. Bauer, B. Stritzelberger</i>	
Initial Noise Predictions for Open Rotors Using First Principles	1392
<i>P. Spalart, A. Travin, M. Shur, M. Strelets</i>	
Prediction of Near- and Far-Field Noise Generated by Counter-Rotating Open Rotors	1401
<i>C. Hirsch, T. Deconinck, P. Hoffer, J. Bonaccorsi, A. De Meulenarc</i>	
Installation Effects on Contra-Rotating Open Rotor Noise	1412
<i>J. Ricouard, E. Julliard, M. Omais, V. Regnier, A. Parry, S. Baralon</i>	
On the Validity of Amiet's Model for Propeller Trailing-Edge Noise	1420
<i>V. Blandeau, P. Joseph</i>	
Propeller Unsteady Distortion Noise	1437
<i>R. Robison, N. Peake</i>	
Blade-Geometry Considerations in Analytical Gust-Airfoil Interaction Noise Models	1447
<i>M. Roger, A. Carazo</i>	
Evaluating the Acoustic Effect of Over-the-Rotor Foam-Metal-Liner Installed on a Low Speed Fan Using Virtual Rotating Microphone Imaging.....	1464
<i>D. Sutliff, R. Dougherty, B. Walker</i>	
Experimental Investigation of Acoustic and Flow Phenomena of a Simplified Subsonic Ducted Rotor	1476
<i>M. Bilka, F. Preseznik, J. Sousa, J. Anthoine</i>	
Acoustic Interaction Between a Fan and a Spliced Casing Liner	1486
<i>W. Koehler, H. Siller, U. Michel, M. Kutner, G. Saueressig, S. Frohlich</i>	
Experimental Investigation of Airfoil Self Noise and Turbulent Wake Reduction by the use of Trailing Edge Serrations.....	1495
<i>M. Gruber, P. Joseph, T. Chong</i>	
Predictions of the Unsteady Acoustic Sources and Self-Noise of a Katana Blade	1518
<i>S. Moreau, L. Corriveau, J. Christophe, M. Roger</i>	
Nonlinear Frequency Scattering of Broadband Noise in Turbomachinery	1535
<i>G. Bennett, I. Davis, U. Tapken, J. Mahon</i>	
Validation of an Acoustically 3-D-Designed Turbine Exit Guide Vane	1553
<i>D. Broszat, F. Kennepohl, U. Tapken, M. Moser, F. Heitmeir</i>	
Characterization of a Hybrid Active-Passive Liner by Means of Laser Doppler Velocimetry	1561
<i>B. Betgen, M. Galland, E. Piot, F. Simon</i>	
Back-Ground Noise Decontamination of Experimental Turbulent Time Signals Using Wavelet Transforms.....	1575
<i>J. Grilliat, R. Camussi, M. Jacob, G. Robert</i>	
Further Study on the Test Configuration for Axial Flow Fans Noise Measurements.....	1585
<i>A. Cattanei, E. Canepa, G. Milanese, D. Parodi</i>	
The Error Supression of an Experimental Over-Determination of In-Duct Flow Noise Sources	1597
<i>A. Holmberg, M. Abom, H. Boden</i>	
Comparison of Two Acoustic Analogies Applied to Experimental PIV Data for Cavity Sound Emission Estimation	1616
<i>V. Koschatzky, J. Westerweel, B. Boersma</i>	
Observer-Based Method in Acoustic Array Signal Processing	1627
<i>L. Bai, X. Huang</i>	
Experimental Validation of Source Localization Methods for an Array of Pressure and Particle Velocity Sensors	1637
<i>J. Wind, H. de Bree, B. Xu</i>	
Development of LES-High-Order Spectral Difference Method for Flow Induced Noise Simulation	1648
<i>M. Parsani, G. Ghorbaniasl, C. Lacor</i>	

Higher-Order Preserving Methods for Unsteady Finite Volume Solvers Based on Reproducing Kernels: Application to Aeroacoustic Problems	1669
<i>S. Khelladi, S. Martin, X. Noguiera, F. Bakir</i>	
A High-Order, Overset-Mesh Algorithm for Adjoint-Based Optimization for Aeroacoustics Control	1683
<i>J. Kim, D. Bodony, J. Freund</i>	
A Time Reversal Method Coupled with Complex Differentiation for the Study of Aeroacoustic Sources.....	1704
<i>R. Marchiano, P. Druault, P. Sagaut</i>	
Assessment of Time-Domain Equivalent Source Method for Acoustic Scattering.....	1711
<i>S. Lee, K. Brentner, P. Morris</i>	
A Discontinuous Galerkin Method for Long-Time Simulations in Aeroacoustics	1733
<i>R. Arina, R. Della Ratta Rinaldi, A. Iob</i>	
Advances in the Computational Aeroacoustics with the Discontinuous Galerkin Solver NoisSol	1747
<i>A. Birkefeld, A. Beck, M. Dumbser, C. Munz, D. Konig, W. Schroder</i>	
Optimization of a Seamless Inlet Liner Using an Empirically Validated Prediction Method	1757
<i>B. Schuster, L. Lieber, A. Vavalle</i>	
Effect of Local Impedance Variation and Non-Linearity on Tone Attenuation.....	1782
<i>W. Eversman</i>	
Liner Optimization for Turbofan Ducts - Towards a Fully Automated Approach.....	1793
<i>R. Astley, I. Achunche, R. Sugimoto, A. Kempton, M. Kewin</i>	
PW 4098 Forward Fan Case Acoustic Liner Design Under NASA EVNRC Program	1803
<i>J. Yu, E. Chien, H. Kwan</i>	
Preliminary Design of Aero-Engine Intake Acoustic Liners by Means of the Multi-Objective Approach.....	1816
<i>D. Copiello, P. Ferrante, U. Iemma, A. Maci</i>	
Development of a Semi-Empirical Impedance Model for Metallic Foams.....	1827
<i>B. Howerton, M. Jones, C. Gerhold, B. Bialy</i>	
Acoustic Investigation of a Specially Manufactured Non-Locally Reacting Liner for Aircraft Application.....	1843
<i>S. Busse, C. Richter, S. Nitsch, F. Bake, L. Enghardt, F. Thiele, C. Kuckens, U. Muller</i>	
The Measurement of Mean Flow of Fan and Its Effect on the Liner Design.....	1862
<i>T. Wang, D. Liang, Y. Guan</i>	
Slat Noise Prediction Using Discontinuous Galerkin Method and Stochastic Turbulent Sound Source.....	1874
<i>M. Bauer, R. Ewert</i>	

VOLUME 3

CAA-RPM Prediction and Validation of Slat Setting Influence on Broadband High-Lift Noise Generation.....	1896
<i>R. Ewert, J. Dierke, C. Appel, M. Pott-Pollenske, R. Emunds, M. Sutcliff</i>	
Comparative Analysis of Turbulence Models for Slat Noise Sources Calculations Employing Structured Meshes.....	1919
<i>V. Lopes, A. dos Santos Bonatto, J. Meneghini, F. Saltara</i>	
The Effect of Cross Flow on Slat Noise	1932
<i>D. Lockard, M. Choudhari</i>	
Development of an Empirical Prediction Model for Flap Side-Edge Noise	1949
<i>K. Rossignol</i>	
Aircraft Slat Noise Modeling and Prediction	1967
<i>Y. Guo</i>	
Comparative Analysis of Turbulence Models for Slat Noise Source Calculations Employing Unstructured Meshes.....	1990
<i>B. Aflalo, L. Simoes, R. Silva, M. Medeiros</i>	
Computation of Slat Noise by a LES/LPCE Hybrid Method with Brinkman Penalization	2014
<i>S. Lee, J. Kim, Y. Jo, Y. Bae, Y. Moon</i>	
LES-Based Noise Prediction for Shocked Jets in Static and Flight Conditions.....	2024
<i>M. Shur, P. Spalart, M. Strelets</i>	
The Effect of Nondeterministic Parameters on Shock-Associated Noise Prediction Modeling.....	2045
<i>M. Dahl, A. Khavaran</i>	

Applying Fluent Software for Jet Noise Generation Modeling.....	2069
<i>A. Sipatov, M. Usanin, N. Chuhlantseva</i>	
Sound Generation of Variable Density Jets.....	2083
<i>G. Geiser, S. Koh, H. Foysi, W. Schroder</i>	
Effect of Filter Width on Jet Aeroacoustics.....	2092
<i>H. Foysi, G. Geiser, S. Koh, W. Schroder</i>	
Feasibility of Large-Eddy Simulation on Angular Sector to Evaluate Chevron Effects on Jet Noise	2104
<i>G. Bodard, C. Bailly</i>	
Near-Field Jet Noise from a Supersonic C-D Chevron Nozzle.....	2127
<i>M. Burak, L. Eriksson, D. Munday, E. Gutmark, E. Prisell</i>	
Analytical Method for the Computation of the Noise from a Pusher Propeller.....	2144
<i>H. Brouwer</i>	
Noise Radiation from Installed Pusher Propeller Using Coupling of Unsteady Panel Method, Actuator Disk and FW-H Methodology	2154
<i>J. Yin, A. Stuermer</i>	
Aeroacoustic and Aerodynamic Optimization of Aircraft Propeller Blades	2171
<i>B. Marinus, M. Roger, R. Van Den Braembussche</i>	
ANIBAL: A New Aero-acoustic Optimized Propeller for Light Aircraft Applications.....	2188
<i>S. Canard-Caruana, C. Le Tallec, F. David, P. Beaumier, T. Lefebvre</i>	
Identification of Noise Sources in a Turboprop Engine Bay	2208
<i>M. Schulz, L. Laube</i>	
Validity of the Point Source Assumption in Rotor Noise Measurements with Shielding.....	2216
<i>N. Turkdogru, K. Ahuja, R. Gaeta</i>	
Experimental Analysis of UAV Propeller Noise	2241
<i>L. Marino</i>	
Icing Effect on the Aeroacoustics of Helicopter Blade-Vortex Interaction: A Numerical Study Using Large-Eddy Simulation	2255
<i>M. Ilie</i>	
Bypass Transition to Sustained Thermoacoustic Oscillations in a Linearly Stable Rijke Tube	2272
<i>M. Juniper, I. Waugh</i>	
Role of Transient Growth in Subcritical Transition to Thermoacoustic Instability in a Horizontal Rijke Tube	2282
<i>S. Mariappan, Tamil Nadu, P. Schmid, R. Sujith</i>	
Uncertainty Quantification of Subcritical Bifurcation in a Rijke Tube	2311
<i>V. Nair, S. Sarkar, R. Sujith</i>	
Prediction of Sound Emission from Open Turbulent Premixed Flames.....	2331
<i>N. Swaminathan, G. Xu, A. Dowling, R. Balachandran</i>	
Can Describing Function Technique predict Bifurcations in Thermoacoustic Systems?	2343
<i>P. Subramanian, V. Gupta, B. Tulsky, R. Sujith</i>	
On the Propagation of Sound in a High-Speed Non-Isothermal Boundary Layer	2363
<i>L. Campos, M. Kobayashi</i>	
Acoustic Energy for Sheared Flows	2377
<i>J. Brazier</i>	
Experimental and Numerical Investigation of Flow-Induced Resonance of Simplified Automotive Door Gaps.....	2397
<i>A. de Jong, H. Bijl</i>	
Combustor Stability Analysis Based on Linearized Flow Solvers and Arnoldi-Based Eigenmode Extraction Techniques.....	2429
<i>G. Jourdain, L. Eriksson</i>	
Estimation of Combustion Noise of a Premixed Swirled Combustor via Large-Eddy-Simulation.....	2445
<i>C. Silva, M. Leyko, F. Nicoud, S. Moreau</i>	
Study of the Aerodynamics/Aeroacoustics of an Axial-Flow Fan: Experimental Validation of a LES/LPCE/Brinkman Penalization Method	2454
<i>F. Ravelet, S. Khelladi, H. Nouri, F. Bakir, H. Kim, Y. Bae, Y. Moon</i>	
Aerodynamics and Acoustics of a 3D Annular Cascade - Comparison with a 2D Linear Cascade	2463
<i>M. Logue, H. Atassi, D. Topol, J. Gilson</i>	
Reduction of Helicopter BVI Noise Using Active Flow Control Technique: Numerical Study Using LES	2479
<i>M. Ilie</i>	

LES of a Jet Excited by the Localized Arc Filament Plasma Actuators	2494
<i>C. Brown</i>	
Role of Coherent Structures in Supersonic Impinging Jet Noise and its Control	2509
<i>R. Kumar, L. Venkatakrishnan, A. Wiley, F. Alvi</i>	
Comparison of Flow Control Methods Applied to Conical C-D Nozzles	2520
<i>D. Munday, N. Heeb, M. Perrino, E. Gutmark, M. Burak, L. Eriksson, E. Prisell</i>	
Micro-Jet Flow Control for Noise Reduction of a Supersonic Jet from a Practical C-D Nozzle	2557
<i>M. Perrino, D. Munday, E. Gutmark, M. Burak, L. Eriksson, E. Prisell</i>	
Eulerian Solenoidal Digital Filtering Technique for Broadband Trailing-Edge Noise Prediction	2573
<i>I. Cozza, R. Arina, C. Schipani</i>	
Trailing-Edge Noise Data Quality Assessment for CAA Validation.....	2590
<i>M. Herr, R. Ewert, C. Appel, J. Dierke</i>	
Semi-Empirical Modeling of Turbulent Anisotropy for Airfoil Self Noise Prediction.....	2611
<i>M. Kamruzzaman, T. Lutz, A. Herrig, E. Kramer</i>	
Numerical Simulation of Sound from Flow over an Airfoil with a Blunt Trailing Edge	2630
<i>P. Lew, A. Najafi-Yazdi, L. Mongeau</i>	
Development of a Noise Prediction Model for a Cruise Friendly Circulation Control Wing.....	2650
<i>R. Gaeta, R. Young</i>	
Aeroacoustic Performance of a Circulation Control Airfoil	2664
<i>M. Pott-Pollenske, K. Pfingsten</i>	
Absorbing Inlet Boundary Analysis of Rotor Wake/Stator Time Domain Computations	2686
<i>M. Olausson, L. Eriksson</i>	
A Stochastic Method for Airfoil Self-Noise Computation in Frequency-Domain	2701
<i>D. Casalino, M. Barbarino</i>	
Random-Vortex-Particle Methods for Broadband Fan Interaction Noise.....	2715
<i>M. Dieste, G. Gabard</i>	
Boundary Condition for the Imposition of Divergence-Free Vortical Gusts	2739
<i>D. Hixon, A. Sescu</i>	
Direct Aeroacoustics Predictions of a Low Speed Axial Fan	2758
<i>F. Perot, Min-Suk Kim, S. Moreau, M. Henner, D. Neal</i>	
Simulation of Broadband Noise Behind a Backward Facing Step.....	2773
<i>S. Becker, F. Schaefer, J. Grabinger, M. Kaltenbacher</i>	
Simulation of the Cascade-Gust Interaction Problem Using a High-Order Immersed Boundary Method.....	2783
<i>R. Bobenrieth Miserda, A. Maldonado, B. Pimenta, R. Queiroz</i>	
Linear Viscous Eigenmode Analysis Within a Radially Varying Swirling Flow	2806
<i>T. Law, R. Corral, J. Fernandez, A. Serrano</i>	

VOLUME 4

An Analytical Solution for Acoustic Wave Propagation in a Narrow Duct with Mean Temperature Gradient	2822
<i>T. Holzinger, A. Cardenas, W. Polifke</i>	
Flow-Induced Scattering of Acoustic Modes in Slowly-Varying Ducts	2837
<i>A. Smith, N. Ovenden, R. Bowles</i>	
Mode Propagation in Bifurcated Bypass Ducts: Elementary Mechanisms.....	2850
<i>L. Panek, N. Schonwald, C. Richter, F. Thiele</i>	
Mode Propagation in Bifurcated Bypass Ducts: Application Oriented Simulation Approach	2867
<i>N. Schonwald, L. Panek, C. Richter, F. Thiele</i>	
A Novel Method for Sound Field Prediction of Arbitrary Shape Duct	2879
<i>Y. Yang, Q. Zhou</i>	
Characterization of the Noise Sources in a Rod-Airfoil Configuration by Means of Time-Resolved Tomographic PIV	2896
<i>V. Lorenzoni, D. Violato, F. Scarano</i>	
Effect of Lip-Thickness on the Acoustic Characteristics of Hartmann Resonator.....	2906
<i>S. Narayanan, K. Srinivasan, T. Sundararajan</i>	
Experimental Investigation of a Missile Forebody Acoustics Flow Field in a Transonic Wind Tunnel	2915
<i>B. Medved</i>	

Shear Layer Driven Acoustic Modes in a Cylindrical Cavity	2921
<i>D. Stephens, G. Bennett, F. Verdugo</i>	
The Link Between Wall Pressure Spectra and Radiated Sound from Turbulent Boundary Layers.....	2932
<i>X. Gloerfelt</i>	
High Reduced Frequency Measurements on Airfoils with a Cavity.....	2962
<i>W. Olsman, A. Hirschberg, R. Trieling</i>	
Time-Domain Tailored Green's Functions for Arbitrary Geometries	2969
<i>C. Bonamy, P. Jordan, Y. Gervais</i>	
The Influence of Non-Local Property of Surface Acoustic Impedance on Acoustic Scattering	2976
<i>M. Yang, T. Wang, Z. Fan, Z. Jin</i>	
Experimental Investigations on Tip Leakage Flow and Noise in Skewed Blades.....	2988
<i>Y. Wu, H. Ouyang, G. Jin, Z. Du</i>	
A Computational Fluid Dynamics Based Stability Analysis For Hybrid Rocket Motor Combustion	3002
<i>M. Stoia-Djeska, F. Mingireanu</i>	
Research of Collateral Axial Flow Fan System Inside Outdoor Unit of Air Conditioner.....	3012
<i>J. Tian, H. Ouyang, Y. Wu, Z. Du, Z. Zheng, S. Shiochi</i>	
Noise Measurements of Tactical UAVs	3022
<i>K. Massey, R. Gaeta</i>	
Propulsion Airframe Aeroacoustic Integration Effects for a Hybrid Wing Body Aircraft Configuration	3038
<i>R. Thomas, M. Czech, R. Elkoby</i>	
Hybrid Wing Body Aircraft System Noise Assessment with Propulsion Airframe Aeroacoustic Experiment	3061
<i>R. Thomas, C. Burley, D. Olson</i>	
Turbomachinery Noise Shielding Assessment of Advanced Aircraft Configurations	3089
<i>L. Ng, Z. Spakovszky</i>	
Sensitivity Investigation of Aircraft Engine Noise to Operational Parameters	3103
<i>G. Scarselli, A. Paonessa, F. Marulo</i>	
The Influence of Realistic 3-D Viscous Mean Flow on Shielding of Engine-Fan Noise by a 3-Element High-Lift Wing	3112
<i>J. Dierke, R. Ewert, J. Chappuis, S. Lidoine, J. Ricouard</i>	
Numerical and Experimental Characterization of Aft-Fan Noise for Isolated and Installed Configurations	3126
<i>D. Mincu, E. Manoha, R. Davy, C. Parzani, J. Chappuis, S. Redonnet, M. Scouflaire</i>	
Development of a Prediction Method for Jet Installation Noise: Reflection/Shielding	3142
<i>R. Young, R. Gaeta, D. Mavris</i>	
Effect of Inlet Flow Conditions on Noise and Performance of Supersonic Nozzles	3153
<i>D. Long, T. McDonald, P. Maye</i>	
Measurement and Modeling of Effect of Forward Flight on Jet Noise	3166
<i>K. Viswanathan, M. Czech</i>	
Nozzle Installation Effects	3190
<i>S. Birch, K. Khritov, V. Maslov, A. Secundov, K. Yakubovsky</i>	
Advanced Acoustic Assessment of Small-Scale Military-Style Nozzles with Chevrons	3211
<i>C. Kuo, J. Veltin, D. McLaughlin</i>	
Forward Flight Effect on Small Scale Supersonic Jet Acoustics	3231
<i>J. Veltin, B. Day, D. McLaughlin</i>	
Flight Effects on Supersonic Jet Noise from Round Nozzles	3247
<i>R. Schlinker, J. Simonich, R. Reba</i>	
An MDOE Investigation of Chevrons for Supersonic Jet Noise Reduction	3263
<i>B. Henderson, J. Bridges</i>	
Prediction of Thermoacoustic Instabilities: Numerical Study of Mach Number Effects.....	3281
<i>K. Wieczorek, F. Nicoud</i>	
Whistling of Short Corrugated Pipes: Experimental Investigation of the Source Locations	3292
<i>J. Goliard, D. Tonon</i>	
Investigation of the Effect of Combustor Cooling Geometry on Acoustic Energy Absorption	3298
<i>J. Schmidt, U. Bhayaraju, K. Kashinath, S. Hochgreb</i>	
Flow-Induced Pulsations in Double Closed Branch Systems	3310
<i>D. Tonon, J. Willems, A. Hirschberg, S. Foller, W. Polifke</i>	
Numerical Study of Flow-Induced Pulsations in Pipe Systems with Closed Branches	3319
<i>P. Martinez-Lera, J. Goliard, C. Schram</i>	

Multistage Prefactored Compact Schemes	3327
<i>G. Ashcroft, R. Hixon</i>	
Accuracy Improvement for Finite-Volume Vertex-Centered Schemes Solving Aeroacoustics Problems on Unstructured Meshes	3345
<i>T. Kozubskaya, I. Abalakin, A. Dervieux, H. Ouvrard</i>	
Nonuniform-Time-Step Explicit Runge-Kutta Scheme for High-Order Finite Difference Methods.....	3356
<i>L. Liu, X. Li, F. Hu</i>	
On the Perfectly Matched Layer for the Boltzmann-BGK Equation and its Application to Computational Aeroacoustics	3367
<i>F. Hu, E. Craig</i>	
Verification of a High-Order Nonlinear CAA Code Using External Verification Analysis (EVA)	3385
<i>D. Ingraham, R. Hixon, D. Rigby</i>	
Study of a Coupled DG/FD Solver on Hybrid Meshes for CAA	3400
<i>R. Leger, C. Peyret, S. Piperno</i>	
A Low-Dispersion and Low-Dissipation Implicit Runge-Kutta Scheme.....	3411
<i>A. Najafi-Yazdi, L. Mongeau</i>	
Brinkman Penalization Method for Computation of Acoustic Scattering from Complex Geometry.....	3418
<i>Y. Bae, Y. Moon</i>	
Mode-Matching Conditions for Lined Ducts with Flow	3431
<i>G. Gabard</i>	
An Improved Multimodal Method In Nonuniform Lined Ducts Of Complex Geometries	3443
<i>W. Bi, Y. Auregan</i>	
A Well-posed Modified Myers Boundary Condition	3460
<i>E. Brambley</i>	
Numerical Study of Hydrodynamic Unstable Modes in a Ducted Shear Flow with Wall Lining and Comparison to Experiments	3473
<i>G. Boyer, E. Piot, J. Brazier</i>	
Determining the Pressure Modes at High Frequencies in Lined Ducts with a Shear Flow	3484
<i>O. Olivieri, A. McAlpine, R. Astley</i>	
On a Modified Myers Boundary Condition to Match Lined Wall Impedance Deduced from Several Experimental Methods in Presence of a Grazing Flow.....	3497
<i>Y. Renou, Y. Auregan</i>	
Comparison of Experiments with Stability Analysis Predictions in a Lined Flow Duct.....	3511
<i>D. Marx, Y. Auregan</i>	
Sound Radiation from a Lined Exhaust Duct with Lined Afterbody.....	3528
<i>A. Demir, S. Rienstra</i>	
Coupled FEM/BEM Vibroacoustic Modeling of Turbopropeller Cabin Noise	3546
<i>J. Ahlquist, P. Huguenet, J. Higueras</i>	
Optimal Design of Tonal Noise Control Inside Smart-Stiffened Fuselages of Turboprop Aircraft.....	3555
<i>C. Testa, G. Bernardini, M. Gennaretti</i>	
Vibroacoustic Behavior of a Plate Excited by Synthesized Aeroacoustic Pressure Fields.....	3570
<i>A. Hekmati, D. Ricot, P. Druault</i>	
A Semi-Random Finite Element Modal Approach to Turbulent Boundary Layer Induced Sound Transmission	3581
<i>U. Tengzelius</i>	
Using Wavelet Transforms and Linear Stochastic Estimation to Study Nearfield Pressure and Turbulent Velocity Signatures in Free Jets	3599
<i>D. Grassucci, R. Camussi, F. Kerherve, P. Jordan, S. Grizzi</i>	
Near Field Aeroacoustics of a Jet from Elliptical Nozzle at M=0.8	3611
<i>S. Sharma, K. Murugan</i>	
On the Scaling of Small, Heat Simulated Jet Noise Measurements to Moderate Size Exhaust Jets	3638
<i>D. McLaughlin, J. Bridges, C. Kuo</i>	
Jittering Wave-Packet Models for Subsonic Jet Noise	3656
<i>A. Cavalieri, P. Jordan, A. Agarwal, Y. Gervais</i>	
Noise Sources of Subsonic Round Jets Investigated Using Phased Microphone Arrays	3668
<i>T. Suzuki</i>	
Application of Powell's Analogy for the Prediction of Vortex-Pairing Sound in a Low-Mach Number Jet Based on Time-resolved Planar and Tomographic PIV	3691
<i>D. Violato, P. Moore, K. Bryon, F. Scarano</i>	

On the Suitability of Direct Application of Acoustic Theory to Time-Resolved Tomographic PIV Tested by DNS for Low Mach Number Jet Flows.....	3708
<i>P. Moore, D. Violato, K. Bryon, F. Scarano</i>	

VOLUME 5

Aeroacoustic Investigation of Free Turbulent Jet Flow - A Combined Experimental Approach.....	3721
<i>H. Fleischer, A. Sassaroli, J. Zillmann</i>	
On Computing the Physical Sources of Jet Noise.....	3726
<i>S. Sinayoko, A. Agarwal</i>	
Intermittent Sound Generation in a Free-Shear Flow.....	3737
<i>A. Cavalieri, P. Jordan, Y. Gervais, M. Wei, J. Freund</i>	
Low-Order Modeling for Chevron Jet Noise Based on LES Data.....	3747
<i>S. Karabasov, H. Xia, O. Graham, T. Hynes, P. Tucker, A. Dowling</i>	
Jet Turbulence Characteristics Associated with Downstream and Sideline Sound Emission	3760
<i>F. Kerherve, P. Jordan, C. Bogey, D. Juve</i>	
Once Again on the Importance of Propagation Effects for Jet Mixing Noise Modeling.....	3773
<i>S. Karabasov</i>	
Simulation of a Low-Mach, High Reynolds Number Jet: First Step Towards the Simulation of Jet Noise Control by Micro-Jets	3781
<i>A. Fosso Pouange, H. Deniau, N. Lamarque, J. Boussuge, S. Moreau</i>	
Jet Noise Scaling in Dual Stream Nozzles	3791
<i>A. Khavaran, J. Bridges</i>	
A Nonlinear PSE-Based Model for Jet Noise	3809
<i>A. Salgado, V. Suponitsky, N. Sandham, A. Agarwal</i>	
Prediction of Landing Gear Noise Reduction and Comparison to Measurements.....	3823
<i>L. Lopes, K. Brentner, C. Hennes</i>	
Computational Analysis of the Effect of Bogie Inclination Angle on Landing Gear Noise	3839
<i>K. van Mierlo, K. Takeda, E. Peers</i>	
Reduction of Landing Gear Noise Using Meshes	3852
<i>S. Oerlemans, C. Sandu, N. Molin, J. Piet</i>	
Experimental study on Noise Generation of a Two-Wheel Main Landing Gear.....	3866
<i>Y. Yokokawa, T. Immura, H. Ura, H. Uchida, K. Yamamoto</i>	
Control of Landing Gear Noise Using Meshes	3880
<i>M. Smith, L. Chow, N. Molin</i>	
The Effect of a Lifting Wing on Landing Gear Noise	3888
<i>J. Carrilho, M. Smith</i>	
A Hybrid Lattice-Boltzmann/FH-W Method to Predict Sources and Propagation of Landing Gear Noise.....	3897
<i>S. Noeling, G. Bres, P. Dethioux, T. Van de Ven, R. Vieito</i>	
Sound Generation of a Turbine Stage Due to Non-uniform Mean Flow Temperatures.....	3913
<i>Z. Mu, U. Michel, M. Steger, F. Kennepohl, G. Ashcroft, F. Thiele</i>	
Large-Eddy Simulation of a Single Airfoil Tip Clearance Flow	3926
<i>J. Boudet, J. Caro, M. Jacob</i>	
Technique to Analyze Characteristics of Turbomachinery Broadband Noise Sources	3938
<i>W. Jurgens, U. Tapken, B. Padowitz, P. Kausche, G. Bennett, L. Enghardt</i>	
Broadband Noise Reduction with Trailing Edge Brushes.....	3951
<i>A. Finez, M. Jacob, E. Jondeau, M. Roger</i>	
Trailing-Edge Blowing on Tandem Airfoils: Aerodynamic and Aeroacoustic Implications	3964
<i>J. Winkler, T. Carolus, J. Scheuerlein, F. Dinkelacker</i>	
Tone Noise Reduction of a Turbofan Engine by Additional Aerodynamical Blade Forces.....	3980
<i>M. Steger, U. Michel, A. Graham, G. Ashcroft, F. Thiele</i>	
Improved Characteristic Non-Reflecting Boundary Conditions for the Linearized Euler Equations	3995
<i>L. Koloszar, H. Deconinck, N. Villedieu, P. Rambaud, J. Anthoine</i>	
Aeroacoustic Characterization of T-Junctions Based on Large Eddy Simulation and System Identification	4003
<i>S. Foller, W. Polifke, D. Tonon</i>	
Time Stepping with Runge-Kutta Discontinuous Galerkin Methods on Triangular Grids	4016
<i>T. Toulorge, W. Desmet</i>	

An Extension of Amiet's Theory for Spanwise-Varying Incident Turbulence Noise and Broadband Scattering Using BEM	4030
<i>K. Kucukcoskun, J. Christophe, J. Anthoine, C. Schram, M. Tournour</i>	
Numerical Investigation of Flow Features and Acoustic Radiation of a Round Cavity	4045
<i>O. Marsden, C. Bogey, C. Bailly</i>	
Numerical Study of Noise Reduction via Wall Turbulence Control	4058
<i>S. Koh, W. Schroder, M. Meinke</i>	
Silent Owl Flight: Bird Flyover Noise Measurements	4069
<i>E. Sarradj, C. Fritzsche, T. Geyer</i>	
Aeroacoustic Investigation of Deployed Spoiler During Steep Approach Landing	4086
<i>K. Kanjere, X. Zhang, Z. Hu, D. Angland</i>	
Power-Spectral-Density Transfer Function from Boundary Pressure to Field Pressure	4103
<i>L. Morino, C. Leotardi, R. Camusci</i>	
Validation of a Hybrid CAA Method: Noise Generated by a Flap in a Simplified HVAC Duct	4116
<i>C. Carton De Wiart, P. Geuzaine, Y. Detandt, J. Manera, S. Caro, Y. Marichal, G. Winckelmans</i>	
Several Computational Aeroacoustics Solutions for the Ducted Diaphragm at Low Mach Number	4132
<i>M. Piellard, C. Bailly</i>	
A Study of Interpolation Accuracy in Acoustic Analogy Integrals	4146
<i>A. Kierkegaard, G. Efraimsson</i>	
Determination of Acoustic Transfer Matrices via Large Eddy Simulation and System Identification	4155
<i>S. Foller, W. Polifke</i>	
Simulations of Acoustic Waves in a Turbo-Fan Engine Air Intake	4171
<i>G. Efraimsson, N. Forsberg, J. Nordstrom</i>	
Computation of Wall Pressure Spectra from Steady Flow Data for Noise Prediction	4188
<i>S. Remmler, J. Christophe, J. Anthoine, S. Moreau</i>	
Assessment of Hybrid RANS/LES Turbulence Models for Aeroacoustics Applications	4208
<i>V. Vatsa, D. Lockard</i>	
A Comparison of Community Noise Metrics for Open Rotor Engine Architectures	4223
<i>R. Young, J. Tai, B. Havrilesko, D. Mavris</i>	
Proposed Standard 3-D Aircraft Flyover Noise Measurement and Analysis Methods	4232
<i>R. McKinley, J. Spyropoulos, H. Gallagher, A. Aubert, S. Munro</i>	
Simulation of Helicopter Community Noise in a Realistic Urban Environment	4244
<i>D. Casalino, M. Barbarino, A. Visingardi</i>	
Sonic Boom Minimization Through a Simplified Approach for the Preliminary Design of Civil Supersonic Aircraft	4257
<i>G. Scarselli, F. Marulo</i>	
The Acoustic Impedance of a Confined Circular Side Branch Orifice Subjected to Grazing-Bias Flow	4266
<i>M. Karlsson</i>	
Simulations of the Whistling Potentiality of an In-Duct Orifice with Linear Aeroacoustics	4277
<i>A. Kierkegaard, G. Efraimsson, S. Boij, M. Abom</i>	
Can Acoustic Multi-Port Models Be Used to Predict Whistling	4285
<i>M. Abom, M. Karlsson</i>	
Influence of Propagation Equations on the Scatter Matrix for Ducts Carrying Non-Uniform Mean Flow	4293
<i>B. Vanelderen, W. De Roeck, W. Desmet</i>	
Test-Rig for Complete Acoustic Characterization of Turbochargers	4304
<i>H. Tiikoja, H. Rammal, M. Abom, H. Boden</i>	
Jet Pipe Reflections - Influence of Geometrical and Flow Exit Conditions	4313
<i>O. Cinar, B. Nilsson, S. Boij, G. Cinar</i>	
Large-Eddy Simulation of the Noise from a Subsonic Jet-Edge System	4328
<i>J. Gao, X. Li</i>	
High-Fidelity Numerical Simulations of a Round Nozzle Jet Flow	4339
<i>A. Uzun, M. Hussaini</i>	
Correlations of Jet Noise Azimuthal Components and Their Role in Source Identification	4355
<i>V. Kopiev, S. Chernyshev, G. Faranov, M. Zaitsev, I. Belyaev</i>	
POD of Aeroacoustic Fields of a Jet Impinging on an Inclined Plate	4365
<i>T. Nonomura, K. Fujii</i>	
CFD and CAA Analysis of Single Stream Isothermal Jets with Noise Suppression Devices	4376
<i>B. Aflalo, O. Almeida, J. Barbosa</i>	

An Integrated RANS-PSE-Wave Packet Tool for the Prediction of Subsonic and Supersonic Jet Noise	4395
<i>F. Ladeinde, K. Alabi, T. Colonius, K. Gudmundsson, R. Schlinker, R. Reba</i>	
Effect of Microjet Injection on Supersonic Jet Noise.....	4429
<i>K. Zaman, G. Podboy</i>	
Large-Eddy Simulations of a Supersonic Jet with Fluidic Injection for Noise Reduction.....	4449
<i>J. Liu, K. Kailasanath, R. Ramamurti, D. Munday, E. Gutmark</i>	
The Effect of Chevrons on the Turbulence Characteristics of Jets	4482
<i>J. Kennedy, J. Fitzpatrick</i>	
Jet Noise Reduction by Notched Nozzle on Japanese ECO Engine Project.....	4501
<i>T. Oishi</i>	
An Assessment of Jet Noise Shielding Prediction Parameters	4511
<i>C. O'Reilly, H. Rice</i>	
Fluidic Injection for Noise Reduction of a Supersonic Jet from a Practical C-D nozzle.....	4524
<i>D. Munday, N. Heeb, E. Gutmark, J. Liu, K. Kailasanath</i>	
Effect of a Pylon on Double Stream Jet Noise from Hybrid CAA Computations	4543
<i>F. Vuillot, N. Lupoglazoff, M. Huet</i>	
Prediction of Sound Transmission Through an Annular Cascade Using an Analytical Cascade Response Function.....	4560
<i>H. Posson, S. Moreau, H. Beriot, Y. Buot de L'Epine, C. Schram</i>	
Waves Transmission and Generation in Turbine Stages in a Combustion-Noise Framework	4583
<i>M. Leyko, S. Moreau, T. Poinsot, F. Nicoud, F. Duchaine</i>	
On the Continuous Spectrum of Sound in Sheared and Swirling Flow	4597
<i>L. Campos, P. Serrao</i>	
Development and Application of a New Procedure for Fan Noise Prediction	4607
<i>A. Moreau, S. Guerin</i>	
Author Index	