Monday

Monday, 30 May 2016

1-PLNY-1 0800 - 0830 hrs	Opening Session	Auditorium Pasteur
	Welcome	

Monday, 30 May 2016

2-AA-1 — Aeroacoustic Interactions I: Scattering — Saint Clair 3B

Chaired by: G. GABARD, ISVR/University of Southampton

0830 hrs AIAA-2016-2700 **Aeroacoustics of an Elastic Element in Unsteady Flow of Low Reynolds Numbers** L. Schickhofer, A. Dahlkild, M. Mihaescu, Royal Institute of Technology (KTH), Stockholm, Sweden	0900 hrs AIAA-2016-2701 **Numerical Investigation on the Spectral Broadening of Acoustic Waves by a Turbulent Layer** V. Clair, G. Gabard, University of Southampton, Southampton, United Kingdom	0930 hrs AIAA-2016-2702 **A weak-scattering model for tone haystacking caused by sound propagation through an axisymmetric turbulent shear layer** A. McAlpine, B. Tester, University of Southampton, Southampton, United Kingdom	1000 hrs AIAA-2016-2703 **Vorticity scattering in shear flows at soft wall - Hard wall transition** D. Singh, Eindhoven University of Technology, Eindhoven, The Netherlands	1030 hrs AIAA-2016-2704 **Scattering of turbulent-jet wavepackets by a flexible composite plate** S. Piantanida, National Center for Scientific Research (CNRS), Poitiers, France; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; W. Wolf, University of Campinas, Campinas, Brazil; M. Danadon, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France	1100 hrs AIAA-2016-2705 **Numerical Studies of Acoustic Diffraction by Rigid Bodies** J. Hao, R. Kotapati, F. Perot, A. Mann, Exa Corporation, Burlington, MA			

Monday, 30 May 2016

3-AA-2 — Airframe Noise I: High-Lift Systems — Saint Clair 3A

Chaired by: J. DELFS, DLR - German Aerospace Center

0830 hrs AIAA-2016-2706 **Simulation-Based Airframe Noise Prediction of a Full-Scale, Full Aircraft** M. Khorrami, NASA Langley Research Center, Hampton, VA; E. Fares, Exa Corporation, Stuttgart, Germany	0900 hrs AIAA-2016-2707 **Airframe Noise Prediction of a Full Aircraft in Model and Full Scale Using a Lattice Boltzmann Approach** E. Fares, B. Duda, Exa Corporation, Stuttgart, Germany; M. Khorrami, NASA Langley Research Center, Hampton, VA	0930 hrs AIAA-2016-2708 **Airframe Noise from a Hybrid Wing Body Aircraft Configuration** F. Hutcheson, T. Spalt, T. Brooks, NASA Langley Research Center, Hampton, VA; G. Plassman, National Institute of Aerospace, Hampton, VA	1000 hrs AIAA-2016-2709 **FQUROH: a Flight Demonstration Project for Airframe Noise Reduction Technology - Concept and Current Status** K. Yamamoto, Japan Aerospace Exploration Agency (JAXA), Tokyo, Japan; K. Hayama, Kawasaki Heavy Industries, Ltd., Kakamigahara, Japan; T. Kumada, Sumitomo Precision Products Co. Ltd., Amagasaki, Japan; K. Hayashi, Mitsubishi Aircraft Corporation, Toyoyama-cho, Japan	1030 hrs AIAA-2016-2710 **Flyover Array Measurements with JAXA Flying Test Bed 'Hisho'** T. Takaishi, H. Ura, K. Nagai, Y. Yokokawa, M. Murayama, Y. Ito, Japan Aerospace Exploration Agency (JAXA), Mitaka, Japan; et al.	1100 hrs AIAA-2016-2711 **Computational Evaluation of Airframe Noise Reduction Concepts at Full Scale** M. Khorrami, NASA Langley Research Center, Hampton, VA; E. Fares, B. Duda, A. Hazir, Exa Corporation, Stuttgart, Germany			

Monday, 30 May 2016								
4-AA-3	CAA I: Integral Methods							Rhône 3A
Chaired by: A. LYRINTZIS								
0830 hrs AIAA-2016-2712 **Fast Methods applied to BEM Solvers for Acoustic Propagation Problems** N. Balin, G. Sylvand, J. Robert, Airbus Group , Blagnac, France	0900 hrs AIAA-2016-2713 **Boundary element formulation for wave propagation in weakly non-uniform potential flows** S. Mancini, S. Sinayoko, R. Astley, G. Gabard, University of Southampton, Southampton, United Kingdom; M. Tournour, Siemens, Leuven, Belgium	0930 hrs AIAA-2016-2714 **A Novel Extrapolation Approach in Aeroacoustics: Development & Validation** D. Heitmann, R. Ewert, J. Delfs, German Aerospace Center (DLR), Braunschweig, Germany	1000 hrs AIAA-2016-2715 **Boundary-Field Integral Formulations for Sound Scattering of Moving Bodies** C. Testa, Italian Institute for Naval Hydrodynamic Research and Ship Model Basin, Rome, Italy; M. Gennaretti, G. Bernardini, Roma Tre University, Rome, Italy	1030 hrs AIAA-2016-2716 **Integral formulations for the prediction of low Mach number flow noise with non-compact solid surfaces.** N. Papaxanthos, E. Perrey-Debain, University of Technology, Compiègne, France	1100 hrs AIAA-2016-2717 **Validation of a surface based analogy for the LEE accounting for scattering effects** M. Muriel Gracia, V. Korchagin, W. De Roeck, W. Desmet, Catholic University of Leuven, Leuven, Belgium			

Monday, 30 May 2016								
5-AA-4	CAA II: Methods							Rhône 3B
Chaired by: X. LI, Beihang University								
0830 hrs AIAA-2016-2718 **A Hybrid PSTD/DG Method to Solve the Linearized Euler Equations: Optimization and Accuracy** R. Pagán Muñoz, M. Hornikx, Eindhoven University of Technology, Eindhoven, The Netherlands	0900 hrs AIAA-2016-2719 **A Hybrid 3D Discontinuous Galerkin Code for CAA Applications** M. Lummer, German Aerospace Center (DLR), Braunschweig, Germany	0930 hrs AIAA-2016-2720 **High order upwind compact scheme and ETA buffer zone-type non-reflecting boundary condition for LEE** Z. Qian, Aviation Industry Corporation of China (AVIC), Beijing, China	1000 hrs AIAA-2016-2721 **Optimized prefactored compact schemes for wave propagation phenomena** A. Rona, E. Hall, University of Leicester, Leicester, United Kingdom; I. Spisso, Cineca, Casalecchio di Reno, Italy	1030 hrs AIAA-2016-2722 **High-order Variational Multiscale model with an explicit filtering in a stabilised finite element method for LES/DES computations** Y. Pierre, Dassault Group, Saint Cloud, France; C. Bailly, École Centrale de Lyon, Ecully, France; D. Franck, F. Chalot, B. Sébastien, Dassault Group, Saint Cloud, France	1100 hrs AIAA-2016-2723 **High-order aeroacoustics propagation solver with sliding-mesh capabilities for subsonic turbomachinery** C. Foulquié, Safran Group, Villaroche, France; S. Khelladi, M. Deligant, Paris Institute of Technology, Paris, France; J. Mardjono, Safran Group, Villaroche, France; M. Henner, Valeo, La Verrière, France			

Monday, 30 May 2016								
6-AA-5	Duct Acoustics I: Impedance Eduction							Rhône 2
Chaired by: W. EVERSMAN, Missouri University of Science and Technology								
0830 hrs AIAA-2016-2724 **Three-Dimensional Numerical Theory for Impedance Eduction in Normal Incidence Tubes** W. Watson, M. Jones, NASA Langley Research Center, Hampton, VA	0900 hrs AIAA-2016-2725 **Broadband eduction of liner impedance under multimodal acoustic propagation.** R. Troian, D. Dragna, C. Bailly, M. Galland, École Centrale de Lyon, Ecully, France	0930 hrs AIAA-2016-2726 **Impedance Eduction of Acoustic Liners Based on Four Different Levels of Physical Modeling** A. Schulz, F. Bake, L. Enghardt, German Aerospace Center (DLR), Berlin, Germany; D. Ronneberger, University of Göttingen, Göttingen, Germany	1000 hrs AIAA-2016-2727 **On the effect of flow direction on impedance eduction results** H. Boden, L. Zhou, Royal Institute of Technology (KTH), Stockholm, Sweden; J. Cordioli, A. Medeiros, A. Spillere, Federal University of Santa Catarina, Florianópolis, Brazil	1030 hrs AIAA-2016-2728 **Impedance Eduction with a Theoretical Model for Sound Propagation in a Grazing Impedance Tube** H. Jiang, X. Huang, Peking University, Beijing, China	1100 hrs AIAA-2016-2729 **Effects of the turbulent grazing flow over the impedance prediction of a single-orifice Helmholtz resonator** Q. Zhang, D. Bodony, University of Illinois, Urbana-Champaign, Urbana, IL			

Monday, 30 May 2016								
7-AA-6	**Jet Noise I**							**Auditorium Pasteur**
Chaired by: F. CLERO, ONERA								
0830 hrs AIAA-2016-2730 **Land- and Aircraft Carrier-Based F-35C Jet Blast Deflector Noise Testing** A. Pilon, Lockheed Martin Corporation, Palmdale, CA	0900 hrs AIAA-2016-2731 **A Novel Framework for Uncertainty Propagation in Multidisciplinary Design Life Cycle for Shock-Cell Noise Research** F. Granados-Ortiz, C. Lai, University of Greenwich, London, United Kingdom	0930 hrs AIAA-2016-2732 **Broadband Shock-cell Noise Signature Identification Using a Wavelet-based Method** L. Gefen, Roma Tre University, Rome, Italy; C. Pérez Arroyo, CERFACS, Toulouse, France; R. Camussi, Roma Tre University, Rome, Italy; G. Puigt, CERFACS, Toulouse, France; C. Airiau, École Centrale de Lyon, Toulouse, France	1000 hrs AIAA-2016-2733 **Local stability analysis of a round jet parallel to a flat plate** J. Brazier, ONERA, Toulouse, France	1030 hrs AIAA-2016-2734 **Numerical Study of Free Supersonic Hot Jet on Unstructured Grids with Emphasis on Aerodynamics and Resulting Radiated Noise** J. Troyes, F. Vuillot, ONERA, Châtillon, France; H. Lambaré, A. Espinosa Ramos, French Space Agency (CNES), Paris, France				

Monday, 30 May 2016								
8-AA-7	**Leading Edge Noise I**							**Rhône 1**
Chaired by: S. GLEGG, Florida Atlantic University								
0830 hrs AIAA-2016-2735 **Airfoil Unsteady Loading and Sound Radiation due to Incident and Self-Generated Turbulent Flows** J. Anderson, A. Buono, M. Catlett, Naval Surface Warfare Center, West Bethesda, MD	0900 hrs AIAA-2016-2736 **Leading edge serration geometries for significantly enhanced leading edge noise reductions** C. Paruchuri, University of Southampton, Southampton, United Kingdom; S. Narayanan, Indian School of Mines, Dhanbad, India; P. Joseph, J. Kim, University of Southampton, Southampton, United Kingdom	0930 hrs AIAA-2016-2737 **Numerical Computation of Gust Aerodynamic Response for Realistic Airfoils: Application of Amiet's Theory** R. Miotto, W. Wolf, University of Campinas, Campinas, Brazil; L. de Santana, University of Twente, Enschede, The Netherlands	1000 hrs AIAA-2016-2738 **Airfoil geometry effects on turbulence interaction noise in cascades** C. Paruchuri, J. Coupland, P. Joseph, University of Southampton, Southampton, United Kingdom	1030 hrs AIAA-2016-2739 **An Investigation of the Tonal Noise Produced by a Wall-mounted Finite Airfoil at Angle of Attack** D. Moreau, C. Doolan, University of New South Wales, Sydney, Australia	1100 hrs AIAA-2016-2740 **Noise Prediction for Serrated Leading-edges** B. Lyu, University of Cambridge, Cambridge, United Kingdom; M. Azarpeyvand, University of Bristol, Bristol, United Kingdom; S. Sinayoko, University of Southampton, Southampton, United Kingdom			

Monday, 30 May 2016								
9-AA-8	**Open Rotors**							**Saint Clair 1**
Chaired by: U. PALIATH, GE Global Research								
0830 hrs AIAA-2016-2741 **The scattering of open rotor tones by a cylindrical fuselage and its boundary layer** H. Brouwer, National Aerospace Laboratory (NLR), Amsterdam, The Netherlands	0900 hrs AIAA-2016-2742 **Broadband Noise Prediction of Open Rotors Using Semi-Empirical Methods Informed by CFD Calculations** J. Botha, H. Rice, J. Kennedy, Trinity College Dublin, Dublin, Ireland	0930 hrs AIAA-2016-2743 **A preliminary semi-empirical approach for CROR noise modeling** M. Quaglia, S. Moreau, University of Sherbrooke, Sherbrooke, Canada; M. Roger, École Centrale de Lyon, Lyon, France; R. Fernando, Safran Group, Paris, France	1000 hrs AIAA-2016-2744 **Effect of a Model Leading-Edge Vortex on the Blade Aerodynamic Response for Application to CROR Tonal Noise Predictions** N. Jaouani, Sogeti High Tech, Toulouse, France; M. Roger, École Centrale de Lyon, Ecully, France; T. Node-Langlois, Airbus, Toulouse, France; G. Serre, Sogeti High Tech, Toulouse, France					

Monday, 30 May 2016								
10-AA-9	**Turbomachinery Noise I: Combustion**							**Saint Clair 2**
Chaired by: C. TAM, Florida State Univeristy								
0830 hrs AIAA-2016-2745 **The Effect of Flame Thickening on the Acoustic Emission in Turbulent Combustion** K. Pausch, S. Schlimpert, S. Koh, J. Grimmen, W. Schroeder, RWTH Aachen University, Aachen, Germany	0900 hrs AIAA-2016-2746 **An investigation of the generation of indirect combustion noise in a turbo-engine** C. Tam, Z. Li, Florida State University, Tallahassee, FL; W. Schuster, Honeywell International, Inc., Phoenix, AZ	0930 hrs AIAA-2016-2747 **Numerical investigation of combustion noise from aeronautical combustor to far-field** M. Férand, T. Livebardon, CERFACS, Toulouse, France; S. Moreau, University of Sherbrooke, Sherbrooke, Canada; T. Poinsot, Fluid Mechanics Institute of Toulouse (IMFT), Toulouse, France; C. Sensiau, Safran Group, Villaroche, France						

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11-AA-10	**Turbulent Boundary Layers**							**Saint Clair 4**
Chaired by: J. JAWORSKI, Lehigh University								
0830 hrs AIAA-2016-2748 **Reduction of Boundary Layer Noise with Micro-Perforated Partitions** T. Bravo, Spanish National Research Council, Madrid, Spain; C. Maury, C. Pinhede, National Center for Scientific Research (CNRS), Marseille, France	0900 hrs AIAA-2016-2749 **Characteristics of Wall Pressure Fluctuations for a Flat Plate Turbulent Boundary Layer with Pressure Gradients** N. Hu, M. Herr, German Aerospace Center (DLR), Braunschweig, Germany	0930 hrs AIAA-2016-2750 **Analysis of hydrodynamic and acoustic events in a turbulent boundary layer using a direct noise simulation database** F. Margnat, Institut Pprime, Poitiers, France; X. Gloerfelt, Arts et Metiers ParisTech, Paris, France	1000 hrs AIAA-2016-2751 **Pressure Fluctuations in a High-Reynolds-Number Turbulent Boundary Layer Flow over Rough Surfaces** L. Joseph, T. Meyers, N. Molinaro, W. Devenport, Virginia Polytechnic Institute and State University, Blacksburg, VA	1030 hrs AIAA-2016-2752 **Vortex sound generation from flexible fibers** J. Jaworski, Lehigh University, Bethlehem, PA				

Monday, 30 May 2016		
12-PLNY-2 **1130 - 1230 hrs**	**Propagation and Radiation Modeling for Fan Noise. Can CAA Tools Deliver Accurate Predictions?**	**Auditorium Pasteur**
Jeremy Astley ISVR, University of Southampton		

Monday, 30 May 2016								
13-AA-11	**Aeroacoustic Interactions II: Control**							**Saint Clair 3B**
Chaired by: L. CATTAFESTA, FAMU-FSU College of Engineering								
1400 hrs AIAA-2016-2753 **Experimental Investigations of the Tonal Self-Noise Emission of a Vehicle Side Mirror** M. Werner, W. Würz, E. Kraemer, University of Stuttgart, Stuttgart, Germany	1430 hrs AIAA-2016-2754 **Bluff Body Flow and Noise Control Using Porous Media** S. Showkat Ali, X. Liu, M. Azarpeyvand, University of Bristol, Bristol, United Kingdom	1500 hrs AIAA-2016-2755 **Synchronized Velocity and Pressure Measurements of Supersonic Flow over a Finite Span Cavity with Leading Edge Slot Blowing** B. George, L. Ukeiley, University of Florida, Gainesville, Gainesville, FL; L. Cattafesta, K. Taira, Florida A&M University-Florida State University, Tallahassee, FL	1530 hrs AIAA-2016-2756 **Cavity Noise Suppression Using Fluidic Spoilers** G. Bennett, Trinity College Dublin, Dublin, Ireland; S. Morris, University of Notre Dame, Notre Dame, IN	1600 hrs **Break**	1630 hrs AIAA-2016-2757 **Statistical-empirical modelling of aerofoil noise subjected to leading edge serrations and aerodynamic identification of noise reduction mechanisms** T. Biedermann, University of Applied Sciences, Düsseldorf, Germany; T. Chong, Brunel University, London, United Kingdom; F. Kameier, University of Applied Sciences, Düsseldorf, Germany	1700 hrs AIAA-2016-2758 **Closed-loop control of wavepackets in a free shear-flow** K. Sasaki, G. Tissot, A. Cavalieri, F. Silvestre, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, D. Biau, National Center for Scientific Research (CNRS), Poitiers, France	1730 hrs AIAA-2016-2759 **Vortex shedding noise reduction by single dielectric barrier discharge plasma actuators** L. Al-Sadawi, T. Chong, Brunel University, London, United Kingdom	

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14-AA-12	**Advanced Testing Techniques I**							**Rhône 3A**
Chaired by: A. BORGOLTZ, Virginia Tech								
1400 hrs AIAA-2016-2760 **An empirical de-reverberation technique for closed-section wind tunnel beamforming** J. Fischer, C. Doolan, University of New South Wales, Sydney, Australia	1430 hrs AIAA-2016-2761 **Analyzing Noise Components on Skewed Fans with a Virtual Rotating Microphone Array** G. Herold, Brandenburg University of Technology, Cottbus, Germany; F. Zenger, University of Erlangen-Nürnberg, Erlangen, Germany; E. Sarradj, Brandenburg University of Technology, Cottbus, Germany	1500 hrs AIAA-2016-2762 **A fast ray casting method for sound refraction at shear layers** E. Sarradj, Brandenburg University of Technology, Cottbus, Germany	1530 hrs AIAA-2016-2763 **Focussed Synthesis of a Turbulent Boundary Layer Excitation** C. Maury, National Center for Scientific Research (CNRS), Marseille, France; T. Bravo, Spanish National Research Council, Madrid, Spain	1600 hrs **Break**	1600 hrs AIAA-2016-2764 **Design and Experimental Validation of an Array of Accelerometers for In-flow Acoustic Beamforming Applications** Q. Leclere, E. Chéron, National Institute of Applied Sciences (INSA), Lyon, France; A. Pereira, École Centrale de Lyon, Lyon, France; C. Picard, VibraTec, Ecully, France; P. Souchotte, École Centrale de Lyon, Lyon, France	1630 hrs AIAA-2016-2765 **Compressive sensing based spinning mode detection with in-duct microphone array** W. Yu, X. Huang, Peking University, Beijing, China	1700 hrs AIAA-2016-2766 **Directivity measurement of an ECS outlet on a business jet aircraft on ground** A. Finez, Vibratec, Ecully, France; B. Sébastien, Dassault Group, Saint Cloud, France	

Monday, 30 May 2016								
15-AA-13	**Airframe Noise II: Landing Gear**							**Saint Clair 3A**
Chaired by: P. RAVETTA, AVEC, Inc.								
1400 hrs AIAA-2016-2767 **Lattice-Boltzmann Flow Simulation of a Two-Wheel Landing Gear** L. Sanders, E. Manoha, ONERA, Châtillon, France; M. Murayama, Y. Yokokawa, K. Yamamoto, Japan Aerospace Exploration Agency (JAXA), Tokyo, Japan; T. Hirai, Ryoyu Systems Company, Ltd., Tokyo, Japan	1430 hrs AIAA-2016-2768 **Noise Prediction of the LAGOON Landing Gear Using Acoustic Analogy and Proper Orthogonal Decomposition** P. Azevedo, W. Wolf, University of Campinas, Campinas, Brazil	1500 hrs AIAA-2016-2769 **Analysis of landing gear noise during approach** R. Merino-Martinez, Delft University of Technology, Delft, The Netherlands; L. Bertsch, German Aerospace Center (DLR), Goettingen, Germany; D. Simons, M. Snellen, Delft University of Technology, Delft, The Netherlands	1530 hrs AIAA-2016-2770 **Review of landing gear acoustic research at Messier-Bugatti-Dowty** Q. Bouvy, Safran Group, Gloucester, United Kingdom; B. Petot, T. Rougier, Safran Group, Vélizy-Villacoublay, France	1600 hrs **Break**	1600 hrs AIAA-2016-2771 **A Comparison of Wall Functions for Bluff Body Aeroacoustic Simulations** Y. Hou, D. Angland, University of Southampton, Southampton, United Kingdom	1630 hrs AIAA-2016-2772 **A study of planar jet flow control and perforated fairings for the reduction of the flow-induced noise of tandem rods in a cross-flow** K. Zhao, P. Okolo, J. Kennedy, G. Bennett, Trinity College Dublin, Dublin, Ireland	1700 hrs AIAA-2016-2773 **Numerical Investigation of Flow Control Using Vertex Generator for Landing Gear Noise Reduction** H. Aipeng, J. Yuhong, Beihang University, Beijing, China	1730 hrs AIAA-2016-2774 **Investigation on landing gear shallow round cavity flow field and noise signature** F. De La Puente, L. Sanders, ONERA, Paris, France; P. Druault, Pierre and Marie Curie University, Paris, France; F. Vuillot, ONERA, Paris, France

Monday, 30 May 2016								
16-AA-14	**CAA III: Adjoint Methods and Scattering**							**Rhône 3B**
Chaired by: J. FREUND, University of Illinois at Urbana-Champaign								
1400 hrs AIAA-2016-2775 **Application of an Adjoint CAA Solver for Design Optimization of Acoustic Liners** J. Abdel Hay, Technical University of Berlin, Berlin, Germany; E. Özkaya, N. Gauger, Technical University of Kaiserslautern, Kaiserslautern, Germany; N. Schönwald, CFD Software GmbH, Berlin, Germany	1430 hrs AIAA-2016-2776 **A Discrete Adjoint-based Shape Optimization for Shear-layer-noise Reduction** D. Buchta, R. Vishnampet, D. Bodony, J. Freund, University of Illinois, Urbana-Champaign, Urbana, IL	1500 hrs AIAA-2016-2777 **A Discrete Adjoint Framework for Trailing-Edge Turbulence Control and Noise Minimization via Porous Material** B. Zhou, N. Gauger, Technical University of Kaiserslautern, Kaiserslautern, Germany; S. Koh, M. Meinke, W. Schroeder, RWTH Aachen University, Aachen, Germany	1530 hrs AIAA-2016-2778 **Development of an Adjoint CAA Solver for Design Optimization of Acoustic Liners** E. Özkaya, J. Abdel Hay, N. Gauger, Technical University of Kaiserslautern, Kaiserslautern, Germany; F. Thiele, CFD Software GmbH, Berlin, Germany	1600 hrs **Break**	1600 hrs AIAA-2016-2779 **On the assessment of acoustic scattering and shielding by time domain boundary integral equation solutions** F. Hu, M. Pizzo, Old Dominion University, Norfolk, VA	1630 hrs AIAA-2016-2780 **Numerical Simulation of Acoustic Scattering by a Turbulent Shear Layer: Spectral, Temporal and Analytic Study.** I. Bennaceur, D. Mincu, I. Mary, M. Terracol, ONERA, Châtillon, France; L. Larchevêque, D. Pierre, University of Provence, Marseille, France	1700 hrs AIAA-2016-2781 **Compressible Flow Simulations of Wave Scattering Problems Using the Immersed Boundary Method** W. Ramirez, University of Campinas, Campinas, Brazil; B. Olson, Lawrence Livermore National Laboratory, Livermore, CA; W. Wolf, University of Campinas, Campinas, Brazil	

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17-AA-15	Duct Acoustics II: Liners							Rhône 2
Chaired by: H. BODEN, KTH								
1400 hrs AIAA-2016-2782 **Effects of Liner Length and Attenuation on NASA Langley Impedance Eduction** M. Jones, W. Watson, NASA Langley Research Center, Hampton, VA	1430 hrs AIAA-2016-2783 **Optimization of Variable-Depth Liner Configurations for Increased Broadband Noise Reduction** M. Jones, W. Watson, D. Nark, N. Schiller, NASA Langley Research Center, Hampton, VA; J. Born, Northrop Grumman Corporation, Hampton, VA	1500 hrs AIAA-2016-2784 **Further Development and Assessment of a Broadband Liner Optimization Process** D. Nark, M. Jones, NASA Langley Research Center, Hampton, VA	1530 hrs AIAA-2016-2785 **Experimental Investigation of Acoustic Damping Performance of Double- and Single-layer Perforated Liners: Effect of Porosity and Joint Bias-grazing Flow** D. Zhao, C. Ji, N. Han, X. Li, Y. Ang, J. Li, Nanyang Technological University, Singapore, Singapore	1600 hrs **Break**	1600 hrs AIAA-2016-2786 **Modeling Liners for Engine Exhaust Applications** M. Nair, Y. Detandt, B. Yannic, D. Binet, T. Cordaro, B. de Brye, Free Field Technologies, Mont-Saint-Guibert, Belgium; et al.	1630 hrs AIAA-2016-2787 **Evaluation of Novel Liner Concepts for Fan and Airframe Noise Reduction** M. Jones, B. Howerton, NASA Langley Research Center, Hampton, VA	1700 hrs AIAA-2016-2788 **Design, manufacturing and demonstration of acoustic liners for air conditioning systems** E. Piot, J. Brazier, F. Simon, ONERA, Toulouse, France; V. Fascio, ATECA, Montauban, France; C. Peyret, ONERA, Châtillon, France; J. Ingenito, Liebherr Aerospace, Toulouse, France	1730 hrs AIAA-2016-2789 **A Requirements-Driven Optimization Method for Acoustic Treatment Design** J. Berton, NASA Glenn Research Center, Cleveland, OH

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18-AA-16	General Acoustics							Saint Clair 4
Chaired by: M. ROGER, Ecole Centrale de Lyon								
1400 hrs AIAA-2016-2790 **Non-linear interaction of multiple tones on perforated liners** P. Serrano, G. Gabard, P. Murray, R. Astley, University of Southampton, Southampton, United Kingdom	1430 hrs AIAA-2016-2791 **Wall pressure fluctuations in hypersonic boundary layer: a strategy to design the passive noise control systems** T. Pagliaroli, U. Iemma, A. Bornaccioni, R. Camussi, Roma Tre University, Rome, Italy; P. Lv, China Academy of Aerospace Aerodynamics, Beijing, China; F. Mohd Zawawi, University of Technology, Malaysia, Johor Bahru, Malaysia	1500 hrs AIAA-2016-2792 **Experimental Validation of Ducted Low-Speed Cooling Fan Noise Prediction Methods Including Broadband Scattering** J. Christophe, von Kármán Institute for Fluid Dynamics, Rhode-Saint-Genèse, Belgium; K. Kucukcoskun, Siemens, Leuven, Belgium; D. Lallier-Daniels, M. Sanjosé, S. Moreau, University of Sherbrooke, Sherbrooke, Canada	1530 hrs AIAA-2016-2793 **On the Generalization of Lighthil`s Eigth-Power Law to Acoustic-Vortical Waves** L. Braga da Costa Campos, Technical University of Lisbon, Lisbon, Portugal	1600 hrs **Break**	1600 hrs AIAA-2016-2794 **The Frequency-Domain Formulations of the Quadrupole Correction for the Ffowcs Williams-Hawkings Integration** T. Ikeda, K. Yamamoto, Japan Aerospace Exploration Agency (JAXA), Chofu, Japan; K. Amemiya, ASIRI Corporation, Tokyo, Japan	1630 hrs AIAA-2016-2795 **Analysis of the Noise Shielding Characteristics of a NACA0012 2D Wing** K. Rossignol, J. Delfs, German Aerospace Center (DLR), Braunschweig, Germany	1700 hrs AIAA-2016-2796 **Hybrid aeroacoustic computations for flows in ducts with single and tandem diaphragms** P. Martinez-Lera, K. Kucukcoskun, Siemens, Leuven, Belgium; M. Shur, A. Travin, Saint-Petersburg Polytechnic University, St. Petersburg, Russia; M. Tournour, Siemens, Leuven, Belgium	

Monday, 30 May 2016								
19-AA-17	Jet Noise II: Screech							Auditorium Pasteur
Chaired by: C. BAILLY, Ecole Centrale de Lyon								
1400 hrs AIAA-2016-2797 **Screech Noise Characterization using Dynamic Mode Decomposition and Shadowgraph Imagery** M. Burak, B. Gustafsson, GKN Aerospace Engine Systems, Trollhättan, Sweden; B. Malla, E. Gutmark, University of Cincinnati, Cincinnati, OH	1430 hrs AIAA-2016-2798 **Large Eddy Simulation of Shock-Cell Noise From a Dual Stream Jet** C. Pérez Arroyo, G. Puigt, CERFACS, Toulouse, France; C. Airiau, Fluid Mechanics Institute of Toulouse (IMFT), Toulouse, France; J. Boussuge, CERFACS, Toulouse, France	1500 hrs AIAA-2016-2799 **A schlieren and nearfield acoustic based experimental investigation of screech noise sources** B. Mercier, École Centrale de Lyon, Ecully, France; T. Castelain, Claude Bernard University Lyon 1, Villeurbanne, France; C. Bailly, École Centrale de Lyon, Ecully, France	1530 hrs AIAA-2016-2800 **Supersonic Jet Impingement on a Cylindrical Surface** J. Weightman, O. Amili, D. Honnery, D. Edgington-Mitchell, J. Soria, Monash University, Melbourne, Australia	1600 hrs **Break**	1630 hrs AIAA-2016-2801 **Shock-Turbulence Interactions in a Screeching Axisymmetric Underexpanded Jet** D. Tan, J. Soria, D. Honnery, D. Edgington-Mitchell, Monash University, Melbourne, Australia	1700 hrs AIAA-2016-2802 **Towards a Suitable Turbulence Length and Temporal Scale Model for Broadband Shock Associated Noise** A. Kalyan, S. Karabasov, Queen Mary University of London, London, United Kingdom		

Monday, 30 May 2016								
20-AA-18	Jet Noise III: Modeling							Rhône 1
Chaired by: W. SCHROEDER, RWTH AACHEN, Institute of Aerodynamics								
1400 hrs AIAA-2016-2803 **Azimuthal Source Non-Compactness and Mode Coupling in Sound Radiation from High-Speed Axisymmetric Jets** M. Goldstein, NASA Glenn Research Center, Cleveland, OH; S. Leib, Ohio Aerospace Institute, Cleveland, OH	1430 hrs AIAA-2016-2804 **Predictive Capability of the Low Frequency Asymptotic Green's Function in Non-Parallel Flows within Goldstein's Generalized Acoustic Analogy** M. Afsar, Imperial College London, London, United Kingdom; A. Sescu, Mississippi State University, Starkville, MS; S. Leib, Ohio Aerospace Institute, Brook Park, OH	1500 hrs AIAA-2016-2805 **Similarity scaling of jet noise sources: towards a robust low-order jet noise scheme based on the Goldstein generalized acoustic analogy** V. Semiletov, University of Cambridge, Cambridge, United Kingdom; S. Karabasov, Queen Mary University of London, London, United Kingdom	1530 hrs AIAA-2016-2806 **On defining the jet noise source quadrupole structure on the basis of multi-array acoustic data and correlation theory** V. Kopiev, S. Chernyshev, G. Faranosov, TsAGI, Moscow, Russia	1600 hrs **Break**	1600 hrs AIAA-2016-2807 **Prediction of jet mixing noise in flight from static tests** U. Michel, CFD Software GmbH, Berlin, Germany	1630 hrs AIAA-2016-2808 **Super- and multi-directive acoustic radiation by linear global modes of a turbulent jet** O. Schmidt, A. Towne, T. Colonius, California Institute of Technology, Pasadena, CA; P. Jordan, V. Jaunet, National Center for Scientific Research (CNRS), Poitiers, France; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; et al.	1700 hrs AIAA-2016-2809 **Acoustic waves in the potential core of jets** A. Towne, California Institute of Technology, Pasadena, CA; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France; T. Colonius, California Institute of Technology, Pasadena, CA; V. Jaunet, National Center for Scientific Research (CNRS), Poitiers, France; O. Schmidt, California Institute of Technology, Pasadena, CA; et al.	1730 hrs AIAA-2016-2810 **Modelling Velocity Correlations with LES and RANS for Prediction of Noise from Isothermal or Hot Jets** V. Rosa, R. Self, University of Southampton, Southampton, United Kingdom; C. Ilário, Embraer, São José dos Campos, Brazil; I. Naqavi, P. Tucker, University of Cambridge, Cambridge, United Kingdom

Monday, 30 May 2016								
21-AA-19	Trailing Edge Noise I							Saint Clair 1
Chaired by: J. ANDERSON, Naval Surface Warfare Center								
1400 hrs AIAA-2016-2811 **Investigation of Wall-Pressure Fluctuations Characteristics on a NACA0012 Airfoil with Blunt Trailing Edge** A. Grebert, J. Bodart, L. Joly, University of Toulouse, Toulouse, France	1430 hrs AIAA-2016-2812 **Source Characterization of Turbulent Boundary Layer Trailing Edge Noise Using an Improved TNO Model** S. Lee, University of California, Davis, Davis, CA	1500 hrs AIAA-2016-2813 **Study of the Impact of Turbulent Anisotropy on the Airfoil Turbulent Boundary Layer Trailing Edge Noise** B. Bai, X. Li, Beihang University, Beijing, China	1530 hrs AIAA-2016-2814 **Effect of aerofoil thickness on trailing edge noise** R. Leung, Defence Science and Technology Laboratory, Southampton, United Kingdom; C. Paruchuri, P. Joseph, University of Southampton, Southampton, United Kingdom	1600 hrs **Break**	1630 hrs AIAA-2016-2815 **Study of the Impact of Angle of Attack on Tone Frequency by Thin Airfoil at Moderate Reynolds Number** X. Li, B. Bai, Beihang University, Beijing, China; M. Jiang, Shipbuilding Information Center of China, Beijing, China	1700 hrs AIAA-2016-2816 **Several noise control of the trailing-edge noise of a Controlled-Diffusion airfoil** S. Moreau, P. Laffay, A. Idier, N. Atalla, University of Sherbrooke, Sherbrooke, Canada	1730 hrs AIAA-2016-2817 **Wake Development of Airfoils with Serrated Trailing Edges** X. Liu, H. Kamliya Jawahar, M. Azarpeyvand, R. Theunissen, University of Bristol, Bristol, United Kingdom	

Monday, 30 May 2016								
22-AA-20	Turbomachinery Noise II: Flow Distortion							Saint Clair 2
Chaired by: S. MOREAU, Université de Sherbrooke								
1400 hrs AIAA-2016-2818 **Influence of Distortion on Fan Tonal Noise** M. Daroukh, Safran Group, Moissy-Cramayel, France; S. Moreau, University of Sherbrooke, Sherbrooke, Canada; N. Gourdain, University of Toulouse, Toulouse, France; J. Boussuge, CERFACS, Toulouse, France; C. Sensiau, Safran Group, Moissy-Cramayel, France	1430 hrs AIAA-2016-2819 **Effect of Inlet Distortions on Ducted Fan Noise** M. Shur, M. Strelets, A. Travin, Saint-Petersburg Polytechnic University, St. Petersburg, Russia; J. Christophe, K. Kucukcoskun, C. Schram, von Kármán Institute for Fluid Dynamics, Rhode-Saint-Genèse, Belgium; et al.	1500 hrs AIAA-2016-2820 **Noise and vibration interference effects of bodies in the flow: an analogy with rotating instability in axial flow machines** F. Kameier, University of Applied Sciences, Düsseldorf, Germany; R. Heinze, getAir GmbH & Co. KG, Moenchengladbach, Germany; C. Paschereit, Technical University of Berlin, Berlin, Germany; T. Biedermann, University of Applied Sciences, Düsseldorf, Germany	1530 hrs AIAA-2016-2821 **A Novel Numerical Approach for Prediction of Rotor-Stator Interaction Noise in the Presence of Inlet Flow Distortion** K. Patel, C. Novak, J. Defoe, University of Windsor, Windsor, Canada	1600 hrs **Break**	1600 hrs AIAA-2016-2822 **Rotating Coherent Flow Structures as a Source for Narrowband Tip Clearance Noise from Axial Fan** T. Zhu, University of Siegen, Siegen, Germany; D. Lallier-Daniels, M. Sanjose, S. Moreau, University of Sherbrooke, Sherbrooke, Canada; T. Carolus, University of Siegen, Siegen, Germany	1630 hrs AIAA-2016-2823 **Tip Leakage Flow: Advanced Measurements and Analysis** M. Jacob, ISAE - SupAéro, Toulouse, France; E. Jondeau, B. Li, J. Boudet, École Centrale de Lyon, Lyon, France	1700 hrs AIAA-2016-2824 **Tip-Leakage Flow: a Detailed Simulation with a Zonal Approach** J. Boudet, B. Li, École Centrale de Lyon, Ecully, France; J. Caro, E. Jondeau, National Center for Scientific Research (CNRS), Ecully, France; M. Jacob, Claude Bernard University Lyon 1, Villeurbanne, France	1730 hrs AIAA-2016-2825 **Airfoil Tip Leakage Aeroacoustics Predictions using a Lattice Boltzmann Based Method** A. Mann, M. Kim, J. Wu, F. Perot, Exa Corporation, Burlington, MA; J. Grilliat, University of Erlangen-Nürnberg, Nurnberg, Germany; M. Jacob, École Centrale de Lyon, Lyon, France; et al.

Tuesday, 31 May 2016

23-AA-21 — Aeroacoustic Interactions III: Combustion Noise — Saint Clair 3B

Chaired by: A. DOWLING, University of Cambridge

0800 hrs	0830 hrs	0900 hrs	0930 hrs	1000 hrs				
AIAA-2016-2826	AIAA-2016-2827	AIAA-2016-2828	AIAA-2016-2829	AIAA-2016-2830				
Prediction of pulsations in a cold-gas scale-model of a SRM	**Combustion Noise Analysis of Open Flames Using Incompressible LES**	**The acoustic equivalence of a mass and heat point source**	**Aeroacoustic study of a slotted burner**	**Numerical investigation of combustion noise: The Entropy Wave Generator**				
L. Hirschberg, C. Schram, von Kármán Institute for Fluid Dynamics, Rhode-Saint-Genèse, Belgium; A. Hirschberg, University of Twente, Enschede, The Netherlands	I. Langella, Y. Mahmoudi-Larimi, N. Swaminathan, A. Dowling, University of Cambridge, Cambridge, United Kingdom	L. Peerlings, H. Boden, S. Boij, Royal Institute of Technology (KTH), Stockholm, Sweden	T. Pagliaroli, M. Mancinelli, R. Camussi, Roma Tre University, Rome, Italy; G. Troiani, Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Rome, Italy	C. Becerril, CERFACS, Toulouse, France; S. Moreau, University of Sherbrooke, Sherbrooke, Canada; M. Bauerheim, L. Gicquel, T. Poinsot, CERFACS, Toulouse, France				

Tuesday, 31 May 2016

24-AA-22 — Trailing Edge Noise II: Control — Saint Clair 3A

Chaired by: D. MOREAU, University of New South Wales

0800 hrs	0830 hrs	0900 hrs	0930 hrs	1000 hrs	1030 hrs	1100 hrs		
AIAA-2016-2831	AIAA-2016-2832	AIAA-2016-2833	AIAA-2016-2834	AIAA-2016-2835	AIAA-2016-2836	AIAA-2016-2837		
Noise Reduction via Jet Injection near the Trailing Edge	**Trailing Edge Bluntness Flow and Noise Control Using Porous Treatments**	**Aeroacoustic and flow assessments of the poro-serrated trailing edges**	**Trailing Edge Noise Reduction Using Novel Surface Treatments**	**Bioinspired Passive Control of Airfoil Radiated Noise**	**DNS of Noise Radiation from a Turbulent Flow Convecting over an Elastic Trailing-Edge**	**Sensitivity of aerofoil self-noise reductions to serration flap angles**		
J. Yu, S. Koh, M. Meinke, W. Schroeder, RWTH Aachen University, Aachen, Germany	S. Showkat Ali, M. Szoke, M. Azarpeyvand, University of Bristol, Bristol, United Kingdom; C. Ilário, Embraer, São José dos Campos, Brazil	T. Chong, E. Dubois, A. Vathylakis, Brunel University London, Uxbridge, United Kingdom	A. Afshari, University of Yazd, Yazd, Iran; M. Azarpeyvand, University of Bristol, Bristol, United Kingdom; A. Dehghan, University of Yazd, Yazd, Iran; M. Szoke, University of Bristol, Bristol, United Kingdom	M. Zhang, K. Frendi, University of Alabama, Huntsville, Huntsville, AL	S. Schlanderer, University of Southampton, Southampton, United Kingdom; R. Sandberg, University of Melbourne, Melbourne, Australia	A. Vathylakis, Brunel University, Uxbridge, United Kingdom; C. Paruchuri, University of Southampton, Southampton, United Kingdom; T. Chong, Brunel University, Uxbridge, United Kingdom; P. Joseph, University of Southampton, Southampton, United Kingdom		

Tuesday, 31 May 2016

25-AA-23 — CAA IV — Rhône 3A

Chaired by: K. YAMAMOTO, Japan Aerospace Exploration Agency

0800 hrs	0830 hrs	0900 hrs	0930 hrs	1000 hrs	1030 hrs			
AIAA-2016-2838	AIAA-2016-2839	AIAA-2016-2840	AIAA-2016-2841	AIAA-2016-2842	AIAA-2016-2843			
Aeroacoustic study of a submerged air inlet using an IDDES/FW-H approach and sound source modelling through direct numerical beamforming	**A CAA Study of Turbulence Distortion in Broadband Fan Interaction Noise**	**Leading Edge Noise Predictions using Anisotropic Synthetic Turbulence**	**Impact of Turbofan Intake Distortion on Fan Noise Propagation and Generation**	**Aeroacoustic analysis of a cylinder in low Mach number flow using a periodic CFD-BEM technique**	**In-Duct Assessment of a Linearized Unsteady Navier-Stokes Scheme for Compressor Tone Noise**			
N. Pignier, C. O'Reilly, S. Boij, Royal Institute of Technology (KTH), Stockholm, Sweden	T. Hainaut, G. Gabard, V. Clair, University of Southampton, Southampton, United Kingdom	F. Gea Aguilera, J. Gill, X. Zhang, X. Chen, University of Southampton, Southampton, United Kingdom; T. Node-Langlois, Airbus, Toulouse, France	M. Doherty, H. Namgoong, Rolls-Royce Group plc, Derby, United Kingdom	M. Karimi, P. Croaker, N. Kessissoglou, University of New South Wales, Sydney, Australia; N. Peake, Department of Applied Mathematics and Theoretical Physics, Cambridge, United Kingdom	C. Porter, P. Orkwis, University of Cincinnati, Cincinnati, OH; J. Wojno, T. Goerig, General Electric Company, Evendale, OH; T. Wood, General Electric Company, Niskayuna, NY			

Tuesday, 31 May 2016								
26-AA-24	**CAA V: Applications**							**Rhône 3B**
Chaired by: S. REDONNET, ONERA								
0800 hrs AIAA-2016-2844 **Numerical Characterization of Landing Gear Noise Emission using Advanced Simulation and Analysis Techniques** S. Redonnet, J. Bulte, G. Cunha, S. Ben Khelil, ONERA, Châtillon, France	0830 hrs AIAA-2016-2845 **Mesh Screen Application for Noise Reduction of Landing Gear Strut** P. Okolo, K. Zhao, J. Kennedy, G. Bennett, Trinity College Dublin, Dublin, Ireland	0900 hrs AIAA-2016-2846 **Aerodynamic noise prediction for a wind turbine using numerical flow simulations and semi-empirical modelling approaches** A. Rasam, Royal Institute of Technology (KTH), Stockholm, Sweden; J. Botha, Trinity College Dublin, Dublin, Ireland; K. Bolin, C. O'Reilly, G. Efraimsson, Royal Institute of Technology (KTH), Stockholm, Sweden; H. Rice, Trinity College Dublin, Dublin, Ireland	0930 hrs AIAA-2016-2847 **Large eddy simulation of tonal noise at a side-view mirror using a high order discontinuous Galerkin method** H. Frank, C. Munz, University of Stuttgart, Stuttgart, Germany	1000 hrs AIAA-2016-2848 **Unsteady Aerodynamics of High Speed Train Pantograph Cavity Flow Control for Noise Reduction** H. Kim, University of Southampton, Southampton, United Kingdom	1030 hrs AIAA-2016-2849 **Comparison of Far-Field Acoustic Prediction Techniques in Application to Tonal Noise Radiation of Transitional Airfoils** S. Salehian, L. Nguyen, V. Golubev, R. Mankbadi, Embry-Riddle Aeronautical University, Daytona Beach, FL			

Tuesday, 31 May 2016								
27-AA-25	**Duct Acoustics III**							**Rhône 2**
Chaired by: S. RIENSTRA, Technische Universiteit Eindhoven								
0800 hrs AIAA-2016-2850 **Multi-port Characterization of a Modal Filter Containing Micro-perforated Panels** H. Denayer, V. Korchagin, W. De Roeck, W. Desmet, Catholic University of Leuven, Leuven, Belgium	0830 hrs AIAA-2016-2851 **Full Multi-Port Characterization of a Circular Orifice-Plate** S. Sack, M. Åbom, Royal Institute of Technology (KTH), Stockholm, Sweden	0900 hrs AIAA-2016-2853 **Measurement of Perforate Impedance with grazing flow on both Sides** M. Farooqui, T. Elnady, Ain Shams University, Cairo, Egypt; M. Åbom, Royal Institute of Technology (KTH), Stockholm, Sweden	0930 hrs AIAA-2016-2854 **PIV Measurement of a Porous Liner in a Duct with Flow** A. Alomar, Y. Auregan, National Center for Scientific Research (CNRS), Le Mans, France	1000 hrs AIAA-2016-2855 **HVAC noise simulations using direct and hybrid methods** A. Kierkegaard, A. West, S. Caro, CD-adapco, London, United Kingdom	1030 hrs AIAA-2016-2856 **Sound Propagation and Radiation from an Unflanged Circular Duct: A Benchmark Problem Revisited** M. Dahl, NASA Glenn Research Center, Cleveland, OH; D. Hixon, University of Toledo, Toledo, OH			

Tuesday, 31 May 2016		
28-AA-26 **0800 - 1130 hrs**	**Fan Broadband Noise Workshop**	**Saint Clair 1**

Tuesday, 31 May 2016								
29-AA-27	**Jet Noise IV: Surface Interactions**							**Auditorium Pasteur**
Chaired by: F. VUILLOT, ONERA								
0800 hrs AIAA-2016-2857 **A model problem for sound radiation by an installed jet** P. Nogueira, A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France	0830 hrs AIAA-2016-2858 **PSE-based prediction of sound radiation by installed jets** P. Nogueira, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; S. Piantanida, National Center for Scientific Research (CNRS), Poitiers, France; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France	0900 hrs AIAA-2016-2859 **Hydrodynamic pressure field propagation model for the prediction of the far-field sound produced by jet-wing interaction** J. Vera, J. Lawrence, University of Southampton, Southampton, United Kingdom; M. Kingan, University of Auckland, Auckland, New Zealand; R. Self, S. Sinayoko, University of Southampton, Southampton, United Kingdom	0930 hrs AIAA-2016-2860 **Effects of coherence on jet-surface interaction noise** F. da Silva, A. da Silva, C. Deschamps, Federal University of Santa Catarina, Florianópolis, Brazil; P. Jordan, S. Piantanida, Institut Pprime, CNRS-ENSMA-Univ. Poitiers, Poitiers, France; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; et al.	1000 hrs AIAA-2016-2861 **Cross-statistical and wavelet analysis of velocity and wall-pressure fields in jet-surface interaction** M. Mancinelli, A. Di Marco, R. Camussi, Roma Tre University, Rome, Italy	1030 hrs AIAA-2016-2862 **Modeling Jet-Surface Interaction Noise for Separate Flow Nozzles** C. Brown, G. Podboy, J. Bridges, NASA Glenn Research Center, Cleveland, OH	1100 hrs AIAA-2016-2863 **Jet Surface Interaction Noise in a Planar Exhaust** A. Khavaran, R. Bozak, C. Brown, NASA Glenn Research Center, Cleveland, OH		

Tuesday, 31 May 2016								
30-AA-28	**Jet Noise V**							**Rhône 1**
Chaired by: U. MICHEL, CFD Software GmbH								
0800 hrs AIAA-2016-2864 **Hydrodynamic and Acoustic Wavelet-Based Separation of the Near-Field Pressure of a Compressible Jet** M. Mancinelli, T. Pagliaroli, A. Di Marco, R. Camussi, Roma Tre University, Rome, Italy; T. Castelain, École Centrale de Lyon, Lyon, France; O. Leon, ONERA, Paris, France	0830 hrs AIAA-2016-2865 **On removing the near-field coherent structures in a jet and its impact on the radiated sound** Z. Fu, A. Agarwal, University of Cambridge, Cambridge, United Kingdom; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France; G. Brès, Cascade Technologies, Inc., Palo Alto, CA	0900 hrs AIAA-2016-2866 **Jet noise reduction through filtering small-scale structures** Z. Fu, A. Agarwal, University of Cambridge, Cambridge, United Kingdom; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, G. Lehnasch, National Center for Scientific Research (CNRS), Poitiers, France; G. Daviller, Fluid Mechanics Institute of Toulouse (IMFT), Toulouse, France	0930 hrs AIAA-2016-2867 **On the properties of fluctuating turbulent stress sources for high-speed jet noise** V. Semiletov, University of Cambridge, Cambridge, United Kingdom; S. Karabasov, Queen Mary University of London, London, United Kingdom	1000 hrs AIAA-2016-2868 **Jet-noise reduction: the effect of azimuthal actuation modes** M. Le Rallic, P. Jordan, Y. Gervais, National Center for Scientific Research (CNRS), Poitiers, France	1030 hrs AIAA-2016-2869 **The aeroacoustics of a subsonic rectangular jet** R. Henrywood, A. Agarwal, University of Cambridge, Cambridge, United Kingdom; K. Kanjere, Dyson, Ltd., Malmesbury, United Kingdom			

Tuesday, 31 May 2016								
31-AA-29	**Propeller and Rotor Noise I**							**Saint Clair 4**
Chaired by: M. WANG, University of Notre Dame								
0800 hrs AIAA-2016-2870 **On trailing edge noise with application in hydroacoustics.** D. Nigro, I. Abrahams, University of Manchester, Manchester, United Kingdom	0830 hrs AIAA-2016-2871 **Fast Prediction Model for Tonal Noise from Propellers or Rotors** B. Marinus, Royal Military Academy, Brussels, Belgium; A. Halimi, Polytechnical School of Algiers, Algiers, Algeria; M. Jeanpierre, École Spéciale Militaire de Saint-Cyr, Guer, France	0900 hrs AIAA-2016-2872 **Airfoil-Gust Interactions in Transonic Flow** J. Gill, University of Southampton, Southampton, United Kingdom; X. Zhang, S. Zhong, R. Fattah, Hong Kong University of Science and Technology, Hong Kong, Hong Kong	0930 hrs AIAA-2016-2873 **Experimental Study of Quadcopter Acoustics and Performance at Static Thrust Conditions** N. Intaratep, W. Alexander, W. Devenport, Virginia Polytechnic Institute and State University, Blacksburg, VA; S. Grace, Boston University, Boston, MA; A. Dropkin, Aurora Flight Sciences, Cambridge, MA	1000 hrs AIAA-2016-2874 **A Time-Domain Convected High-Speed Impulsive Noise Simulation for Propeller at Incidence** Z. Huang, G. Ghorbaniasl, L. Siozos-Rousoulis, C. Lacor, Vrije Universiteit Brussel, Brussels, Belgium	1030 hrs AIAA-2016-2875 **Pusher-Propeller Installation Effects in Angular Inflow** T. Sinnige, D. Ragni, G. Eitelberg, L. Veldhuis, Delft University of Technology, Delft, The Netherlands			

Tuesday, 31 May 2016								
32-AA-30	**Turbomachinery Noise III**							**Saint Clair 2**
Chaired by: W. SCHUSTER, Honeywell International, Inc.								
0800 hrs AIAA-2016-2876 **Numerical and Experimental Results of a Turning Mid Turbine Frame with Embedded Design in terms of Acoustic Mode Analysis** S. Zerobin, P. Bader, C. Faustmann, A. Marn, E. Göttlich, Graz University of Technology, Graz, Austria	0830 hrs AIAA-2016-2877 **Measurement techniques for mode detection in aeroengine inter-stage sections** J. Chen, P. Joseph, University of Southampton, Southampton, United Kingdom	0900 hrs AIAA-2016-2878 **Sound radiation of fan tones from an installed turbofan aero-engine: fuselage boundary-layer refraction effects** J. Gaffney, A. McAlpine, Southampton University, Southampton, United Kingdom; K. Michael, University of Auckland, Auckland, New Zealand	0930 hrs AIAA-2016-2879 **Numerical Simulations of Shock-Wave Propagation in Turbofan Intakes** J. Thisse, C. Polacsek, J. Mayeur, ONERA, Châtillon, France; S. Khelladi, X. Gloerfelt, Paris Institute of Technology, Paris, France; A. Lafitte, Safran Group, Villaroche, France	1000 hrs AIAA-2016-2880 **On a mode-matching technique for sound generation and transmission in a three-dimensional annular cascade of outlet guide vanes** S. Bouley, B. François, M. Roger, École Centrale de Lyon, Ecully, France	1030 hrs AIAA-2016-2881 **Influence and modeling of OGV heterogeneity** M. Sanjose, University of Sherbrooke, Sherbrooke, Canada; M. Pestana, École Centrale de Lyon, Ecully, France; S. Moreau, University of Sherbrooke, Sherbrooke, Canada; M. Roger, École Centrale de Lyon, Ecully, France	1100 hrs AIAA-2016-2882 **Motor Noise for Electric Powered Aircraft** D. Huff, B. Henderson, E. Envia, NASA Glenn Research Center, Cleveland, OH		

Tuesday, 31 May 2016		
33-PLNY-3 1130 - 1230 hrs	Future Poser Plant Systems Challenges	Auditorium Pasteur
	Cedric Morel Safran-Sncema	

Tuesday, 31 May 2016								
34-AA-31	Aeroacoustic Interactions IV: Cavities and Liners							Saint Clair 3B
Chaired by: R. EWERT, DLR - German Aerospace Center								
1400 hrs AIAA-2016-2883 **On The Modal Behaviour of Trapped Acoustic Modes in a Square Ducted Cavity** M. Bolduc, S. Ziada, McMaster University, Hamilton, Canada; P. Lafon, EDF, Clamart, France	1430 hrs AIAA-2016-2884 **Effect of viscosity, eddy viscosity and velocity profile on the unstable mode in a lined duct with flow** B. Xin, X. Jing, X. Sun, Beihang University, Beijing, China	1500 hrs AIAA-2016-2885 **Geometry Effect Investigation on Parallel-Coupled Helmholtz Resonators for Duct Noise Damping** C. Ji, D. Zhao, X. Li, M. Yin, J. Li, Nanyang Technological University, Singapore, Singapore	1530 hrs AIAA-2016-2886 **Measured Source Term in Corrugated Pipes with Flow. Effect of Diameter on Pulsation Source.** J. Golliard, F. Sanna, TNO, Delft, The Netherlands; Y. Auregan, University of Maine, Le Mans, France; D. Violato, TNO, Delft, The Netherlands	1600 hrs **Break**	1630 hrs AIAA-2016-2887 **An asymptotic model for non-linear Helmholtz resonator of finite depth** S. Rienstra, D. Singh, Eindhoven University of Technology, Eindhoven, The Netherlands	1700 hrs AIAA-2016-2888 **Unsteady Wall Pressure Measurements In An Outflow Butterfly Valve Using Remote Microphone Probes** A. Marsan, M. Sanjose, Y. Pasco, S. Moreau, M. Brouillette, University of Sherbrooke, Sherbrooke, Canada		

Tuesday, 31 May 2016								
35-AA-32	Active Control							Saint Clair 1
Chaired by: R. SANDBERG, University of Melbourne								
1400 hrs AIAA-2016-2889 **Direct Numerical Simulations for Adjoint-based Optimal Flow and Noise Control of a Backward-Facing Step** J. Otero, University of Southampton, Southampton, United Kingdom; R. Sandberg, University of Melbourne, Melbourne, Australia; A. Sharma, University of Southampton, Southampton, United Kingdom	1430 hrs AIAA-2016-2890 **Plasma Actuator for Cylinder Noise Mitigation** V. Kopiev, I. Belyaev, V. Kopiev, M. Zaitsev, TsAGI, Moscow, Russia	1500 hrs AIAA-2016-2891 **Reduction of UHBR fan blade tones by flow induced secondary sound sources** L. Neuhaus, U. Tapken, L. Enghardt, G. Enders, German Aerospace Center (DLR), Berlin, Germany; J. Zillmann, Airbus, Munich, Germany	1530 hrs AIAA-2016-2892 **Acoustic Study of a Sweeping Jet Actuator for Active Flow Control (AFC) Applications** W. Horne, N. Burnside, NASA Ames Research Center, Moffett Field, CA					

Tuesday, 31 May 2016								
36-AA-33	Advanced Testing Techniques II							Rhône 3A
Chaired by: D. SUTLIFF, NASA Glenn Research Center								
1400 hrs AIAA-2016-2894 **Validation of an in-duct to far-field beamformer method for predicting far-field fan broadband noise** B. Tester, University of Southampton, Southampton, United Kingdom; Y. Özyörük, Middle East Technical University, Ankara, Turkey; D. Sutliff, R. Bozak, NASA Glenn Research Center, Cleveland, OH	1430 hrs AIAA-2016-2895 **Low speed anechoic closed test section at ONERA S1MA Wind tunnel** F. Mery, ONERA, Modane, France	1500 hrs AIAA-2016-2897 **Acoustic source localisation on a model engine jet with different nozzle configurations and wing installation** H. Siller, S. Funke, J. König, German Aerospace Center (DLR), Berlin, Germany	1530 hrs AIAA-2016-2898 **Development and Calibration of a Field-Deployable Microphone Phased Array for Propulsion and Airframe Noise Flyover Measurements** W. Humphreys, D. Lockard, M. Khorrami, W. Culliton, R. McSwain, NASA Langley Research Center, Hampton, VA; P. Ravetta, AVEC, Inc., Blacksburg, VA; et al.	1600 hrs **Break**	1630 hrs AIAA-2016-2899 **Imaging of Broadband Noise from Rotating Sources in Uniform Axial Flow** C. Ocker, W. Pannert, Aalen University, Aalen, Germany			

Tuesday, 31 May 2016								
37-AA-34	**Airframe Noise III: Landing Gear**							**Saint Clair 3A**
Chaired by: E. MANOHA, ONERA								
1400 hrs AIAA-2016-2900 **The Reduction of Main Landing Gear Noise** J. Kennedy, E. Neri, G. Bennett, Trinity College Dublin, Dublin, Ireland	1430 hrs AIAA-2016-2901 **Acoustic Measurements of a Large Civil Transport Main Landing Gear Model** P. Ravetta, AVEC, Inc., Blacksburg, VA; M. Khorrami, NASA Langley Research Center, Hampton, VA; R. Burdisso, AVEC, Inc., Blacksburg, VA	1500 hrs AIAA-2016-2902 **High-Order Numerical Simulations of An Isolated Landing Gear Wheel with A Hub Cavity** M. Wang, D. Angland, University of Southampton, Southampton, United Kingdom; X. Zhang, R. Fattah, Hong Kong University of Science and Technology, Hong Kong, China	1530 hrs AIAA-2016-2903 **Development of an empirical model for landing gear noise prediction** Y. Jiang, China Aerodynamics Research and Development Center, Mianyang, China; A. Filippone, University of Manchester, Manchester, United Kingdom	1600 hrs **Break**	1630 hrs AIAA-2016-2904 **The Influence of Yaw on the Unsteady Aerodynamics over a Two-wheeled Landing Gear Model** A. Gatto, Brunel University London, Uxbridge, United Kingdom; W. Graham, University of Cambridge, Cambridge, United Kingdom	1700 hrs AIAA-2016-2905 **Passive Control of Tandem Cylinders Flow and Noise Using Porous Coating** H. Liu, Northwestern Polytechnical University, Xi'an, China; M. Azarpeyvand, University of Bristol, Bristol, United Kingdom		

Tuesday, 31 May 2016								
38-AA-35	**Community and Interior Noise**							**Saint Clair 4**
Chaired by: S. RIZZI, NASA Langley Research Center								
1400 hrs AIAA-2016-2906 **Auralization of NASA N+2 Aircraft Concepts from System Noise Predictions** S. Rizzi, C. Burley, R. Thomas, NASA Langley Research Center, Hampton, VA	1430 hrs AIAA-2016-2907 **A Psychoacoustic Evaluation of Noise Signatures from Advanced Civil Transport Aircraft** S. Rizzi, A. Christian, NASA Langley Research Center, Hampton, VA	1500 hrs AIAA-2016-2908 **Sound synthesis and 3D sound rendering of aircraft flyovers with controllable parameters** A. Minard, S. Hourcade, C. Lambourg, P. Boussard, GENESIS Acoustics, Aix-en-Provence, France	1530 hrs AIAA-2016-2909 **Quantifying the audible differences in measured and auralized aircraft sounds** A. Sahai, D. Simons, Delft University of Technology, Delft, The Netherlands	1600 hrs **Break**	1630 hrs AIAA-2016-2910 **Influence of pressure gradients and Reynolds number on wall-pressure wavenumber-frequency spectra** X. Gloerfelt, Paris Institute of Technology, Paris, France	1700 hrs AIAA-2016-2911 **Numerical Study of Wall Pressure Fluctuations for Zero and Non-Zero Pressure Gradient Turbulent Boundary Layers** N. Hu, C. Appel, M. Herr, R. Ewert, N. Reiche, German Aerospace Center (DLR), Braunschweig, Germany	1730 hrs AIAA-2016-2912 **Estimation of Automotive Wind Noise by Coupling a Lattice Boltzmann Based Flow Simulation to Statistical Energy Analysis** F. Vanherpe, R. Haidar, C. Qi, PSA Peugeot Citroën, Vélizy-Villacoublay, France	1800 hrs AIAA-2016-2913 **Contribution of coherent structures to wall-pressure beneath turbulent boundary layer flows subjected to pressure gradients** M. Alaoui, X. Gloerfelt, Paris Institute of Technology, Paris, France; A. Sengissen, Airbus, Toulouse, France

Tuesday, 31 May 2016								
39-AA-36	**CAA VI: Boundary conditions and Airfoils**							**Rhône 3B**
Chaired by: V. GOLUBEV, Embry-Riddle Aeronautical University (ERAU)								
1400 hrs AIAA-2016-2914 **Towards a Generic Non-Reflective Characteristic Boundary Condition for Aeroacoustic Simulations** R. Fattah, Hong Kong University of Science and Technology, Kowloon, Hong Kong; J. Gill, University of Southampton, Southampton, United Kingdom; X. Zhang, Hong Kong University of Science and Technology, Kowloon, Hong Kong	1430 hrs AIAA-2016-2915 **Development and Evaluation of Non-Reflective Boundary Conditions for Lattice Boltzmann Method** F. Chevillotte, Matelys - Research Lab, Vaulx-en-Velin, France; D. Ricot, Renault, Guyancourt, France	1500 hrs AIAA-2016-2917 **Determination of Acoustic Impedance for Helmholtz Resonators Through Incompressible Unsteady Flow Simulations** J. Tournadre, KU Leuven, Leuven, Belgium; K. Förner, Technical University of Munich, Munich, Germany; P. Martinez-Lera, Siemens, Leuven, Belgium; W. Polifke, Technical University of Munich, Munich, Germany; W. Desmet, KU Leuven, Leuven, Belgium	1530 hrs AIAA-2016-2918 **A Numerical Study of Synthetic-Jet Actuation Effect on Airfoil Trailing Edge Noise** M. Sansone, L. Nguyen, V. Golubev, R. Mankbadi, Embry-Riddle Aeronautical University, Daytona Beach, FL	1600 hrs **Break**	1630 hrs AIAA-2016-2919 **Large Eddy Simulation of Airfoil Self-Noise at High Reynolds Number** J. Kocheemoolayil, S. Lele, Stanford University, Stanford, CA	1700 hrs AIAA-2016-2920 **Prediction of porous trailing edge noise reduction using acoustic jump-conditions at porous interfaces** L. Rossian, B. Fassmann, R. Ewert, J. Delfs, German Aerospace Center (DLR), Braunschweig, Germany		

Tuesday, 31 May 2016								
40-AA-37	**Duct Acoustics IV: Modeling**							**Rhône 2**
Chaired by: E. BRAMBLEY, University of Cambridge								
1400 hrs AIAA-2016-2921 **A Statistical Approach to Broadband Noise Suppression** W. Eversman, Missouri University of Science and Technology, Rolla, MO	1430 hrs AIAA-2016-2922 **Asymptotic and numerical Green's functions in a lined duct with realistic shear and swirl** J. Mathews, N. Peake, University of Cambridge, Cambridge, United Kingdom; S. Bianchi, Rolls-Royce Group plc, Derby, United Kingdom	1500 hrs AIAA-2016-2923 **New Insights into Mode Nonorthogonality in Ducts with Impedance Boundary Conditions** W. Bi, V. Pagneux, University of Maine, Le Mans, France	1530 hrs AIAA-2016-2924 **Influence of shear flow on liner impedance computed by multimodal method** X. Dai, Y. Auregan, University of Maine, Le Mans, France	1600 hrs **Break**	1630 hrs AIAA-2016-2928 **On the Interaction of NA Acoustic Liner with a Boundary Layer and a Cross-Flow** L. Braga da Costa Campos, Technical University of Lisbon, Lisbon, Portugal	1700 hrs AIAA-2016-2926 **A Spectral Boundary Integral Method for Computing the Effect of Locally and Non-locally Reacting Liners in Flow Duct Applications** E. Perrey-Debain, R. Maréchal, J. Ville, University of Technology, Compiègne, France	1730 hrs AIAA-2016-2927 **Comparative study of different analytical approaches for modelling the transmission of sound waves through turbomachinery stators** M. Behn, U. Tapken, German Aerospace Center (DLR), Berlin, Germany; P. Puttkammer, R. Hagmeijer, University of Twente, Enschede, The Netherlands; N. Thouault, MTU Aero Engines, Munich, Germany	1800 hrs AIAA-2016-2925 **Sound Propagation in Slowly Varying 2D Duct with Shear Flow** S. Rienstra, Technical University of Eindhoven, Eindhoven, The Netherlands

Tuesday, 31 May 2016								
41-AA-38	**Jet Noise VI**							**Auditorium Pasteur**
Chaired by: D. MCLAUGHLIN, Pennsylvania State University								
1400 hrs AIAA-2016-2929 **Azimuthal organisation of turbulent structures in underexpanded impinging round jets** R. Gojon, C. Bogey, École Centrale de Lyon, Ecully, France	1430 hrs AIAA-2016-2930 **Effect of Nozzle-Plate Distance on Acoustic Phenomena from Supersonic Impinging Jet** M. Akamine, K. Okamoto, University of Tokyo, Kashiwa, Japan; K. Gee, T. Neilsen, Brigham Young University, Provo, UT; S. Teramoto, T. Okunuki, University of Tokyo, Bunkyo, Japan; et al.	1500 hrs AIAA-2016-2931 **Investigation of the feedback mechanism in ideally expanded round impinging jets using large-eddy simulation** R. Gojon, C. Bogey, École Centrale de Lyon, Ecully, France	1530 hrs AIAA-2016-2932 **Theoretical modeling of the excess noise due to jet-wing interaction** S. Denisov, G. Faranosov, N. Ostrikov, O. Bychkov, TsAGI, Moscow, Russia	1600 hrs **Break**	1630 hrs AIAA-2016-2933 **Turbulence Modelling and Meshing Developments for the Prediction of Jet Noise Installation Effects** C. Mockett, M. Fuchs, F. Kramer, U. Michel, CFD Software GmbH, Berlin, Germany; M. Steger, Rolls-Royce Group plc, Dahlewitz, Germany; F. Thiele, CFD Software GmbH, Berlin, Germany	1700 hrs AIAA-2016-2934 **Input-output analysis of heated axisymmetric turbulent jets** J. Jeun, J. Nichols, M. Jovanovic, University of Minnesota, Minneapolis, Minneapolis, MN	1730 hrs AIAA-2016-2935 **Stochastic and harmonic optimal forcing in subsonic jets** O. Semeraro, LadHyX, Palaiseau, France; V. Jaunet, P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France; A. Cavalieri, Instituto Tecnológico de Aeronáutica, São José dos Campos, Brazil; L. Lesshafft, LadHyX, Palaiseau, France	

Tuesday, 31 May 2016								
42-AA-39	**Jet Noise VII: Supersonic Jets**							**Rhône 1**
Chaired by: K. AHUJA, Georgia Institute of Technology								
1400 hrs AIAA-2016-2936 **Effects of Disturbed Nozzle-exit Boundary Layers on Acoustic Waves from Ideally-expanded Supersonic Jet** T. Nonomura, A. Oyama, K. Fujii, Japan Aerospace Exploration Agency (JAXA), Sagamihara, Japan; K. Morihira, G. Pichon, D. Terakado, University of Tokyo, Sagamihara, Japan	1430 hrs AIAA-2016-2937 **Effects of Temperature on Noise Generation in Supersonic Jets** J. Liu, A. Corrigan, K. Kailasanath, Naval Research Laboratory, Washington, D.C.; E. Gutmark, University of Cincinnati, Cincinnati, OH	1500 hrs AIAA-2016-2938 **Numerical Simulation of Supersonic Twin-Jet Noise with High Order Finite Difference Scheme** J. Gao, X. Xu, X. Li, Beihang University, Beijing, China	1530 hrs AIAA-2016-2939 **Effects of Extended Expansion Ramps on Flow and Acoustic Field of Low Supersonic Single Expansion Ramp Nozzles** B. Malla, E. Gutmark, University of Cincinnati, Cincinnati, OH	1600 hrs **Break**	1630 hrs AIAA-2016-2940 **Coupling Dynamics of Twin Supersonic Round Jets** J. Cluts, C. Kuo, M. Samimy, Ohio State University, Columbus, OH	1700 hrs AIAA-2016-2941 **Mode Decomposition of a Supersonic Jet** U. Sasidharan Nair, D. Gaitonde, Ohio State University, Columbus, OH	1730 hrs AIAA-2016-2942 **Acoustic fields of a supersonic jet deflected by wedges mounted on a flat plate** S. Patel, J. Mathew, Indian Institute of Science, Bangalore, India	

Tuesday, 31 May 2016								
43-AA-40	**Turbomachinery Noise IV: Broadband**							**Saint Clair 2**
Chaired by: H. ATASSI, University of Notre Dame								
1400 hrs AIAA-2016-2943 **Acoustic Characterization of Forward- and Backward-Skewed Axial Fans under Increased Inflow Turbulence** F. Zenger, University of Erlangen-Nürnberg, Erlangen, Germany; G. Herold, Brandenburg University of Technology, Cottbus, Germany; S. Becker, University of Erlangen-Nürnberg, Erlangen, Germany	1430 hrs AIAA-2016-2944 **Fan-OGV interaction broadband noise prediction in a rigid annular duct with swirling and sheared mean flow.** V. Masson, University of Sherbrooke, Sherbrooke, Canada; H. Posson, Airbus, Toulouse, France; M. Sanjose, T. Léonard, S. Moreau, University of Sherbrooke, Sherbrooke, Canada; M. Roger, École Centrale de Lyon, Lyon, France	1500 hrs AIAA-2016-2945 **Turbofan Broadband Noise Prediction using the Lattice Boltzmann Method** D. Casalino, A. Hazir, Exa Corporation, Stuttgart, Germany; A. Mann, Exa Corporation, Brisbane, CA	1530 hrs AIAA-2016-2946 **Investigation of methods for including vane geometry in predictions of fan broadband noise** S. Grace, D. Villafranco, A. Wixom, Boston University, Boston, MA	1600 hrs **Break**	1630 hrs AIAA-2016-2947 **Analytical models based on a mode-matching technique for turbulence impingement noise on axial-flow outlet guide vanes** B. François, S. Bouley, M. Roger, École Centrale de Lyon, Ecully, France; S. Moreau, Université de Sherbrooke, Sherbrooke, Canada	1700 hrs AIAA-2016-2948 **Effects of Vane Sweep on Fan-Wake/Outlet-Guide-Vane Interaction Broadband Noise** H. Ju, General Electric Company, Niskayuna, NY	1730 hrs AIAA-2016-2949 **Three-Dimensional Modeling of Annular Cascade Trailing-Edge Noise** M. Roger, B. François, M. Bauerheim, École Centrale de Lyon, Ecully, France	1800 hrs AIAA-2016-2950 **Turbofan broadband noise predictions using a 3-D ZDES rotor blade approach** V. Bonneau, Safran, Magny-les-Hameaux, France; C. Polacsek, ONERA, Châtillon, France; L. Castillon, J. Marty, ONERA, Meudon, France; Y. Gervais, Institut Pprime, Poitiers, France; S. Moreau, University of Sherbrooke, Sherbrooke, Canada

Wednesday

Wednesday, 1 June 2016								
44-AA-41	**Leading Edge Noise II: Control**							**Saint Clair 3B**
Chaired by: P. JOSEPH, ISVR/University of Southampton								
0800 hrs AIAA-2016-2951 **Towards Understanding Aerofoils with Dual-Frequency Wavy Leading Edges Interacting with Vortical Disturbances** J. Turner, J. Kim, C. Paruchuri, P. Joseph, University of Southampton, Southampton, United Kingdom	0830 hrs AIAA-2016-2952 **Towards Understanding Aerofoils with Wavy Leading Edges Interacting with Vortical Disturbances** J. Turner, J. Kim, University of Southampton, Southampton, United Kingdom	0900 hrs AIAA-2016-2953 **Experimental validation of a wind turbine turbulent inflow noise prediction code** S. Buck, Siemens, Boulder, CO; S. Oerlemans, Siemens, Brande, Denmark; S. Palo, University of Colorado, Boulder, Boulder, CO	0930 hrs AIAA-2016-2954 **Experimental Investigation of Leading Edge Hook Structures for Wind Turbine Noise Reduction** T. Geyer, Brandenburg University of Technology, Cottbus, Germany; S. Wasala, J. Cater, S. Norris, University of Auckland, Auckland, New Zealand; E. Sarradj, Brandenburg University of Technology, Cottbus, Germany	1000 hrs AIAA-2016-2955 **Experimental Study of Wake / Flap Interaction Noise and the Reduction of Flap Side Edge Noise** F. Hutcheson, NASA Langley Research Center, Hampton, VA; D. Stead, Northrop Grumman Corporation, Hampton, VA; G. Plassman, National Institute of Aerospace, Hampton, VA	1030 hrs AIAA-2016-2956 **An Experimental and Numerical Investigation of Airfoil Instability Noise with Leading Edge Serrations** W. Chen, W. Qiao, Northwestern Polytechnical University, Xi'an, China; X. Wang, State Key Laboratory of Aerodanymics, Mianyang, China; L. Wang , F. Tong, Northwestern Polytechnical University, Xi'an, China			

Wednesday, 1 June 2016								
45-AA-42	**Airframe Noise IV: High-Lift Systems**							**Saint Clair 3A**
Chaired by: Y. GUO, NEAT Consulting								
0800 hrs AIAA-2016-2957 **Modeling and Prediction of Krueger Device Noise** Y. Guo, NEAT Consulting, Seal Beach, CA; C. Burley, R. Thomas, NASA Langley Research Center, Hampton, VA	0830 hrs AIAA-2016-2958 **Computational Design of a Krueger Flap Targeting Conventional Slat Aerodynamics** H. Akaydin, J. Housman, C. Kiris, NASA Ames Research Center, Moffett Field, CA; C. Bahr, F. Hutcheson, NASA Langley Research Center, Hampton, VA	0900 hrs AIAA-2016-2959 **Study on Change of Noise Generation from Slat Track Shape** M. Murayama, Y. Yokokawa, Y. Ito, K. Yamamoto, T. Takaishi, H. Ura, Japan Aerospace Exploration Agency (JAXA), Mitaka, Japan; et al.	0930 hrs AIAA-2016-2960 **Aeroacoustic Measurements of Leading-Edge Slat Noise** K. Pascioni, L. Cattafesta, Florida State University, Tallahassee, FL	1000 hrs AIAA-2016-2961 **A Comparison of the Noise Characteristics of a Conventional Slat and Krueger Flap** C. Bahr, F. Hutcheson, R. Thomas, NASA Langley Research Center, Hampton, VA; J. Housman, NASA Ames Research Center, Moffett Field, CA	1030 hrs AIAA-2016-2962 **Noise Prediction of a Simplified High-Lift Device** P. Salas, S. Moreau, University of Sherbrooke, Sherbrooke, Canada	1100 hrs AIAA-2016-2963 **Slat Noise Predictions using Higher-Order Finite-Difference Methods on Overset Grids** J. Housman, C. Kiris, NASA Ames Research Center, Moffett Field, CA		

Wednesday, 1 June 2016								
46-AA-43	**CAA VII**							**Rhône 3A**
Chaired by: M. KHORRAMI, NASA Langley Research Center								
0800 hrs AIAA-2016-2964 **Realization of Arbitrary Vorticity Spectra using Generic Stochastic Turbulence** N. Reiche, R. Ewert, German Aerospace Center (DLR), Braunschweig, Germany	0830 hrs AIAA-2016-2965 **Canonical Stochastic Realization of Turbulent Sound Sources via Forced Linear Advection-Diffusion-Dissipation Equation** R. Ewert, German Aerospace Center (DLR), Braunschweig, Germany	0900 hrs AIAA-2016-2966 **On Efficient Vertex-Centered Schemes on Hybrid Unstructured Meshes** T. Kozubskaya, P. Bakhvalov, Russian Academy of Sciences, Moscow, Russia	0930 hrs AIAA-2016-2967 **GPU CABARET Solutions for the SILOET Jet Noise Experiment: Flow and Noise Modelling.** A. Markesteijn, Queen Mary University of London, London, United Kingdom; V. Semiletov, University of Cambridge, Cambridge, United Kingdom; S. Karabasov, Queen Mary University of London, London, United Kingdom	1000 hrs AIAA-2016-2968 **Scattering to Higher Harmonics for Quarter Wave and Helmholtz Resonators** K. Förner, Technical University of Munich, Munich, Germany; J. Tournadre, P. Martinez-Lera, Siemens, Leuven, Belgium; W. Polifke, Technical University of Munich, Munich, Germany				

Wednesday, 1 June 2016								
47-AA-44	**CAA VIII**							**Rhône 3B**
Chaired by: D. CASALINO, EXA GmbH								
0800 hrs AIAA-2016-2969 **Direct Noise Computation with a Lattice-Boltzmann Method and Application to Industrial Test Cases** R. Brionnaud, M. Chávez Modena, G. Trapani, D. M. Holman, Next Limit Technologies, Madrid, Spain	0830 hrs AIAA-2016-2970 **An Adaptive, High-Order Finite Element Method for Aeroengine Acoustics** G. Gabard, University of Southampton, Southampton, United Kingdom; H. Beriot, Siemens, Leuven, Belgium; A. Prinn, University of Southampton, Southampton, United Kingdom; K. Kucukcoskun, Siemens, Leuven, Belgium	0900 hrs AIAA-2016-2971 **Artificial Damping Methods for Stable Computations with Linearized Euler Equations** Y. Sun, S. Zhong, X. Zhang, Hong Kong University of Science and Technology, Hong Kong, Hong Kong; J. Gill, X. Chen, University of Southampton, Southampton, United Kingdom	0930 hrs AIAA-2016-2972 **A flux reconstruction technique for non-conforming grid interfaces in aeroacoustic simulations** S. Le Bras, CERFACS, Toulouse, France; H. Deniau, ONERA, Toulouse, France; C. Bogey, École Centrale de Lyon, Ecully, France	1000 hrs AIAA-2016-2973 **Linearized Navier-Stokes Equations and their Numerical Solution** A. Lario, R. Arina, Technical University of Turin, Torino, Italy	1030 hrs AIAA-2016-2974 **Impact of the Mean Flow Representation on DGM Simulations of Flow Acoustics** M. Williamschen, G. Gabard, University of Southampton, Southampton, United Kingdom; H. Beriot, Siemens, Leuven, Belgium	1100 hrs AIAA-2016-2975 **On fully-implicit solutions of the time-linearized Euler equations in a DG/Chimera solver** N. Wukie, P. Orkwis, University of Cincinnati, Cincinnati, OH		

Wednesday, 1 June 2016								
48-AA-45	**Duct Acoustics V**							**Rhône 2**
Chaired by: M. JONES, NASA-Langley Research Center								
0800 hrs AIAA-2016-2976 **Analytic model and concise impedance boundary condition for viscous acoustics in ducted shear flow** D. Khamis, E. Brambley, University of Cambridge, Cambridge, United Kingdom	0830 hrs AIAA-2016-2977 **Determination of the acoustic properties of liners under high level multi-tone excitation** H. Boden, Royal Institute of Technology (KTH), Stockholm, Sweden	0900 hrs AIAA-2016-2978 **Impedance and attenuation measurements of acoustic absorbers in a hot environment** C. Richter, C. Lahiri, Rolls-Royce Group plc, Blankenfelde-Mahlow, Germany; F. Bake, K. Knobloch, German Aerospace Center (DLR), Berlin, Germany; R. Pongratz, D. Redmann, Airbus, Ottobrunn, Germany	0930 hrs AIAA-2016-2979 **Acoustic Liner Drag: Measurements on Novel Facesheet Perforate Geometries** B. Howerton, M. Jones, NASA Langley Research Center, Hampton, VA	1000 hrs AIAA-2016-2980 **Acoustic Characterization of a Hybrid Liner Consisting of Porous Material by Using A Unified Linearized Navier-Stokes Approach** W. Na, S. Boij, G. Efraimsson, Royal Institute of Technology (KTH), Stockholm, Sweden	1030 hrs AIAA-2016-2981 **Enhancement of sound absorption in ducts using porous material with embedded inclusions** L. Xiong, University of Maine, Le Mans, France; H. Posson, D. Lizarazu, Airbus, Toulouse, France; Y. Auregan, University of Maine, Le Mans, France	1100 hrs AIAA-2016-2982 **Development of a single degree of freedom micro-perforate impedance model under grazing flow and high SPL** P. Murray, University of Southampton, Southampton, United Kingdom; C. Donnan, Bombardier Aerospace, Belfast, United Kingdom; C. Richter, Rolls-Royce Group plc, Dahlewitz, Germany; R. Astley, University of Southampton, Southampton, United Kingdom		

Wednesday, 1 June 2016								
49-AA-46	**Jet Noise VIII: Experiments**							**Auditorium Pasteur**
Chaired by: P. JORDAN, CNRS PPRIME INSTITUTE								
0800 hrs AIAA-2016-2983 **Design of a Facility for Shock-Cells Noise Experimental Investigation on a Subsonic/ Supersonic Coaxial Jet** D. Guariglia, University of Rome "La Sapienza", Rome, Italy; A. Rubio Carpio, C. Schram, von Kármán Institute for Fluid Dynamics, Rhode-Saint-Genèse, Belgium	0830 hrs AIAA-2016-2984 **Estimation of convection speed in underexpanded jets from schlieren pictures** T. Castelain, Claude Bernard University Lyon 1, Lyon, France; R. Gojon, B. Mercier, C. Bogey, École Centrale de Lyon, Ecully, France	0900 hrs AIAA-2016-2985 **Vortex Dynamics and Sound Emission in an Excited High-Speed Jet** M. Crawley, C. Kuo, M. Samimy, Ohio State University, Columbus, OH	0930 hrs AIAA-2016-2986 **Noise Prediction for Installed Jet** B. Lyu, A. Dowling, University of Cambridge, Cambridge, United Kingdom	1000 hrs AIAA-2016-2987 **Assessment of WALE and Sigma(σ) Sub-Grid Scale Models for Jet Noise Prediction** M. Mahak, M. Moratilla-Vega, G. Page, H. Xia, Loughborough University, Loughborough, United Kingdom				

Wednesday, 1 June 2016								
50-AA-47	**Jet Noise IX**							**Rhône 1**
Chaired by: D. BODONY, University of Illinois at Urbana-Champaign								
0800 hrs AIAA-2016-2988 **Simple Jet Noise Reduction Technique for Variable Nozzle of Supersonic Aircraft** J. Akatsuka, Y. Watanabe, T. Ishii, Japan Aerospace Exploration Agency (JAXA), Mitaka, Japan	0830 hrs AIAA-2016-2989 **Experimental and Numerical Study of Injector Design and Operation on Supersonic Jet Noise Reduction Using Fluidic Corrugations** S. Hromisin, J. Lampenfield, D. McLaughlin, P. Morris, Pennsylvania State University, State College, PA	0900 hrs AIAA-2016-2990 **Extending On-Demand Noise Reduction to Industry Scale for Tactical Aircraft** D. McLaughlin, P. Morris, Pennsylvania State University, State College, PA; S. Martens, E. Lariviere, General Electric Company, Evendale, OH	0930 hrs AIAA-2016-2991 **An Experimental Investigation of Jet Noise from Septae Nozzles** K. Zaman, J. Bridges, A. Fagan, C. Brown, NASA Glenn Research Center, Cleveland, OH	1000 hrs AIAA-2016-2992 **The Aeroacoustics of Offset Three-Stream Jets for Future Commercial Supersonic Aircraft** B. Henderson, D. Huff, NASA Glenn Research Center, Cleveland, OH				

Wednesday, 1 June 2016								
51-AA-48	**Propeller and Rotor Noise II: Turbulence Ingestion**							**Saint Clair 1**
Chaired by: W. ALEXANDER, Virginia Tech								
0800 hrs AIAA-2016-2994 **Phased Array Measurements of a Rotor Ingesting a Turbulent Shear Flow** W. Alexander, N. Molinaro, C. Hickling, H. Murray, W. Devenport, Virginia Polytechnic Institute and State University, Blacksburg, VA; S. Glegg, Florida Atlantic University, Boca Raton, FL	0830 hrs AIAA-2016-2995 **Sound Radiation from a Rotor Operating at High Thrust Near a Wall** S. Glegg, J. Grant, Florida Atlantic University, Boca Raton, FL; H. Murray, W. Devenport, W. Alexander, Virginia Polytechnic Institute and State University, Blacksburg, VA	0900 hrs AIAA-2016-2996 **Effect of the Edge-and-Tip Vortex on Airfoil Selfnoise and Turbulence Impingement Noise** J. Giez, L. Vion, Safran Group, Moissy-Cramayel, France; M. Roger, École Centrale de Lyon, Lyon, France; S. Moreau, University of Sherbrooke, Sherbrooke, Canada	0930 hrs AIAA-2016-2997 **Boundary Layer induced Rotor Noise using an Analytical Modal Approach** M. Staggat, A. Moreau, S. Guerin, German Aerospace Center (DLR), Berlin, Germany	1000 hrs AIAA-2016-2998 **Computation of the Noise of Rotor Interaction with a Turbulent Wake** J. Wang, K. Wang, M. Wang, University of Notre Dame, Notre Dame, IN	1030 hrs AIAA-2016-2999 **Aeroacoustic Study of the Interaction of a Rotating Blade with a Batchelor Vortex** P. Zehner, F. Falissard, ONERA, Châtillon, France; X. Gloerfelt, Paris Institute of Technology, Paris, France			

Wednesday, 1 June 2016								
52-AA-49	**Turbomachinery Noise V: Engines**							**Saint Clair 2**
Chaired by: E. ENVIA, NASA Glenn Research Center								
0800 hrs AIAA-2016-3000 **Large Eddy Simulation of a scale-model turbofan for fan noise source diagnostic** T. Leonard, M. Sanjose, S. Moreau, University of Sherbrooke, Sherbrooke, Canada; F. Duchaine, CERFACS, Toulouse, France	0830 hrs AIAA-2016-3001 **Noise Transmission Characteristics of a High Pressure Turbine Stage** K. Knobloch, S. Guerin, A. Holewa, German Aerospace Center (DLR), Berlin, Germany; Y. Mahmoudi-Larimi, T. Hynes, University of Cambridge, Cambridge, United Kingdom; F. Bake, German Aerospace Center (DLR), Berlin, Germany	0900 hrs AIAA-2016-3002 **Characterisation and modelling of axial fan noise** B. Faverjon, National Institute of Applied Sciences (INSA), Lyon, France; J. Fischer, C. Doolan, D. Moreau, Z. Prime, University of New South Wales, Sydney, Australia	0930 hrs AIAA-2016-3003 **Measurements of Interaction and Scattered Modes in a Mixed Bypass/Core Duct due to Multiple Rotating Source** D. Sutliff, NASA Glenn Research Center, Cleveland, OH; T. Marotta, Honeywell International, Inc., Phoenix, AZ	1000 hrs AIAA-2016-3004 **Indirect Noise Generation in a High Pressure Turbine Stage** F. Bake, German Aerospace Center (DLR), Berlin, Germany; P. Gaetani, G. Persico, Technical University of Milan, Milan, Italy; L. Neuhaus, K. Knobloch, German Aerospace Center (DLR), Berlin, Germany	1030 hrs AIAA-2016-3005 **Efficacy of a Multiple Degree of Freedom Acoustic Liner Installed in the Bypass of a Scale Model High Speed Fan** D. Sutliff, NASA Glenn Research Center, Cleveland, OH; D. Nark, M. Jones, NASA Langley Research Center, Hampton, VA	1100 hrs AIAA-2016-3006 **Farfield Acoustic Characteristics of the DGEN380 Turbofan Engine as Measured in the NASA Glenn AeroAcoustic Propulsion Laboratory** D. Sutliff, C. Brown, NASA Glenn Research Center, Cleveland, OH; B. Bayon, Price Induction, SA, Anglet, France; D. Sree, Tuskegee University, Tuskegee, AL		

Wednesday, 1 June 2016		
53-PLNY-4 **1130 - 1230 hrs**	**A Second Golden Age for Aeroacoustics?** **Aeroacoustic Modeling - A View Towards the Future.**	**Auditorium Pasteur**
Sanjiva Lele Stanford University		

Wednesday, 1 June 2016								
54-AA-50	**Loads, Sonic Fatigue and Boom**							**Saint Clair 1**
Chaired by: N. MURRAY, The University of Mississippi								
1400 hrs AIAA-2016-3007 **Wavenumber-Frequency Spectra of Pressure Fluctuations Measured via Fast Response Pressure Sensitive Paint** J. Panda, N. Roozeboom, J. Ross, NASA Ames Research Center, Moffett Field, CA	1430 hrs AIAA-2016-3008 **Unsteady Loading and Dynamic Response of a Structure Excited by a High-Speed Wall-Bounded Jet. Part I: Aerodynamic Excitation** J. Winkler, R. Schlinker, J. Simonich, United Technologies Corporation, East Hartford, CT; K. Low, Pratt & Whitney, East Hartford, CT	1500 hrs AIAA-2016-3009 **Unsteady Loading and Dynamic Response of a Structure Excited by a High-Speed Wall-Bounded Jet Part II: Structural Response** K. Homma, P. Braunwart, United Technologies Corporation, East Hartford, CT; B. Rapp, Pratt & Whitney, East Hartford, CT; R. Schlinker, United Technologies Corporation, East Hartford, CT	1530 hrs AIAA-2016-3010 **Finding the boom: Phased array processing applied to sonic boom direction of arrival estimation** T. Schultz, J. Underbrink, C. Hunting, J. Giannakis, The Boeing Company, Seattle, WA; M. Moore, Siemens, Phoenix, AZ; E. Hearing, NASA Armstrong Flight Research Center, Edwards, CA; et al.	1600 hrs **Break**	1630 hrs AIAA-2016-3011 **Mach Cutoff Analysis and Results from NASA's Farfield Investigation of No-boom Thresholds** L. Cliatt, M. Hill, E. Haering, NASA Armstrong Flight Research Center, Edwards, CA	1700 hrs AIAA-2016-3012 **Steepening and smearing of shock front of nonlinear *N*-wave propagating in a turbulent layer** P. Yuldashev, Moscow State University, Moscow, Russia; S. Ollivier, École Centrale de Lyon, Lyon, France; V. Khokhlova, Moscow State University, Moscow, Russia; P. Blanc-Benon, École Centrale de Lyon, Lyon, France	1730 hrs AIAA-2016-3013 **Reflection of weak shockwaves from a rough surface** D. Dragna, S. Ollivier, C. Desjouy, T. Castelain, P. Blanc-Benon, École Centrale de Lyon, Ecully, France	

Wednesday, 1 June 2016								
55-AA-51	**Aeroacoustic Interactions V: Boundary Layers and Shear Layers**							**Saint Clair 3B**
Chaired by: X. GLOERFELT, Arts et Métiers ParisTech								
1400 hrs AIAA-2016-3014 **Mean Flow Effect on Shielding of Noncompact Aviation Noise Sources** N. Ostrikov, S. Denisov, TsAGI, Moscow, Russia	1430 hrs AIAA-2016-3015 **Mach Number Dependence on Sound Sources in High Mach Number Turbulent Mixing Layer** D. Terakado, T. Nonomura, A. Oyama, K. Fujii, Japan Aerospace Exploration Agency (JAXA), Sagamihara, Japan	1500 hrs AIAA-2016-3016 **Tonal dynamics and sound in subsonic turbulent jets** V. Jaunet, P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; A. Towne, T. Colonius, O. Schmidt, California Institute of Technology, Pasadena, CA; et al.	1530 hrs AIAA-2016-3017 **Silent Owl Flight: The Effect of the Leading Edge Comb on the Gliding Flight Noise** T. Geyer, V. Claus, E. Sarradj, Brandenburg University of Technology, Cottbus, Germany					

Wednesday, 1 June 2016								
56-AA-52	**Trailing Edge Noise III: Control**							**Saint Clair 3A**
Chaired by: F. HUTCHESON, NASA-Langley Research Center								
1400 hrs AIAA-2016-3018 **Reduction of wind turbine noise using blade trailing edge devices** S. Oerlemans, Siemens, Brande, Denmark	1430 hrs AIAA-2016-3019 **The effects of poroelastic blade extensions on scattered noise** L. Ayton, University of Cambridge, Cambridge, United Kingdom	1500 hrs AIAA-2016-3020 **Experimental and Theoretical Analysis of Bio-Inspired Trailing Edge Noise Control Devices** I. Clark, Virginia Polytechnic Institute and State University, Blacksburg, VA; D. Baker, University of Cambridge, Cambridge, United Kingdom; W. Alexander, W. Devenport, Virginia Polytechnic Institute and State University, Blacksburg, VA; S. Glegg, Florida Atlantic University, Boca Raton, FL; J. Jaworski, Lehigh University, Bethlehem, PA; et al.	1530 hrs AIAA-2016-3021 **Flow topology and noise emission around straight, serrated and slitted trailing edges using the Lattice Boltzmann methodology** W. van der Velden, A. van Zuijlen, D. Ragni, Delft University of Technology, Delft, The Netherlands	1600 hrs **Break**	1630 hrs AIAA-2016-3022 **An Integrated Study of Laminar Separation Bubble Effect on Tonal Noise Generation in Transitional Airfoils** G. Yakhina, M. Roger, École Centrale de Lyon, Ecully, France; P. Kholodov, Safran Group, Moscow, Russia; L. Nguyen, V. Golubev, Embry-Riddle Aeronautical University, Daytona Beach, FL	1700 hrs AIAA-2016-3023 **Trailing-edge noise diagnostics with low-repetition-rate PIV** S. Pröbsting, J. Schneiders, F. Avallone, D. Ragni, F. Scarano, Delft University of Technology, Delft, The Netherlands		

Wednesday, 1 June 2016								
57-AA-53	**CAA IX**							**Rhône 3B**
Chaired by: C. BOGEY, Ecole Centrale de Lyon								
1400 hrs AIAA-2016-3024 **Simulation of aerodynamically generated noise using the wave expansion method** J. Hammar, C. O'Reilly, G. Efraimsson, Royal Institute of Technology (KTH), Stockholm, Sweden	1430 hrs AIAA-2016-3025 **Computational Aeroacoustics for Rotating Systems** M. Kaltenbacher, A. Hüppe, Vienna University of Technology, Vienna, Austria; A. Reppenhagen, VIRTUAL VEHICLE Research and Test Center (ViF), Graz, Austria; F. Zenger, S. Becker, University of Erlangen-Nürnberg, Erlangen, Germany	1500 hrs AIAA-2016-3026 **Using Large Eddy Simulations to Predict Fluctuating Wall Pressure Caused by Turbulent Flow over Rough Surfaces** H. Shan, .. Slomski, Naval Surface Warfare Center, West Bethesda, MD	1530 hrs AIAA-2016-3027 **The Role of Large-scale Structures on Crackle Noise** D. Buchta, J. Freund, University of Illinois, Urbana-Champaign, Urbana, IL	1600 hrs **Break**	1630 hrs AIAA-2016-3028 **The Effect of Steady Flow Distortion on Noise Propagation in Turbofan Intakes** A. Prinn, R. Sugimoto, R. Astley, University of Southampton, Southampton, United Kingdom	1700 hrs AIAA-2016-3029 **Time harmonic radiation of a source in a vortical flow** A. Bensalah, P. Joly, J. Mercier, ENSTA Paris Tech, Palaiseau, France	1730 hrs AIAA-2016-3030 **A Summary of High-Fidelity Numerical Studies of Flow Acoustic Resonant Interactions in Transitional Airfoils** L. Nguyen, V. Golubev, R. Mankbadi, Embry-Riddle Aeronautical University, Daytona Beach, FL; G. Yakhina, M. Roger, École Centrale de Lyon, Ecully, France; M. Visbal, Air Force Research Laboratory, Wright-Patterson AFB, OH	1800 hrs AIAA-2016-3031 **Overset LES with an Acoustic Relaxation Term for Sound Source Simulations** P. Bernicke, R. Akkermans, Technical University of Braunschweig, Braunschweig, Germany; R. Ewert, J. Dierke, German Aerospace Center (DLR), Braunschweig, Germany

Wednesday, 1 June 2016								
58-AA-54	**Duct Acoustics VI**							**Rhône 2**
Chaired by: E. PIOT, ONERA								
1400 hrs AIAA-2016-3032 **Mutual Incoherence of Broadband Duct Acoustic Modes** R. Dougherty, OptiNav, Inc., Bellevue, WA	1430 hrs AIAA-2016-3033 **Experimental extraction of turbofan noise sources modal content using a transducer distribution designed with CAA** D. Mincu, E. Manoha, J. Bulte, C. Polacsek, ONERA, Châtillon, France; V. Fleury, F. Rey, Dassault Group, Saint Cloud, France	1500 hrs AIAA-2016-3034 **In-duct Rotating Beamforming and Mode Detection of Fan Noise Sources** L. Caldas, P. Greco, University of São Paulo, São Carlos, Brazil; G. Herold, Brandenburg University of Technology, Berlin, Germany; L. Baccalá, University of São Paulo, São Carlos, Brazil	1530 hrs AIAA-2016-3035 **Experimental investigation of sound field decomposition with higher order modes in rectangular ducts** C. Weng, C. Otto, German Aerospace Center (DLR), Berlin, Germany; L. Peerlings, Royal Institute of Technology (KTH), Stockholm, Sweden; L. Enghardt, F. Bake, German Aerospace Center (DLR), Berlin, Germany	1600 hrs **Break**	1630 hrs AIAA-2016-3036 **Sound Damping by Injector Tubes and Surrounding Ducting used in Liquid Rocket Combustors** K. Ahuja, S. Lympany, Georgia Institute of Technology, Atlanta, GA	1700 hrs AIAA-2016-3037 **Radial Mode Analysis of Ducted Sound Fields with Sensor Rakes and Wall Flush Sensor Arrays under Consideration of a Radial Flow Profile** M. Spitalny, U. Tapken, German Aerospace Center (DLR), Berlin, Germany	1730 hrs AIAA-2016-3038 **Efficient Azimuthal Mode Analysis using Compressed Sensing** M. Behn, R. Kisler, U. Tapken, German Aerospace Center (DLR), Berlin, Germany	

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59-AA-55	**Integration Effects and Flight Acoustics**							**Rhône 3A**
Chaired by: C. BURLEY, NASA-Langley Research Center								
1400 hrs AIAA-2016-3039 **Potential for Landing Gear Noise Reduction on Advanced Aircraft Configurations** R. Thomas, C. Nickol, C. Burley, NASA Langley Research Center, Hampton, VA; Y. Guo, NEAT Consulting, Seal Beach, CA	1430 hrs AIAA-2016-3040 **Progress of Aircraft System Noise Assessment with Uncertainty Quantification for the Environmentally Responsible Aviation Project** R. Thomas, C. Burley, NASA Langley Research Center, Hampton, VA; Y. Guo, NEAT Consulting, Seal Beach, CA	1500 hrs AIAA-2016-3041 **Quantification of Acoustic Scattering Prediction Uncertainty for Aircraft System Noise Assessment** C. Burley, R. Thomas, NASA Langley Research Center, Hampton, VA; Y. Guo, NEAT Consulting, Seal Beach, CA	1530 hrs AIAA-2016-3042 **Testing Installed Propulsion For Shielded Exhaust Configurations** J. Bridges, G. Podboy, C. Brown, NASA Glenn Research Center, Cleveland, OH	1600 hrs **Break**	1630 hrs AIAA-2016-3043 **The effect of pylon on the excess jet-flap interaction noise** G. Faranosov, V. Kopiev, N. Ostrikov, V. Kopiev, TsAGI, Moscow, Russia	1700 hrs AIAA-2016-3044 **CFD-CAA Validation on a Large-Scale High-Lift Configuration** A. Kolb, Airbus, Munich, Germany; R. Ewert, J. Dierke, M. Pott-Pollenske, German Aerospace Center (DLR), Braunschweig, Germany; A. Buescher, Airbus, Bremen, Germany		

Wednesday, 1 June 2016								
60-AA-56	**Jet Noise X**							**Auditorium Pasteur**
Chaired by: A. PILON, Lockheed Martin Aeronautics								
1400 hrs AIAA-2016-3045 **Analysis of Turbulent Jet Flow and Associated Noise with Round and Chevron Nozzles using Large Eddy Simulation** N. Dhamankar, G. Blaisdell, Purdue University, West Lafayette, IN; A. Lyrintzis, Embry-Riddle Aeronautical University, Daytona Beach, FL	1430 hrs AIAA-2016-3046 **Large Eddy Simulation of Jet Noise from Unstructured Grids with Turbulent Nozzle Boundary Layer** F. Vuillot, N. Lupoglazoff, M. Lorteau, F. Clero, ONERA, Châtillon, France	1500 hrs AIAA-2016-3047 **Far-field Noise Prediction of Round and Serrated Jets with Increasingly Refined Grids** M. Angelino, H. Xia, M. Moratilla-Vega, G. Page, Loughborough University, Loughborough, United Kingdom	1530 hrs AIAA-2016-3048 **Numerical study on the relation between hydrodynamic fluctuations and noise in hot jets at high Reynolds number** R. Biolchini, Safran Group, Moissy-Cramayel, France; C. Bailly, École Centrale de Lyon, Lyon, France; J. Boussuge, CERFACS, Toulouse, France; R. Fernando, Safran Group, Moissy-Cramayel, France	1600 hrs **Break**	1630 hrs AIAA-2016-3050 **Large eddy simulation for jet noise: azimuthal decomposition and intermittency of the radiated sound** G. Brès, Cascade Technologies, Inc., Palo Alto, CA; V. Jaunet, M. Le Rallic, P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France; A. Towne, O. Schmidt, California Institute of Technology, Pasadena, CA; et al.	1700 hrs AIAA-2016-3051 **Large Eddy Simulation of the Flight Effects on Single Stream Heated Jets** Z. Wang, I. Naqavi, P. Tucker, University of Cambridge, Cambridge, United Kingdom		

Wednesday, 1 June 2016								
61-AA-57	**Jet Noise XI: Stability, Coherent Structures**							**Rhône 1**
Chaired by: A. AGARWAL, University of Cambridge								
1400 hrs AIAA-2016-3052 **PSE-based sensitivity analysis of turbulent and supersonic single stream jet** T. Ansaldi, C. Airiau, Fluid Mechanics Institute of Toulouse (IMFT), Toulouse, France; C. Pérez Arroyo, G. Puigt, CERFACS, Toulouse, France	1430 hrs AIAA-2016-3053 **Linear Stability Implications of Chevron Geometry Modifications for Turbulent Jets** A. Sinha, A. Rajagopalan, Indian Institute of Technology Bombay, Mumbai, India; S. Singla, PEC University of Technology, Chandigarh, India	1500 hrs AIAA-2016-3054 **Effect of Heating and Compressibility on the Instability of Supersonic Jets** A. Samanta, Indian Institute of Science, Bangalore, India	1530 hrs AIAA-2016-3055 **Control of Supersonic Jet Noise Using Linear Feedback** M. Natarajan, J. Freund, D. Bodony, University of Illinois, Urbana-Champaign, Urbana, IL	1600 hrs **Break**	1630 hrs AIAA-2016-3056 **High-frequency wavepackets in turbulent jets** A. Cavalieri, K. Sasaki, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil; P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France; O. Schmidt, T. Colonius, California Institute of Technology, Pasadena, CA; G. Brès, Cascade Technologies, Inc., Palo Alto, CA	1700 hrs AIAA-2016-3057 **Parabolized Stability Analysis of Dual-Stream Jets** A. Sinha, Indian Institute of Technology Bombay, Mumbai, India; D. Gaitonde, Ohio State University, Columbus, OH; N. Sohoni, Indian Institute of Technology Bombay, Mumbai, India	1730 hrs AIAA-2016-3058 **Two-point coherence of wavepackets in turbulent jets** V. Jaunet, École Nationale Supérieure de Mécanique et d'Aérotechnique, Poitiers, France; P. Jordan, National Center for Scientific Research (CNRS), Poitiers, France; A. Cavalieri, Technological Institute of Aeronautics (ITA), São José dos Campos, Brazil	1800 hrs AIAA-2016-3059 **Validating the Ffowcs Williams and Hawkings acoustic analogy implementation in Antares** D. Di Stefano, A. Rona, E. Hall, C. Morfey, University of Leicester, Leicester, United Kingdom; G. Puigt, CERFACS, Toulouse, France

Wednesday, 1 June 2016								
62-AA-58	Turbomachinery Noise VI: Tones							Saint Clair 2
Chaired by: N. PEAKE, University of Cambridge								
1400 hrs AIAA-2016-3060 **Tones from an Aero-Engine Fan: Comparison between Harmonic-Balance Simulation and Experiment** A. Holewa, S. Guerin, L. Neuhaus, German Aerospace Center (DLR), Berlin, Germany; L. Danwang, T. Huimin, Aviation Industry Corporation of China (AVIC), Shanghai, China	1430 hrs AIAA-2016-3061 **Rotor-Stator Wake-Interaction Tonal Noise Modeling with an Edge-Dipole Approach** S. Bouley, École Centrale de Lyon, Ecully, France; A. Finez, Vibratec, Ecully, France; M. Roger, École Centrale de Lyon, Ecully, France	1500 hrs AIAA-2016-3062 **Tonal and Broadband Noise Control of an Axial Flow Fan with Metal Foams: Design and Experimental Validation** C. Xu, Y. Mao, Xi'an Jiaotong University, Xi'an, China; Z. Hu, University of Southampton, Southampton, United Kingdom	1530 hrs AIAA-2016-3063 **Modal identification of a small-scale ducted fan** A. Pereira, École Centrale de Lyon, Ecully, France; A. Finez, VibraTec, Ecully, France; Q. Leclere, National Institute of Applied Sciences (INSA), Villeurbanne, France; E. Salze, P. Souchotte, École Centrale de Lyon, Ecully, France	1600 hrs **Break**	1630 hrs AIAA-2016-3064 **Acoustic Power Transmission Loss Through A Ducted Fan** E. Envia, NASA Glenn Research Center, Cleveland, OH	1700 hrs AIAA-2016-3065 **Comparison of the Fraction of the Sound Power Level due to Rotor-TEC-Interaction with the Overall Sound Power Level for Different Turbine Exit Guide Vane Designs** A. Marn, T. Selic, F. Schönleitner, S. Bauinger, S. Zerobin, F. Heitmeir, Graz University of Technology, Graz, Austria	1730 hrs AIAA-2016-3066 **Investigation of Acoustic Resonance in a Three-Dimensional Cascade Interacting with Oncoming Unsteady Wakes** H. Kodama, IHI Corporation, Nishitama, Japan	

Wednesday, 1 June 2016		
63-AA-59 1400 - 1830 hrs	Array Methods	Saint Clair 4

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