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AREAS OF RESEARCH

Compressible turbulence; aeroacoustics of jet noise, fan noise, and propulsion-airframe integration; jet noise reduction methods; acoustics of perforates; inverse methods for noise source imaging; supersonic nozzle flow separation.

EDUCATION

Ph.D., Aeronautics	California Institute of Technology	1987
M.S., Aeronautics	California Institute of Technology	1982
B.S., Mechanical & Aerospace Engineering	Syracuse University	1981

ACADEMIC APPOINTMENTS

1998-present	Professor	University of California, Irvine
1994-1998	Associate Professor	University of California, Irvine
1988-1994	Assistant Professor	University of California, Irvine
1987-1988	Research Fellow	California Institute of Technology
1982-1986	Graduate Research Assistant	California Institute of Technology

ADMINISTRATIVE POSITIONS (*Henry Samueli School of Engineering, U.C. Irvine*)

2010-2011	Interim Dean
Summer 2008	Acting Dean
2007-2010	Associate Dean for Academic Affairs
2002-2005	Chair, Mechanical and Aerospace Engineering

HONORS AND AWARDS

2022 AIAA/CEAS Aeroacoustics Best Paper Award (with D. Morata).
Faculty Service Award, Henry Samueli School of Engineering, 2021.
Aeroacoustics Award, American Institute of Aeronautics and Astronautics (AIAA), 2017.
Fellow, AIAA, 2009.
Associate Fellow, AIAA, 2002.
Invited Lecture at the 48th American Physical Society / Div. of Fluid Dynamics Meeting, 1995.
UCI School of Engineering Teaching Award for 1991-92.

PROFESSIONAL ASSOCIATIONS AND SELECTED SERVICE ACTIVITIES

Associate Editor, AIAA Journal (2010-2022).
Chair of Awards Subcommittee of the AIAA Aeroacoustics Technical Committee (AATC) (2019-present).
Vice-Chair of the AIAA AATC (2020-present).
Member of the AIAA AATC (2000-2005, 2010-2014, 2019-present).
Chair, Peer Review Board for the Acoustics Branch of NASA Glenn Research Center (2014).
Administrative Chair of the 18th AIAA/CEAS Aeroacoustics Conference (2012).
Member, U.S. Navy Standards Committee for "Methods for the Measurement of Noise Emissions from High Performance Military Jet Aircraft" (2012-2016).
Member, American Physical Society - Division of Fluid Dynamics (1990-present).

PRINCIPAL PUBLICATIONS

Papamoschou, D., and Roshko, A., "The Turbulent Compressible Shear Layer: An Experimental Study," *Journal of Fluid Mechanics*, Vol. 197, 1988, pp. 453-477.

Papamoschou, D., "Two-Spark Schlieren System for Very-High Velocity Measurement," *Experiments in Fluids*, Vol. 7, 1989, pp. 354-356.

Papamoschou, D., "Structure of the Compressible Turbulent Shear Layer," *AIAA Journal*, Vol. 29, No.5, 1991, pp. 680-681.

Papamoschou, D., "Zones of Influence in the Compressible Shear Layer," *Fluid Dynamics Research*, Vol. 11, 1993, pp. 217-228.

Papamoschou, D. and Lele, S.K., "Vortex-Induced Disturbance Field in a Compressible Shear Layer," *Physics of Fluids A*, Vol. 5, No.6, 1993, pp. 1412-1419.

Papamoschou, D., "Theoretical Validation of the Respiratory Benefits of Helium-Oxygen Mixtures," *Respiration Physiology*, Vol. 99, 1995, pp. 183-190.

Papamoschou, D., "Evidence of Shocklets in a Supersonic Counter Flow Shear Layer," *Physics of Fluids*, Vol.7, No. 2, 1995, pp. 233-235.

Papamoschou, D., and Bunyajitradulya, A., "Evolution of Large Eddies in Compressible Shear Layers," *Physics of Fluids*, Vol. 9, No. 3, 1997, pp. 756-765.

Papamoschou, D., "Characteristics of the Linearized Equations of Motion for a Compressible Fluid," *Physics of Fluids*, Vol. 6, No.1, 1994, pp. 3-5.

Papamoschou, D., "Analysis of Partially-Mixed Supersonic Ejector," *Journal of Propulsion and Power*, Vol. 12, No.4, 1996, pp. 736-741.

Papamoschou, D., "Mach Wave Elimination in Supersonic Jets," *AIAA Journal*, Vol. 35, No.10, 1997, pp. 1604-1611.

Murakami, E., and Papamoschou, D., "Eddy Convection in Supersonic Coaxial Jets," *AIAA Journal*, Vol. 38, No.4, 2000, pp. 628-635.

Papamoschou, D., and Debiase, M., "Directional Suppression of Noise from a High-Speed Jet," *AIAA Journal*, Vol.39, No. 3, 2001, pp. 380-387.

Murakami, E., and Papamoschou, D., "Mean Flow Development in Dual Stream Compressible Jets," *AIAA Journal*, Vol. 40, No.6, 2002, pp. 1131-1138.

Papamoschou, D., "Engine Cycle and Exhaust Configurations for Quiet Supersonic Propulsion," *Journal of Propulsion and Power*, Vol.20, No.2, 2004, pp. 255-262.

Papamoschou, D., "New Method for Jet Noise Suppression in Turbofan Engines," *AIAA Journal*, Vol. 42, No.11, 2004, pp. 2245-2253.

Papamoschou, D., "Fan Flow Deflection in Simulated Turbofan Exhaust," *AIAA Journal*, Vol. 44, No.12, 2006, pp. 3088-3097.

Xiao, Q., Tsai, H.M., and Papamoschou, D., "Numerical Investigation of Supersonic Nozzle Flow Separation," *AIAA Journal*, Vol. 45, No.3, 2007, pp. 532-541.

Papamoschou, D., "Pylon Based Jet Noise Suppressors," *AIAA Journal*, Vol. 47, No.6, 2009, pp. 1408-1420.

Papamoschou, D., Zill, A., and Johnson, A., "Supersonic Flow Separation in Planar Nozzles," *Journal of Shock Waves*, Vol.19, No.3, 2009, pp. 171-183.

Papamoschou, D. and Rostamimonjezi, S., "Effect of Velocity Ratio on Noise Source Distribution of Coaxial Jets," *AIAA Journal*, Vol. 48, No.7, 2010, pp. 1504-1512.

Papamoschou, D., Morris, P.J., and McLaughlin, D.K., "Beamformed Flow-Acoustic Correlations in High-Speed Jets," *AIAA Journal*, Vol. 48, 2010, pp. 2445-2453.

Johnson, A.D., and Papamoschou, D., "Instability of Shock-Induced Nozzle Flow Separation," *Physics of Fluids*, Vol. 22, Article 016102, 2010.

Papamoschou, D., "Prediction of Jet Noise Shielding," Paper 2010-0653, 48th AIAA Aerospace Sciences Meeting and Exhibit, Jan. 2010.

Papamoschou, D., "Imaging of Distributed Directional Noise Sources," *Journal of Sound and Vibration*, Vol. 330, Issue 10, May 2011, pp. 2265-2266.

Xiong, J., Johnson, A., Liu, F., and Papamoschou, D., "Body Force Model for the Aerodynamics of Inclined Perforated Surfaces," *AIAA Journal*, Vol. 50, No.11, Nov. 2012, pp. 2525-2535.

Phong, V. and Papamoschou, D., "High Frequency Acoustic Transmission Loss of Perforated Plates at Normal Incidence," *Journal of the American Acoustical Society*, Vol. 134, No.2, 2013, pp. 1090-1101.

Papamoschou, D., Johnson, A.D., and Phong, V., "Aeroacoustics of Three-Stream High-Speed Jets from Coaxial and Asymmetric Nozzles," *Journal of Propulsion and Power*, Vol. 30, No. 4, 2014, pp. 1055-1069.

Dutta, R., Albee, B., van der Veer, W.E., Harville, T., Donovan, K.C., Papamoschou, D., and Penner, R.M., "Gold Nanowire Thermophones," *Journal of Physical Chemistry*, Vol. 118, No. 50, 2014, pp. 29101-29107.

Phong, V. and Papamoschou, D., "Normal Incidence Acoustic Insertion Loss of Perforated Plates with Bias Flow," *Journal of the American Acoustical Society*, Vol. 138, No.6, Dec. 2015, pp. 3907-3921.

Papamoschou, D., "Wavepacket Modeling of the Jet Noise Source," *International Journal of Aeroacoustics*, Vol. 17, No. 1-2, 2018, pp. 52-69.

Papamoschou, D., "Modelling of Noise Reduction in Complex Multistream Jets," *Journal of Fluid Mechanics*, Vol. 834, Jan. 2018, pp. 555-599.

Papamoschou, D., Morata, D., and Shah, P., "Inverse Acoustic Methodology for Continuous-Scan Phased Arrays," *AIAA Journal* Vol. 57, No. 12, 2019, pp. 5126-5141.

Adam, A., Papamoschou, D., and Bogey, C., "Imprint of Vortical Structures on the Near-Field Pressure of a Turbulent Jet," *AIAA Journal*, Vol. 60, No.3, 2021, pp.1578-1591.

Adam, A., Xiong, J., and Papamoschou, D., "Investigation of Vortical and Near-Acoustic Fields in Three-Stream Jets," *The Journal of the Acoustical Society of America*, Vol. 150, No. 2, 2021, pp. 3329-3342.

Papamoschou, D., "Modeling of Aft-Emitted Tonal Fan Noise in Isolated and Installed Configurations, Paper 2021-0009, AIAA Scitech Forum, Jan. 2021.

PRINCIPAL PATENTS

Papamoschou, D. "Method of Eliminating Mach Waves from Supersonic Jets," U.S. Patent 5,590,520; issued 1/7/97.

Papamoschou, D. "Mixing Enhancement Using Axial Flow," U.S. Patent 6,666,016; issued 12/23/03.

Papamoschou, D. "Jet Engine Noise Suppressor," U.S. Patent No. 7,293,401; issued 11/13/07.

Papamoschou, D., "Turbofan Engine Noise Suppression Using Fan Flow Deflector," U.S. Patent No. 8,997,454, issued 04/07/2015

Papamoschou, D. and Liu, F. "Quiet Bleed Valve for Gas Turbine Engine," U.S. Patent No. 9,175,577, issued 11/03/2015.