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## Jet Aeroacoustics

Edited by Ganesh Raman

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### About the Book:

Jet Aeroacoustics is a growing area, a function of the significant projected growth in global air transportation. With the era of widespread supersonic flight and the proliferation of general aviation aircraft on future horizons, the noise generated by the high speed flow from aircraft engine exhaust is of great concern for communities near airports, for passengers in the aircraft's cabin, and for the structural integrity of the airframe. In addition, there are a number of industrial situations that desire lower noise from high pressure gas jets. Examples from industry include the noise from valves, burners, high pressure jets used in machining, miniature jets used for drying, and high pressure release situations in the power industry. Understanding the source of the noise itself is critical in the development of future noise reduction technologies. The book includes developments in the area of jet aeroacoustics theory, computations and experiments. Topics include: jet noise theories, simulation methodologies, predicting noise from complex geometries, design of jet noise facilities and jet noise measurements. The perspectives are provided by internationally recognized experts in the field. The book will provide a student, scientist or practicing engineer with a concise overview of developments in the field of jet aeroacoustics and a good starting point for further research.

### About the Editor:

Dr. Ganesh Raman's research interests are in the areas of supersonic jet noise, screech and high speed jet flows. He has over 20 years of experience working with Industry, Academia and the U.S. Government. He is Associate Dean for Research and Associate Professor for Mechanical and Aerospace Engineering at the Illinois Institute of Technology (IIT). Before coming to IIT he spent 14 years performing contract research at NASA Glenn Research Center on jet aeroacoustics. He is a Fellow of the American Society of Mechanical Engineers (ASME), Fellow of the Royal Aeronautical Society, Associate Fellow of American Institute of Aeronautics and Astronautics (AIAA) and serves as Editor-in-Chief of the International Journal of Aeroacoustics. Dr. Raman obtained a Bachelor's degree from the Indian Institute of Technology, Bombay and a Ph.D. from Case Western Reserve University, USA.

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