Sound Field Visualization of Jet Noise

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Sponsored by Rolls Royce and Indiana 21st Century R&T Fund

Objectives
- Identify location and strength of flow and combustion noise sources
- Prediction of farfield radiation from test stand measurements

Methods
- Nearfield acoustical holography
- Microphone array measurements in jet nearfield
- Array signal processing

Results
- Simulation for a low speed fan test set-up
- Calculated sound field
Objectives

- Identify and improve the acoustical characteristics of honeycomb panels

Methods

- Flexural mode measurement
- TL loss measurement
- Anisotropic analytic model
- FEM analysis

Honeycomb panel is widely used in aircraft structure
Sound Transmission of Layered Media
Professor J. Stuart Bolton & Jeongwoo Kim
sponsored by RAYTHEON COMPANY

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