

# Low Noise Fans

Faculty: Dr. J. S. Bolton

Student: Y.-S. Shin

## OBJECTIVE

Design an axial fan with improved aerodynamic and acoustic performance by modifying inlet flow

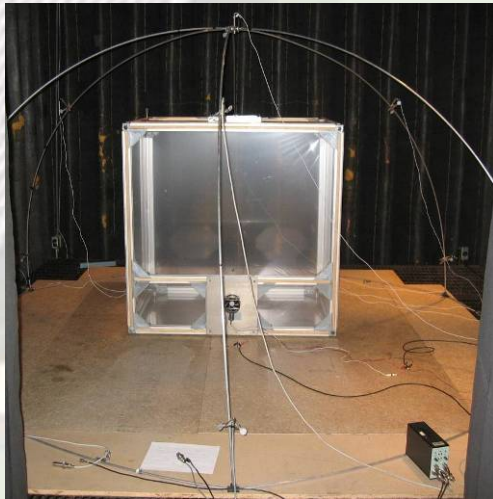
## IMPACT

Axial fan inlet modification using porous foam can:

- Improve fan performance under unfavorable inlet condition
- Reduce tonal noise
- Reduce drag by changing stall condition



## APPROACH



- The INCE plenum reproduces exhaust fan system
- The inflow obstacle generates unfavorable inlet condition
- Aerodynamic / acoustic performance of the inlet conditioner is tested
- Investigation of the inlet conditioner effect on inflow and stall condition

