

**A VARIABLE STEP SIZE ANC METHOD FOR VEHICLE EXHAUST NOISE
REDUCTION CONSIDERING ACCELERATION CHARACTERISTICS**

Takeharu Tanaka

(Environment and Energy Research Division)

Keqiang Li

(Tsinghua University)

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An ANC method for exhaust noise reduction of a medium-duty diesel truck is presented in this paper. To ensure the successful operation of its controller in a time-varying environment, a modified, variable step size LMS algorithm is proposed by considering vehicle's acceleration characteristics.

The variable step size SFX-TB method is developed to devise an adaptive algorithm more efficient than the conventional filtered-x LMS algorithm. After investigating the features of control trackability and stability under accelerated running condition, the practical application of the ANC system for vehicle exhaust noise reduction is introduced