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**LOW FREQUENCY NOISE IN SMALL ROOMS: RESEARCH ON SOUND
FIELDS**

Stefano Pedersoli

ABSTRACT

There is an increasing attention on sound insulation at low frequencies. The standard ISO 16283-1 describes a new method for the measurement in rooms of volume less than 25 m³ with approximately diffuse sound fields. At Empa Swiss Federal Laboratories for Materials Science and Technology a current research project focuses on the application of this method with the goal to investigate its feasibility for rooms in common Swiss buildings, to establish limits for the measurement uncertainty, as well as to give recommendations on the application in special situations. This paper presents the research approach and outlines the methodology applied in the study of low frequency sound field in small rooms.