# ACOUSTICS2008/1244
# Realization of a measurement system for physical and acoustic measurements on brick walls

Luca Barbaresi[a], Massimo Garai[a], Paolo Guidorzi[a] and Giovanni Semprini[b]
[a]DIENCA - Univ. of Bologna, Viale Risorgimento 2, 40136 Bologna, Italy
[b]University, DIENCA Dept. Facoltà di Ingegneria, Viale Risorgimento 2, 40136 Bologna, Italy

Aim of this study is the development of a system for the measurement of frequency values of some physical variables such as the damping factor, the thickness of a structural element, the structural reverberation time and the longitudinal wave speed propagation in light brick walls. Such variables are required by the UNI EN 12354-1 normative for the analytical estimation of the sound reduction index R of monolithic elements in the laboratory. The results of the calculation, as a function of frequency, will be shown and compared with the measured values of the sound reduction index R.