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**Correlation between architectural and acoustical parameters in  
catholic churches of the colonial era in Ayacucho, Peru**

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The paper reports the analysis of the results of an acoustic survey carried out on several Catholic Churches in the city of Ayacucho, a southern city in the Peruvian Andes, built during the colonial era through centuries XVI to XVIII. The study is performed taking into account both room-average values and individual position values of many acoustical parameters measured according to ISO 3382. Effects among architectural characteristics of each church as length, height, room volume, interior surfaces area, total absorbing area, mean absorption coefficient, and some objective acoustical parameters as reverberation time, early decay time, clarity, definition and center time, are investigated.