ACOUSTICS2008/549 Architectural and acoustic restoration of the 'Benevento' Roman Theatre

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Acoustics as well as the extraordinary architecture are substantial part of the heritage of ancient Greek and Roman theatres. These archaeological areas are more often used for classical and modern performing activities but to emphasise the original acoustics, restoration of the original shape, reconfiguration of the space and introduction of new technologies and materials may be needed. These activities must happen taking into account the "International Charter for The Conservation and Restoration of Monuments and Sites" as main tools defining conservation, use and maintenance guidelines in matter of discipline for ancient performing places. This paper presents some proposals for the stage reconstruction of the Benevento Roman Theatre and examine the associated effects on the theatre acoustics. Design proposals, minded to preserve the place authenticity, improving the acoustics and keeping intact the surrounding atmosphere for spectators, are the result of archaeological data, contemporary performances requirements, state of the art in matter of stage setting design. Acoustic field prediction is based on numerical models and auralization aiming to reproduce the real listening conditions.