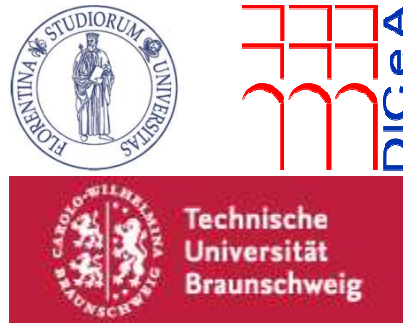**INTERNATIONAL PHD COURSE**

"Processes, Materials And Constructions In Civil And Environmental Engineering And For The Protection Of The Historic-Monumental Heritage"

SEMINAR

"NON-TRADITIONAL APPROACHES TO SHORE PROTECTION IN LOW-ENERGY ENVIRONMENTS"

By
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Abstract

This short course is designed to survey general concepts in alternative, non-traditional approaches to short protection in low-energy environments where some degree of enhanced risk is an acceptable tradeoff for enhanced environmental benefits. The course will review traditional protection structures such as revetments, bulkheads, groins and armoring, including some of the strengths and weaknesses of these approaches. Definitions and examples of low-energy environments will be discussed. The theory and concepts of non-traditional shore protection are outlined. Case studies involving artificial gravel beaches, brush bundles, and vegetation are presented. The advantages and disadvantages of such approaches are discussed. Some design considerations for decision-making for the potential adoption of these 'softer' alternatives are outlined.

The goal of the geo-engineer scientific International Doctoral Course on "Processes, Materials and Constructions in Civil and Environmental Engineering and for The Protection of the Historic-Monumental Heritage" which are sponsored by the Deutsche Forschungsgemeinschaft (DFG) since 01.01.2002 in co-operation with the University of Florence is the deal with relevant subjects of the analysis, monitoring, control and reduction of the induced risks by the natural calamities and by human actions on the built environment.

The seminar is offered for the International PhD Course, but other participants are welcomed.

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