CIVIL AND ENVIRONMENTAL ENGINEERING

DISEG - Structural Concrete with Recycled Materials

Funded By	Dipartimento DISEG
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Context of the research activity	Structural Engineering
Objectives	The main purpose of this research project is to investigate the feasibility of producing structural concrete with recycled materials, by using supplementary cementitious materials (SCM) as binder, waste/marine water, recycled concrete or rubber as aggregate and recycled steel fibers from end-of-life tires. Several concrete mixtures have to be tailored in order to evaluate their fresh and hardened properties, and the feasibility of using them inshore and offshore structures. In particular, the PhD student must: • Tailor sustainable concrete structures • Test and model reinforced concrete elements under repeated loads • Evaluate the durability of full-scale reinforced concrete structures
Skills and competencies for the development of the activity	Structural Mechanics Design of Reinforced Concrete Structures Tailoring concrete mixtures Laboratory tests on concrete Modeling concrete structures