Research in the area of Solid Structures at the University of Luxembourg

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Reinforced and prestressed concrete structures “Structures en béton armé et précontraint”

Research group: 2 PostDocs and 6 PhD students
Laboratory of Solid Structures

Main research subjects
- Smart buildings
- Smart structures
- Demountable structures
- Circular economy

aligned with the strategy of the Institute of Civil and Environmental Engineering.

Strategy of Laboratory of Solid Structures
- **Visibility** towards the “outside world”
- **Integration of UL** into Luxembourg
- **Reference point** for industry, engineering consultancies and administrations
Research areas

**New innovative concrete formulation**
Substitution of cement and traditional aggregates by waste or renewable products aiming at a
- reduction of energy consumption
- reduction of consumption of natural resources and a
- reduction of CO₂ production

**Structural analysis of concrete structures**
Analytical, numerical and experimental analysis of reinforced concrete or prestressed concrete structures

**Computational modelling for concrete**
Multi-Physics Numerical Simulation of the chemical, mechanical and thermal material behaviour of concrete
New innovative concrete formulation
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Structural analysis of concrete structures
Analytical, numerical and experimental analysis of reinforced concrete or prestressed concrete structures

Computational modelling for concrete
Multi-Physics Numerical Simulation of the chemical, mechanical and thermal material behaviour of concrete
New innovative concrete formulation
Secondary Secondary Raw Materials for Concrete Precast Products
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Interreg North-West Europe SeRaMCo

European Regional Development Fund

THEMATIC PRIORITY:
RESOURCE AND MATERIALS EFFICIENCY

Project objectives: increasing the use of construction and demolition waste as secondary raw materials for cement and precast concrete production.

Total budget received from Interreg North-West Europe (2014-2020): €4.37 million of ERDF

Total project budget: €7.28 million

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