TRAINING SCHOOL PROGRAM

Self Healing concrete: the path to sustainable construction

TUESDAY 23rd JANUARY

09:15 – 10:15 **COST action CA 15202 SARCOS: Self-healing as preventive repair of concrete structures; and lessons learnt from the FP7 project HEALCON**
Prof. Nele De Belie (UGent).

10:15 – 10:30 *COFFEE BREAK*

10:30 – 12:30 **TRAINING LECTURES I: Self-healing strategies**

Prof. Elke Gruyaert (KULeuven):
The use of superabsorbent polymers and encapsulated precursors of polymeric healing agents in self-healing concrete

Dr. Chrysoula Litina (University of Cambridge):
Self-healing strategies; Microcapsule-based systems

Prof. Henk Jonkers (TU Delft):
Bacteria-based self-healing concrete

12:30 – 13:30 *LUNCH*

13:30 – 15:30 **TRAINING LECTURES II: External repair methods**

Prof. Arkadiusz Kwiecien (Cracow University of Technology):
Stress concentration - cause of damage in brittle building materials. How to avoid it in external repair?

Prof. Paulina Faria (NOVA University of Lisbon):
The assessment of innovative eco-efficient biotreatments on concrete and other building materials

Dr. Mercedes Sánchez (IETcc – CSIC):
External Surface methods with healing ability for the preventive repair of existing concrete structures

15:30 – 15:45 *COFFEE BREAK*

15:45 – 17:45 **TRAINEES LECTURES I**

WEDNESDAY 24th JANUARY

9:15 – 10:15	**INVITED LECTURE: High resistance low-calcium cements; is it possible to reduce process CO2 emissions while increasing paste resistance?** ***Prof. Rogério Colaço (Instituto Superior Técnico)***
10:15 – 10:30	***COFFEE BREAK***
10:30 – 12:30	**TRAINING LECTURES III: Characterization Techniques** ***Prof. Liberato Ferrara (Politecnico di Milano):*** Methods for precracking and measurements of self-healing.through mechanical tests ***Prof. Paola Antonaci (Politecnico di Torino):*** Characterization of the self-healing effect through ultrasonic methods and durability tests ***Dr. Christof Schroefl (TU Dresden):*** Electron microscopy and other instrumented analysis techniques to characterise self-healing products
12:30 – 13:30	***LUNCH***
13:30 – 15:30	**TRAINING LECTURES IV: Controlled Cracking Processes in Fibre Reinforced Cementitious Composites** ***Dr. Vitor Fernandes Cunha (University of Minho):*** Fibre Reinforced Cementitious Composites ***Dr. Eduardo Pereira (University of Minho):*** Strain-Hardening or Ultra-High Performance Fibre Reinforced Cementitious Composites ***Prof. Alva Peled (Hebrew University):*** Textile Reinforced Cementitious Composites
15:30 – 15:45	***COFFEE BREAK***
15:45 – 17:15	**TRAINEES LECTURES I**

THRUSDAY 25th JANUARY

09:15 – 10:15 **INVITED LECTURE: The importance of self-healing concrete to créate durable structures**
Margarida Mateus (SECIL)

10:15 – 10:30 *COFFEE BREAK*

10:30 – 12:30 **TRAINING LECTURES V: Self-healing modelling**

Prof. Anthony Jefferson (University of Cardiff):
The simulation of mechanical self-healing processes

Prof. Etelvina Javierre (Centro Universitario de la Defensa):
Modelling mobilization and reaction of healing compounds

Prof. Jorge Alfaiate (Technical University of Lisbon)
Simulating fracture in quasi-brittle materials

12:30 – 13:30 *LUNCH*

13:30 – 14:30 **Impact of preventive repair methods on corrosion aspects**
(Prof. Fátima Montemor, ITS).

14:30 – 14:45 *COFFEE BREAK*

14:45 – 16:45 **TRAINEES LECTURES I**