

## ***Behavior of textile reinforced composites under high temperature***

Anne lise Beaucour - [anne-lise.beaucour@cyu.fr](mailto:anne-lise.beaucour@cyu.fr)

Klajdi Toska - [klajdi.toska@cyu.fr](mailto:klajdi.toska@cyu.fr)

Albert Noumowé - [albert.noumowe@cyu.fr](mailto:albert.noumowe@cyu.fr)

### Short description

Composite materials have seen a rapid development in the construction industry since the early '90s. Recently, textile reinforced cementitious composites, commercially known also as Textile Reinforced Mortars (TRM), Fabric of Fiber reinforced cementitious composites (FRCM) and Textile Reinforced Concrete (TRC), have encountered a rapid development. Concerning their applications, the composites have found a wide use especially for retrofitting of existing structures: to enhance bending and shear strength of reinforced concrete beams and to provide confinement effect in axially-loaded columns. However, cementitious composites are relatively recent and further research is still needed to fully understand their behavior and in particular their durability.

In this context, the aim of the research activity is to experimentally investigate the behavior of textile reinforced cementitious composites and their effectiveness in retrofitting techniques when subjected to high thermal stress.

### Works

- Preparation of mortar specimens and textile reinforced composites
- Curing and specimens conditioning under high temperatures in lab furnaces
- Testing of mortar specimens for flexure and compressive strength
- Testing of textile reinforced composites under tensile tests
- Analysis of experimental results.

Duration of the internship : 5 months from February or March 2023

Profil : M2 in Civil Engineering, Structural Engineering, Material Science Engineering