

## Research Grants for PhD students from the China Scholarship Council

Information Form (please read the guidelines carefully on the website [www-csc.utt.fr](http://www-csc.utt.fr))

Supervisor's name :  Given names :

Status (prof., assistant prof., ...) :

Laboratory :  Website address :

Institution :  Website address :

Scientific competence of the supervisor:

Expert on durability of cementitious materials , for more details please see :  
[https://www.researchgate.net/profile/Siham\\_Kamali-Bernard](https://www.researchgate.net/profile/Siham_Kamali-Bernard)

Two major publications in the field proposed for the PhD :

1.
2.

Website address of the personal page :

**Supervisor's email :**

**Description of the research work proposed for a PhD** **Topic # (see list) :**

Title :

Subject :

Corrosion of reinforcement is the main pathology of reinforced concrete structures. It is due either to the carbonation of the coating concrete or to the diffusion of chlorides through this last. Despite huge studies on this field, several questions remain, in particular when the used binder is a non-conventional one. The aim of this project is to investigate these phenomena for new eco-friendly binders that are more and more developed and used instead of ordinary Portland cement. The study will focus on the new binders developed and studied in the "Eco-materials" research team. New nanocomponents will be considered. The thesis will consist of two parts; an experimental part dealing with physical, chemical and mechanical behavior of the studied materials. The second part will be devoted to the multiscale numerical modeling of the two studied degradations.

Keywords :

Expected collaborations :

Background required from the applicant :

The applicant may have a of a background on materials science (cementitious materials or others) including their mechanical behaviour. She (or he) should have an interest for experimental studies. Modelling and numerical skills will be appreciated.

Existence of a PDF file detailing the proposal ("yes" or "no") :

(see guidelines on the website [www-csc.utt.fr](http://www-csc.utt.fr))