

# 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:

Decision support for production systems management and maintenance, based on reliability, and sustainability considerations. Dashboards and KPIs design, multi-criteria analysis, diagnosis and prognosis approaches.

Two major publications in the field proposed for the PhD :

1. 1.
2. 2.

Website address of the personal page :

**Supervisor's email :**

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

Title :

Subject :

The use of second-hand and/or reconditioned spare parts for the maintenance of repairable systems contributes directly to the principle of the circular economy. The thesis will focus on the development of models for understanding the specific characteristics and changes in the safety, maintainability and reliability of systems repaired using this type of part. More specifically, the aim will be to model the state in which the system finds itself at the end of the repair (other than the classic 'as good as new', 'as bad as old'), the degradation process that the replacement part will follow (generic degradation laws (linear, exponential, etc.), random processes (gamma, Wiener, Markov, etc.), and to deduce the consequences on the evolution of the operational safety of the repaired system. The conclusions on this evolution will make it possible to estimate the environmental gain achieved by extending the useful life of the equipment.

Keywords :

Expected collaborations :

Background required from the applicant :

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

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