

Research Grants for PhD students from the China Scholarship Council

Information Form (please read the guidelines carefully on the website www-csc.utt.fr)

Supervisor's name : Given names :

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

Laboratory : Website address :

Institution : Website address :

Scientific competence of the supervisor:

The ERA team focuses in managing autonomous networks. Samiha AYED research topics concern specifically the specification, the medelling and deployment of security policies. The application contexts are e-health, vehicular networks and UAV.

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 :

This thesis proposal aims to design and to validate a secure vehicular framework using new security approaches to manage security requirements in vehicular context. Several scenarios have to be defined to pinpoint the different security requirements and test the proposed solutions. Different intelligent approaches based on artificial intelligence techniques (machine learning, deep learning, game theory, etc.) should be considered to optimize the energy consumption of the proposals:

- 1) To elaborate a state of the art related to the proposed solutions to solve security attacks in an IoV context.
- 2) To elaborate a state of the art related to the use of the artificial intelligence techniques related to the energy consumption in vehicular networks.
- 3) To design and validate a secure framework to improve and secure intra and inter communications in IoV context.
- 4) To propose, specify and validate a new AI based security approach to secure the connected vehicles.
- 5) To study the energy impact of the solution proposed

Keywords :

Expected collaborations :

A co-direction of this Phd may be possible with the Stevens Institute of Technology - New Jersey- USA. Co-director: Hakim Ghazzai (<https://sites.google.com/kaust.edu.sa/hakim-ghazzai/home>)

Background required from the applicant :

The applicant should have a good knowledge about computer networks and specifically in wireless networks. Knowledge about system security will be highly appreciated.

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

(see guidelines on the website www-csc.utt.fr)