Sujets de thèses

PhD offer: Archeological Acoustics

4 07 2019 15:39

Experimental Virtual Archeological-Acoustics: Multimodal study of the influence of rooms on the playing techniques of musicians on instruments of the 17th and 18th century at Versailles.

Partners

In the context of the collaborative project EVAA, the EVAA_Ver project unites the following team members to provide a PhD funding opportunity (2019-2022):

- ETIS UMR 8051 – Université Paris-Seine, Université de Cergy Pontoise, ENSEA, CNRS
- Institut Jean Le Rond ∂'Alembert
- CRC – Equipe Conservation et recherche du Musée de la musique – Cité de la musique – Philharmonie de Paris
- Centre de recherche du château de Versailles

This project has been certified by the Cluster of Excellence (Labex) "Patrima - Foundation for Cultural Heritage Science".

Application

The position will be opened until the 31 rd of July 2019. The candidate should be registered at the University of Cergy-Pontoise before the 13 th of September. The doctoral contract should start ideally on the 1st of October 2019. Please submit a detailed CV, Master's degree transcript, letter of motivation concerning the proposed subject, and a list of 2 references that can be contacted. Material, PDF format, should be addressed to both catherine.lavandier@u-cergy.fr and brian.katz@sorbonne-universite.fr.

Detailed PhD offer

http://www.lam.jussieu.fr/Stages/index.php?page=These_FSP

Thèse INEX APP 2019

28 06 2019 15:45

Dans le cadre d'un appel à projet "Initiative d'Excellence" de l'Université de Cergy-Pontoise, nous sommes à la recherche d'un(e) candidat(e) pour une offre de thèse intitulée : "Sécurité et sureté de fonctionnement des systèmes complexes avec AltaRica // Security and Safety of Complex Systems with AltaRica (SSA)".

Résumé :

Failures of safety-critical embedded systems used in industries such as aeronautics, automotive, railway or nuclear can lead to catastrophic consequences. These more and more connected complex systems, also known as Cyber-Physical Systems (CPS), also have to face cyber-attacks, which most of time cause serious dysfunctions and undermine the security of such systems. For instance, in 2015, an attack via the SPRINT cellular network targeted a Jeep Cherokee. The vehicle happens to be fitted with a multimedia device named Uconnect, connected to a CAN bus using a Renesas V850 processor; at the software level, it also manages the cellular open TCP port 6667 to support a DBus service for interprocess communication (IPC) and remote procedure call (RPC). The security breach consisted in injecting a modified firmware into the V850 co-processor, exploiting a “buffer overflow” error. It became then possible, and actually tested in the field, to remotely, over-the-air, inject CAN packets into the TCP port, and thus taking the hand over the car's various controls, from the radio volume to the brakes: clearly a serious design flaw...
The relationships between security and safety are thus at the heart of the current concerns of specialists in the field of complex embedded systems. In fact, one can no longer consider designing safe systems without ensuring them to be also secured. For instance, a vulnerability may compromise the functional safety of an autonomous car, while, on the other hand, a safety constraint such as the introduction of redundant components or diagnostic ports can increase the attack surface of the system. The increasing complexity of software and hardware components used in complex embedded systems has thus motivated the adoption of new approaches to anticipate security and safety problems. In particular, system designers have been advised to adopt an early modeling and validation approach against potential threats during the design phase to reduce the costs of lately detected errors and correction time.

Encadrant : Nga Nguyen, Equipe CELL du laboratoire ETIS

Contact : nn@eisti.eu

Offre de PhD : Deep Learning & sciences sociales computationnelles

12 06 2019 09:15

Proposition de thèse : IA / Deep Learning & sciences sociales computationnelles.

Date limite de candidature : 1er juillet 2019.

Date début de thèse : 1er octobre 2019.

Encadrants

- Directeur de thèse : David Chavalarias, Directeur de Recherche CNRS, HDR, sciences sociales computationnelles et analyse de données
- Co-directeur de thèse : Hedi Tabia, Maître de conférences / Associate Professor at the ENSEA, machine learning and IA
- Référents techniques : Maziyar Panahi, ingénieur CNRS (Masses de données et machine learning), Boris Borzic, ingénieur CNRS (image processing, machine learning)

Institutions

- Etablissement de rattachement : CNRS
- Laboratoire d'accueil : Institut des Systèmes Complexes de Paris Île-de-France (ISC-PIF)
- Laboratoire partenaire : Equipes Traitement de l'Information et Systèmes (ETIS)

Thèse financée par le programme 80 PRIME du CNRS.

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https://emploi.cnrs.fr/Offres/Doctorant/UPS3611-DAVCHA-004/Default.aspx