Post-doctoral position: Original applications in vibrating reverberation chambers (VIRC)

Offer description

Keywords
Reverberation chamber, VIRC, anechoic environment, electromagnetic compatibility, antenna efficiency, radar cross section, over-the-air test, antenna radiation pattern.

Research Laboratory
XLIM Laboratory, UMR CNRS 7252, University of Limoges, Limoges, France.

Duration
24 months (at least)

Application deadline
July 1, 2021

Expected starting date
Last trimester of 2021

Required nationality
European Union and Switzerland

Research project
CHAOTIQ (funded by the ANR ASTRID French Program) coordinated by XLIM. Other partners of the project: CISTEME (https://cisteme.net/) and Jacques Dubois (http://www.jacquesdubois.com/)

Project description

The project proposes the theoretical and experimental study of chaotic vibrating reverberation chambers (CVRC) made of a metallic tent attached on a light frame. This low-cost test facility (compared to existing faradized enclosures) has the advantage of being quickly removable and mobile, which generates a major change compared to the current situation: the displacement of the test facility towards the system to be tested. It is planned to investigate the feasibility of original applications within a VIRC, as for instance over-the-air tests of wireless devices, characterization of antennas (efficiency, radiation pattern) and radar-cross section measurements. The selected candidate will have to propose (in collaboration with all the project members) the suitable experimental setups as well as the post-processing programs related to each innovative applications proposed.

Research environment

The candidate will join the electromagnetic compatibility (EMC) team making part of the “RF system” group of the XLIM laboratory (https://www.xlim.fr/recherche/pole-electronique/systemes-rf) of the XLIM laboratory, at the University of Limoges (France). The
candidate will work in close collaboration with the colleagues of the “Antennas and Signals” team of the same group.

Qualifications

Candidates should have a Ph.D. degree in electromagnetics, ideally in the field of reverberation chambers, with important skills in signal processing, instrumentation, antennas and/or EMC. The successful candidate should be able to smoothly integrate into the research group and to interact with French and international partners. He should demonstrate capability for independent research. Good communication skills in English are required.

Further information

Further information may be obtained from Guillaume Andrieu, Assistant professor (HDR) (guillaume.andrieu@xlim.fr).

Application procedure

Please submit your application before June 1, 2021 by e-mail to guillaume.andrieu@xlim.fr. Your application should include:

- Motivation letter
- Detailed CV
- Copy of Ph.D. degree
- Reference letters (optional)

References