

Urgent: suggested (M2+) PhD Thesis (50% ONERA and 50% Institut Polytechnique de Paris):

Electric field measurement by second harmonic generation of picosecond laser light (E-FISH) for aerospace applications

In scientific collaboration between France and Singapore, in Palaiseau (France)

Supervisors:

ONERA: Dr. Paul-Quentin ELIAS, IPP: Dr., Prof. Svetlana STARIKOVSKAIA

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ONERA: Dr. Paul-Quentin ELIAS,
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IPP: Dr., Prof. Svetlana STARIKOVSKAIA,
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Scientific collaborators:

NUS: Prof. Tat Loon CHNG,
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Context, objectives, financial support:

The aim of this PhD Thesis will be to develop experimentally a large-scale diagnostics, suitable to provide the measurements on long distances at smallest possible E-field values. Obtained solution should be applied to plasma-assisted combustion experimental bench(s), and to ONERA lightning experimental bench. It is part of a collaborative project, developed between the Institut Polytechnique de Paris (IPP), the Office National d'Etudes et de Recherches Aéronautiques (ONERA) and the National University of Singapore (NUS). 50% of financial support from ONERA and 50% from EUR PlasmaScience will be available at the condition the candidate pass the Doctoral School competition of Institut Polytechnique de Paris (the deadline of the Doctoral School is in the beginning of April).

Profile and skills required:

The selection criteria for students are as follows: excellent knowledge of physics, intellectual capacity, ability to generate ideas to solve problems, ability to make decisions, interest in experimental work, basic programming skills, English at B2 level, integrity and sense of responsibility. Access to ONERA requires obtaining an authorization issued by the General Delegation for Armament. The suggested PhD Thesis is not confidential. Presentations at national/international conferences will be encouraged and financially supported. Scientific publications in the reviewed journals will be encouraged.

