Spécialité de Master « Optique, Matière, Plasmas »

Stage de recherche (4 mois minimum, à partir de début mars)

Proposition de stage (ne pas dépasser 1 page)

Date de la proposition :

Responsable du stage / *internship supervisor*:			
Nom / *name*:	QUERE	Prénom/ *first name* :	Yves
Tél :		Fax :	
Courriel / *mail*:	yves.quere@univ-brest.fr		
Nom du Laboratoire / *laboratory name*:			
Code d'identification :		Organisme :Lab-STICC / Université de Bretagne Occidentale	
Site Internet / *web site*: www.labsticc.fr			
Adresse / *address:* 6, av. Le Gorgeu 29238 Brest			
Lieu du stage / *internship place*: Singapour (CINTRA)			

Titre du stage / *internship title*:Convective flows in a 3--Dimensional Microfluidic network induced by localized light heating

Résumé / *summary*
The goal would be to study, the possibility to obtain a convective flow in 3--Dimensional Microfluidic network induced by localized light heating. To do that, we would need a COC microchannel (with water for instance), a COC microlens to act as a concentator of light and a heat sink. This one could be obtain in first approach with a square of metal or another very interesting thing would be to use a layer of graphene.
This subject is a part of a larger scientific thematic, around the design of wireless and autonomous sensors. The final objective would be to insert a communicative system (antenna, millimetric RF source, sensor ...) inside a mobile COC object.
The Lab--STICC laboratory at the University of Brest is the leader of the project and will be mainly involved in the design.
CINTRA at Nanyang Technological University, Singapore will be involved in the nanotechnological part of the project.
SIMTech from A*STAR at Singapore will be involved in the polymer frabrication.
Candidate profile: material sciences for micro & nano technologies, fluid mechanics (microfluidic...), knowledges in electronic and telecomunication would be appreciated, clean room experience...
Candidate Level : last year of School of Engineer or 2nd year of Master degree.
The internship will take place at CINTRA (Singapore)

Toutes les rubriques ci-dessous doivent obligatoirement être remplies

Ce stage pourra-t-il se prolonger en thèse ? *Possibility of a PhD* **? : oui**

Si oui, financement de thèse envisagé/ *financial support for the PhD***: Co-Financement Cintra (Singapour) et allocation Ministère (France)**

Lasers et matière	**X**	Lumière, Matière : Mesures Extrêmes	**X**
Optique de la science à la technologie	**X**	Plasmas : de l'espace au laboratoire	

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