Post-Doctoral Position

COMCLEEN project: bio-material based devices for radio and microwave applications

Deadline for application: December 15th 2014 for 12 months

Development of selective metallization processes and realization of 2D and 3D microwave devices using injection molding and 3D printing…

Aims and tasks

Applications using biomaterials are a hot topic in current research. COMCLEEN project is funded by the Brittany Region (« Dispositif SAD ») and proposed to evaluate the ability of biomaterial to realize radio and microwave devices. The involved team of the Lab-STICC in COMCLEEN has already began collaborations with biomaterial providers able to propose compatible material with injection molding or 3D Printing processes. An equipment in study will be used to realized selective metallization on 2D and 3D shapes. The first objective of the post-doctoral study, will be to continue the development of this equipment principally based on ink deposition techniques. The first part concerns the software development to control the deposit of ink (meshing, positioning, dosing, etc.)

The second part of this work will be devoted to the metallization tests on different materials (ABS, PLA and biomaterial). The characterization will be done on the materials and on the fabricated devices. This project is linked to several projects of the team which can help for the 3D objects fabrication (by molding or by 3D printing) and for the design of radio and microwave devices (antenna and filters). These various projects are: ANR DGA ASTRID COCORICO, ANR ATOMIQ, MCM-ITP COBRA (Fr/UK project) and ANR ASTRID 3D RAM.

The Team

This project will be conducted by a team of the Lab-STICC laboratory at the University of Brest (Université de Bretagne Occidentale). A collaboration will be initiated with CEA Saclay, BMO Brest and companies close to the biomaterial fields, (http://www.lab-sticc.fr/, http://www.univ-brest.fr/)

Candidate profile

The scientific profile is large. Solid knowledges in one or several thematics would be appreciated: material sciences, ink deposition, technological processes in electronic and micro-electronic, programing, informatic, solidworks… Knowledge in microwave, antenna will be appreciated.

The candidate must be foreign. If candidate is french, she or he must have stayed at least 12 months outside France during the last 3 years.

Net Monthly salary: 2000 €

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