



POSTDOCTORAL SCHOLAR POSITION
IN MR BRAIN IMAGING
LSiIT, Strasbourg, France

Studies about brain maturation aim at providing a better understanding of brain development and links between brain changes and cognitive development. Such studies are of great interest for diagnosis help and clinical course of development and treatment of illnesses. This project aims at going beyond the formal description of the brain maturation thanks to the development of a realistic numerical model of brain aging.

Grant : ERC Starting Grant <http://erc.europa.eu>

Lab : LSiIT, Strasbourg, FRANCE <http://lsiit-miv.u-strasbg.fr/miv>

Description
Reconstruction of High-Resolution in Utero Fetal Brain Images

In this project, we focus on exploring fetal brain maturation and more particularly brain morphology evolution and degree of myelination changes using anatomical MRI (T2-weighted images) and Diffusion Tensor Imaging (DTI). The analysis of fetal MR data remain limited due to motion corruption and low resolution images. The first approach to forming high resolution MR images of the fetal brain has been recently proposed by our research team without modifying the acquisition protocol used in routine. The purpose of the proposed work is to extend the developed method dedicated to T2-weighted MR images to correct geometrical distortions, fetal motion and to reconstruct a high resolution 3D diffusion tensor image.

Profiles

The candidate should be familiar with **image processing** and **applied math**.
The candidate must also have excellent knowledge of **C++** and should be fluent in English.

Application

Please send a CV, a brief research statement and names of two referees to rousseau@lsiit.u-strasbg.fr

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