Tenured-research position in fMRI at ultra-high field

NeuroSpin

NeuroSpin (CEA, France) is seeking to fill a tenured-research position dedicated to human functional MRI at ultra-high field (UHF). Two kinds of profiles will be considered:

1. **A cognitive neuroscientist** with an ambitious research program aimed at elucidating the cerebral organization of one or more well-identified cognitive processes (e.g. vision, language, learning, etc.), using advanced fMRI methods allowing access to the organization of the cortex and subcortical regions at high resolution (for example their subdivision into columns or specialized cortical layers). We are looking for candidates with experience in 3T, 7T or higher-field field interested in leveraging the potential of the unique 11.7T system, and possibly other brain-imaging modalities such as EEG, MEG or intracranial recordings, whose research program would strongly benefit from research on the clinical 11.7T MRI system available at NeuroSpin.
2. **or a UHF methodologist** interested in collaborating with cognitive neuroscientists and other 11.7 T team members to boost the fMRI activity by tackling fundamental challenges related to ultra-high field scanners, including motion correction, parallel transmission, sequence design and programming, B0 field inhomogeneity mitigation, post-processing strategies, etc..

The candidate should be a junior to mid-career researcher with publication record, excellent problem-solving and communication skills. Experience with Siemens technology and with funding acquisition are a plus.

NeuroSpin is a research institute dedicated to brain imaging. It belongs to the Commissariat à l'Energie Atomique et aux Energies Alternatives, located in Saclay (suburb of Paris France), and is led by Prof. Stanislas Dehaene. It hosts approximately 200 staff members (tenure researchers, post-doctoral fellows and PhD students) including physicists, computer scientists, mathematicians, clinicians, neuroscientists and technicians. The institute is equipped with three preclinical (7T, 11.7T, 17T) and three clinical (3T, 7T, 11.7T) MRI scanners. The Iseult 11.7T clinical MRI scanner is a world-premiere in the MR community. Designed by CEA, with a 90 cm wide bore it holds a world record in terms of stored energy in an MRI magnet. Nominal field strength was reached in July 2019, in-vivo images in 2023 (see https://www.nature.com/articles/s41592-024-02472-7). Additional human and hardware resources (high performance gradient coil, newest Siemens electronics, 64Rx), will boost the candidate's means to carry out his/her investigations at this unprecedented field strength.

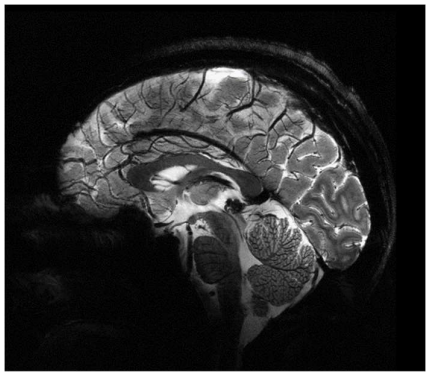

Figure 1. First in vivo human brain images (sagittal, T2-weighted) acquired at 11.7T.*

The deadline for the application is May 30th 2025, for a position to be filled before the end of 2025. To apply, please send your CV and a 3 pages description of a research program to aurelie.mazouyes@cea.fr. Please also arrange for two reference letters to be sent. For further inquiries about the position, please contact us at the same address.