

## Post-Doc Position, Preclinical Neuroimaging, MRI IMIS Team / ICube, Strasbourg, France



### Contact :

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Head of Integrative

Multimodal Imaging in

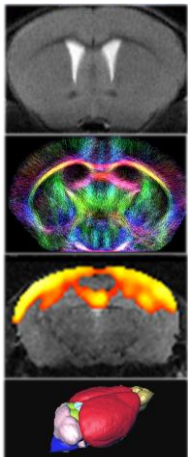
Healthcare Team (IMIS)

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The **Integrative Multimodal Imaging in Healthcare research group** at the “Engineering science, computer science and imaging laboratory – ICube” of University of Strasbourg offers a 2 years postdoctoral position in the field of preclinical MRI. The postdoctoral fellow will have the mission to develop and implement MRI methodologies dedicated to studying brain pathologies in preclinical animal models. We are particularly looking for metabolic imaging developments - GluCEST; GlucoCEST, Diffusion Spectroscopy to be associated with functional MRI and connectome analysis. This position is in support of a EU funded project (PAINFACT - <https://cordis.europa.eu/project/id/848099>) to study structural and functional network as well as metabolic dysfunction underlying the mechanisms of chronic pain and mood disorders comorbidity (PI. Laura Harsan). The selected candidate will have the opportunity to participate and be included in several other preclinical MRI projects (ANR/ NIH) for studying brain disorders and to work in a multi-disciplinary environment. The position is available immediately.

### Qualifications:

- Ph.D. in MRI Physics, Medical Imaging/NeuroImaging, Biomedical Engineering or related fields.
- Experience with sequence developments and protocols optimisations in the preclinical MRI field (Bruker systems) and/or quantitative MRI acquisition/analysis are especially valued.
- Track record of research and publications in scientific journals and conferences
- Self-driven and highly motivated to work in an interdisciplinary team

**Environment:** ICube lab gathers expertise in the biomedical engineering, medical imaging (MR based technologies), computer science and medical research fields (<https://icube.unistra.fr/en/>). It has privileged connection with the neuroscience (part of Interdisciplinary Institute for research in neuroscience) and medical research. **The IMIS team** focuses its research on imaging methods development, particularly MRI - to noninvasively study brain structural and functional brain communication. The major aim is the identification of new, relevant signatures based on quantitative multi-modal MRI, brain connectome patterns and behavioural or clinical traits to unveil pathological mechanisms, predict and diagnose neurological disorders, define therapeutic targets and provide ground for testing therapeutic approaches. The projects of IMIS strongly developed a synergy between the preclinical research - relying on the use of animal models of brain disorders – and the clinical human research, both in methodological and application aspects.

The team has access to ICube imaging platform including a 7T Bruker preclinical MR system with mouse head Cryoprobe, a 3T human MRI dedicated exclusively to research, multi-photon intra-vital and ex-vivo microscopy as well as the NMR metabolomics facility of the University Hospital.

**Applications** should be sent to Laura-Adela Harsan ([harsan@unistra.fr](mailto:harsan@unistra.fr)) and include an outline of the research experience and interests, a Curriculum Vitae and contact information for references.