

## Postdoctoral Position in Functional MRI and Brain Research

Center for Magnetic Resonance Research (CMRR), University of Minnesota

A postdoctoral appointment is available in the Center for Magnetic Resonance Research (CMRR), at the University of Minnesota under the supervision of Professors Wei Chen and Kamil Ugurbil. The successful candidate will participate in the functional MRI studies using advanced multimodal neuroimaging approaches including newly developed MRI-compatible high-density electrodes and optrodes allowing simultaneous neural stimulation (by using electrode stimulus or optrode stimulus in combination with optogenetic animal model), neural recording and high-resolution fMRI mapping at ultrahigh field, and multi-photon optical imaging. This research project is supported by two newly awarded NIH BRAIN Initiative grants (NIH R01 MH111413 and MH111447) aiming to understand the underlying mechanism and mapping specificity of fMRI down to the mesoscopic scales of cortical layers, functional columns and microvessels. CMRR has outstanding research resource and facility and it accommodates a large number of advanced human MRI scanners (3x3T, 4T, 2x7T and the world first whole body 10.5T) and two animal MRI scanners (9.4T and 16.4T), which are dedicated for basic and clinical researches.

The successful candidate will play a critical role in development and optimization of the multimodal fMRI approaches for studying functional connectivity across cortical-subcortical networks under resting state, and visual activation and signaling pathways in response to featured visual stimulation or electrode stimulation at the layer specific scale. He/she will work on developing algorithms and computer programs for effectively processing and analyzing the multimodal fMRI data. Other research opportunities are also available depending on the interests and background of the candidate.

Applicant should have a Ph.D. trained in one of the following fields: physics, medical physics, computer science, biomedical engineering, electrical engineering or neuroscience, in particular, with the MRI related research experience or thesis work. Strong background in MRI physics, fMRI approach, computer programming (Matlab and C++) and MRI pulse sequence development are highly desirable, and neurophysiology knowledge would be a plus.

To apply, please send your curriculum vitae along with two reference names to:

Professor Wei Chen ([wei@cmrr.umn.edu](mailto:wei@cmrr.umn.edu)) and/or  
Professor Kamil Ugurbil ([kamil@cmrr.umn.edu](mailto:kamil@cmrr.umn.edu))

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*The University of Minnesota is an equal opportunity educator and employer. All qualified applicants are encouraged to apply including minorities and women.*