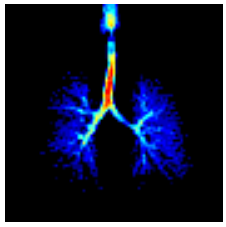
GERMAN CANCER RESEARCH CENTER
IN THE HELMHOLTZ ASSOCIATION



Post: PhD Studentship funded by EU Marie Curie Studentship.
Duration 3 years.
Salary 31,710 Euros p.a. plus relocation allowance

Graduate or Masters Physicists with a strong theoretical and experimental background, knowledge of electronics and programming in languages such as C, and MATLAB. The work will involve implementation of novel imaging techniques on 3T and 1.5T whole body MRI systems. The project is funded as part of the EU Framework 6 Polarised Helium Imaging for Lungs Network (PHELINET) and the student will be encouraged to participate in ongoing collaborations with other researchers across Europe with multiple opportunities to visit leading international laboratories and to attend taught summer schools. In the PHELINET project the group has proposed and implemented innovative methodologies and lung imaging protocols for humans related to lung perfusion/ventilation imaging and dynamic ventilation imaging. New application comprise time-resolved MR angiography of the chest, 3D perfusion MRI of the lung and lung cancer, dynamic (2D+t and 3D+t) MRI of respiratory mechanics, implementation of oxygen-enhanced MRI of ventilation and gas exchange, morphological and functional MRI of the lung in cystic fibrosis as primary imaging modality.

The *German Cancer Research Centre* (DKFZ) is a foundation under public law and a member of the Helmholtz Association of National Research Centres (Helmholtz-Gemeinschaft Deutscher Forschungszentren) with its goal to systematically investigate the mechanisms of cancer development and to identify cancer risk factors. The departments of *Medical Physics in Radiology* and *Radiology* of the DKFZ are equipped with three modern 1.5 T whole-body MR scanner; high field whole-body systems will be installed in the near future: 3.0 T (in 2006/2007) and 7.0 T (in 2007/2008). We are doing basic research in developing new MR-techniques for measuring perfusion, diffusion, oxygenation, and sodium in the human brain or other organs like lung, liver or heart. The group is composed of scientists from physics as well as radiology. It has know-how and expertise in MR sequence programming and its application in human studies.

Closing date: 1st April 2007.

The research group has background in physics and is part of an interdisciplinary team working in close co-operation with the medical department. For more information on the project please **contact**:

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