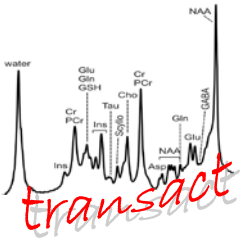
Job Opening

Early Stage Researcher

FP7-PEOPLE Marie Curie Initial Training Network

Transforming Magnetic Resonance Spectroscopy into a Clinical Tool



The TRANSACT Initial Training Network investigates theoretical and practical aspects of in vivo Magnetic Resonance Spectroscopy (MRS) and Spectroscopic Imaging (MRSI) with applications in oncology and neurology. The ITN will host 13 Early Stage Researchers, each performing an individual research project on topics ranging from spectral quality assurance criteria to optimal exploitation of complementary multi-modal magnetic resonance imaging modalities. The research training is supervised by a consortium of 10 academic and 4 industrial partners with wide expertise in basic science, clinical research and information technology.

Job Description

Job Title: Virtual scanner – computer simulation for spectroscopic quantitation, pulse sequence optimization and data analysis development (ESR2)

Job Summary: This job opening covers a 3-year research position in the frame of a 4-year doctoral program (resulting in a PhD degree awarded by Masaryk University or Brno Univ. of Technology). The main part of the research work will be carried out at Institute of Scientific Instruments Brno, Czech Republic (Supervisor: Dr. Zenon Starčuk), and will include a 4-month research secondment at Ecole Polytechnique Fédérale de Lausanne, Switzerland (Co-supervisor: Dr. Cristina Cudalbu).

Job Description: The objective of this project is to extend the functionality, improve deployment robustness and calculation efficacy, as well as to develop automated basis set calculation for the NMRScope-B module of the jMRUI software. The specific aim will be a thorough evaluation of the functionality of NMRScope-B, particularly in more sophisticated features such as multidimensional selective excitation, multiple-rate relaxation, usage of peak phase constraints in quantitation, involving computer models, phantoms, and animal tests.

Keywords: magnetic resonance spectroscopy, signal processing, spin physics, computational software

Research Field: Biophysics, Biomedical Engineering

Job Details

Type of Contract: Temporary (36 months)

Status: Full-time (40 hours/week)

Requirements

Required Degree: Master Degree in Physics or Engineering (or equivalent)

Required Languages: English (Excellent)

Eligibility: < 4 years after obtaining Master Degree, < 1 year living/working in Czech Republic since 2010

Organization/Institute Contact Data

Company/Institute: Institute of Scientific Instruments Brno

Faculty/Department/Research Lab: Department of NMR

City, Country: Brno, Czech Republic

Contact: Dr. Zenon Starčuk (starcuk@isibrno.cz, +420 541 514 247)

Application Details

Envisaged Job Starting Date: immediately after acceptance to a PhD programme at Masaryk University

Application Deadline: open until position filled

How To Apply: send CV and motivation letter to starcuk@isibrno.cz

The TRANSACT ITN adheres to the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.