Postdoctoral and Graduate Positions in Quantitative Magnetic Resonance Spectroscopy

The In-Vivo Magnetic Resonance Spectroscopy research group at the Weizmann Institute of Science seeks highly motivated post-doctoral candidates as well as graduate candidates seeking a PhD for developing & applying exciting cutting edge MR neurospectroscopy methodologies.

About The Work.
“Conventional” spectroscopy aims to acquire metabolite concentrations. Recently, our group has developed multiparametric $^1$H-MRS sequences which enable, in addition, the acquisition of metabolite relaxation times. Metabolite relaxation times change in multiple pathologies and are potentially exciting biomarkers.

The candidate will develop new acquisition and post-processing methods for simultaneously estimating the concentrations and relaxation times of metabolites in the central nervous system, as well as apply these methods to the study of neurological diseases, including Parkinson’s Disease and Multiple Sclerosis. The approaches rely on tools from statistics, information theory and deep learning (including fingerprinting-based approaches). The work is expected to yield new tools and significantly impact the way neurospectroscopy is carried out at 3T and 7T.

Ideal candidates will have a strong background in MR physics and/or applications, sequence development/testing, programming. Knowledge in MR spectroscopy is a plus, but not essential (candidates from other walks of magnetic resonance are welcome!). Work will be carried out on Siemens scanners (Prisma 3T and Terra 7T).

Salaries, housing and travel details may be found on the Feinberg Graduate School website: https://www.weizmann.ac.il/feinberg/fellowship-aid/postdoctoral-fellows

To Apply
Please email your CV, a letter describing your research interests and long term goals, and the names and contact details of at least two references to Dr. Assaf Tal, assaf.tal@weizmann.ac.il.

About The Institute.
The Weizmann Institute is internationally renowned and has played a major role in the history of magnetic resonance. It currently houses multiple labs studying diverse phenomena ranging from electron paramagnetism of proteins to solid state NMR, hyperpolarization techniques, in-vivo spectroscopy and imaging in animal models and in humans. The Institute offers advanced extensive facilities, including a 3 Tesla Siemens PRISMA human MRI scanner, 7T Siemens Terra MRI scanner, 15.2T preclinical Bruker Biospec among others. The Institute provides an outstanding intellectual environment within a beautiful campus.