Post-Doctoral Position in Quantitative MRI

A two-years post-doctoral position is available immediately at the Center for Biomedical Imaging of the New York University (NYU) Langone Medical Center. The position will be integrated into an interdisciplinary research team working on quantitative mapping of tissue parameters using Magnetic Resonance Fingerprinting (MRF). Concepts from MRF will be employed to develop a technique for simultaneous high-resolution mapping of proton density, $T_1$, $T_2$ and Magnetization Transfer (MT) rate in clinically feasible scan time. The new method will be translated into a useful diagnostic tool for the detection and staging of articular cartilage damage, with a significant impact on clinical management. Applications of quantitative MRI to other pathologies in different body regions will be explored. The research team includes imaging researchers, industry scientists, clinical radiologists, and surgeons.

**Responsibilities:** as part of the research team, the candidate will be involved in the following activities:

- Development of a new technique for mapping multiple parameters using MR Fingerprinting
- Validation scans on phantoms and human volunteers
- Acquisition and analysis of clinical data in collaboration with orthopedic surgeons and radiologists
- Preparation of conference abstracts and research manuscripts

**Qualifications:** We are looking for a self-driven, creative, and interactive scientist who is strongly motivated to acquire new skills and to perform interdisciplinary research. The ideal candidate is a Ph.D. or M.D./Ph.D. with experience in magnetic resonance (MR) imaging and a solid background in MR physics and/or biomedical engineering. Knowledge of pulse sequence programming and modeling of magnetization transfer effects will be considered a plus.

**About Us:** The Bernard and Irene Schwartz Center for Biomedical Imaging (CBI) at the NYU Department of Radiology houses approximately 100 full-time research staff providing state-of-the-art facilities, including a 7 Tesla (T) and two 3 T whole body MR scanners, a 3 T MR-PET scanner and a fully equipped radiofrequency engineering laboratory. CBI space and infrastructure also support the Center for Advanced Imaging Innovation and Research (CAI²R), a new model of academic-industrial and interdisciplinary collaboration (http://cai2r.net/). CAI²R researchers, many renowned in their respective fields, focus on new methods and new paradigms for rapid continuous comprehensive imaging, including but not limited to novel rapid MR acquisition and reconstruction strategies, novel RF detectors and transmitters, novel quantitative biomarkers for MRI and PET. CAI²R collaborates with several academic institutions around the world and partners with industry for rapid technology transfer. CAI²R’s approach is to encourage collaboration across research groups, to promote creativity and build a suitable environment for breakthrough innovations at the forefront of biomedical research.

**Salary/Benefits:** The position is for two years, contingent on performance. Salary is commensurate with experience. Full benefits will be provided.

**To Apply:** Email a cover letter, a paragraph explaining your interest in the project, your CV with a list of publications to Riccardo Lattanzi, Ph.D. (Associate Professor of Radiology, Electrical and Computer Engineering, Riccardo.Lattanzi@nyumc.org) and Martijn Cloos, Ph.D. (Assistant Professor of Radiology, Martijn.Cloos@nyumc.org).