KESSLER FOUNDATION

Biomedical Engineer
Rocco Ortenzio Neuroimaging Center, Kessler Foundation, West Orange, NJ

We are seeking candidates who are enthusiastic about neuro-rehabilitation research. The Biomedical Engineer will analyze functional and structural magnetic resonance imaging (MRI) data as part of a multidisciplinary team of clinical investigators, and to write programs and/or scripts to aid in data acquisition, analysis and maintenance.

Key responsibilities:

Neuroimaging Research
- Responsible for data acquisition and processing on multi-modality biomedical data, including but not limited to quantitative analysis of MR imaging, functional MRI, Electroencephalography (EEG), etc.
- Develops/Implements efficient algorithms, writes code for specific applications and automates research data analysis tasks as appropriate.
- Learns, evaluates, and recommends new image processing tools and implements them where necessary.
- Creates and maintains a library of programs with appropriate documentation.
- Performs image quality inspections both routinely and in conjunction with scanner upgrades or other equipment changes.
- Assists scientists in the writing of grant and other research funding applications, scientific papers, progress reports, etc.

Education and Training
- Provides or supervises individualized training for faculty, resident, and post-doctoral researchers, professional staff, and other trainees for data processing on all imaging-related research projects.
- Assists in carrying out statistical modeling of neuroimaging data.

Additional
- Works in collaboration with IT department to ensure that the most up-to-date software is installed.
- Maintains and oversees shared informational resources (e.g., internal library of imaging-related audiovisual media).
- Performs some administrative tasks such as assisting with submissions to the Institutional Review Board.
- Develops proficiency in performing neuroimaging data acquisition, and serves as a backup to the MRI Technologist for the Center.
- Also responsible for developing and extending professional and technical skills to ensure ongoing competence. Performs other duties as assigned.

Requirements:

- Masters (or higher) degree in biomedical engineering, computer science, or statistics with specialization in brain MR analysis, or the equivalent.
- 2-5 years of experience in biomedical image analysis; experience working in a high demand academic research environment.
- Extensive knowledge of structural and functional MRI analysis.
- Proficiency in Linux operating system. Experience with Windows/Macintosh.
- Strong programming skills with experience in common programing languages (e.g., MATLAB, python, R, C++, etc.).
- Excellent organizational and communication skills and ability to work independently.
- Must be able to work collaboratively within a multidisciplinary team.

- Ability to work under the pressure of project deadlines.

Preferred qualifications:

- Familiarity with brain anatomy and resting state fMRI analysis
- Experience in EEG acquisition and analysis.
- Experience with statistical analysis.
- Shell programming and scripting.
- Knowledge of data contents of different image media.
- Knowledge of image analysis suites such as FSL, AFNI, SPM.
- Knowledge of online neuroimaging databases and resources.

Interested applicants should send a letter of interest and résumé/CV to byao@kesslerfoundation.org.

Kessler Foundation is a public charity dedicated to improving the lives of people with physical and cognitive disabilities caused by stroke, multiple sclerosis, injuries to the brain and spinal cord, and other chronic conditions.

We are committed to creating a diverse, cooperative work environment. Women, members of under-represented minority groups, and individuals with disabilities are encouraged to apply.

Please visit our website: www.KesslerFoundation.org.