Postdoctoral Position in Medical Image Processing for the Analysis of Early Brain Growth

**Position description:** A Postdoctoral position is available immediately in advanced MRI (including fMRI and DWI) processing of early brain development in the Intelligent Medical Imaging (IMAGINE) Research Group ([https://imagine.med.harvard.edu/](https://imagine.med.harvard.edu/)) of the Computational Radiology Laboratory (CRL) ([http://crl.med.harvard.edu/](http://crl.med.harvard.edu/)) at Boston Children’s Hospital. Join our team of investigators in a vibrant environment and contribute to developing new, high-impact methods, algorithms, and software tools to answer important scientific/clinical questions about early (fetal and neonatal) brain development and developmental disorders.

**About:** Boston Children’s Hospital (BCH) is ranked #1 in US News ranking of pediatric hospitals. Researchers at CRL are affiliated with Harvard Medical School, which is ranked #1 in US News ranking of medical schools. Boston is known as a hub for medical innovations, and the home for several top-rank universities and hospitals, as well as biotechnology and companies.

**Impact:** An embryo’s developing brain generates neurons at an astonishing rate of almost half a million per minute from the 4th week of pregnancy until mid-gestation. At this stage, the baby’s brain continues to form in the womb, ultimately taking shape as the most complex known living organ. Our collective interest in understanding the relative effects of nature vs. nurture, i.e., genes vs. environment on brain growth and development of intelligence is long-standing.

**Minimum requirements:**

- PhD in computer science, electrical or biomedical engineering, medical physics, applied mathematics, neuroscience, or a related field with a research focus on biomedical image processing/medical image computing, and/or magnetic resonance imaging
- Extensive experience in high-performance programming with C++ and Python
- Demonstrated record of high-quality publications in the field

**Highly desired qualifications:**

- Experience in analyzing medical imaging data including magnetic resonance imaging
- Experience in neuroimaging, diffusion weighted imaging, and functional MRI
- Experience in motion and distortion correction in MRI
- Experience in biomedical image registration, restoration, and segmentation
- Experience in machine learning, pattern recognition, computer vision

**To apply:** Only applications that strictly meet the minimum requirements will be considered. To apply, please send your CV along with a copy of a technical paper, the desired start date, and one paragraph statement of goals to Ali Gholipour at: ali.gholipour@childrens.harvard.edu