Postdoctoral Positions

The Computational Breast Imaging Group (CBIG) of the Radiology Department at the University of Pennsylvania is accepting applications for postdoctoral positions. We are developing an emerging research program to investigate the role of imaging as a quantitative biomarker for improving personalized clinical decision making for breast cancer screening, prognosis, and response to treatment. Positions are available in the following research areas:

Breast cancer risk estimation
The position involves developing novel methods to analyze breast density and parenchymal patterns from digital mammography (DM) images and estimating the predictive value of these imaging features to assess a woman’s risk of breast cancer. The goal is to develop a new predictive model that incorporates imaging biomarkers and clinical breast cancer risk factors to improve breast cancer risk estimation for women. This project is supported by the Department of Defense (DOD) and by the American Cancer Society (ACS). Funding is secured for four years.

Breast cancer prognostic assessment
The position involves developing novel methods to quantify breast dynamic contrast enhanced magnetic resonance imaging (DCE-MRI) tumor structural and functional characteristics in order to investigate associations between the imaging phenotype of breast cancer and breast cancer prognosis. The goal is to develop a new predictive model that incorporates clinical information, prognostic assays, and quantitative imaging biomarkers to assess risk of recurrence based on specific treatment options. This project is supported by the University of Pennsylvania Institute for Translational Medicine and Therapeutics (ITMAT). Funding is secured for three years.

We are seeking highly motivated individuals who have demonstrated academic excellence, including publications. Successful candidates should have a PhD (or equivalent) in Electrical or Biomedical Engineering, or Computer Science, with a strong background on biomedical image analysis with emphasis on image feature extraction, image segmentation, shape statistics, pattern recognition and machine learning. Competence in programming methods (Matlab, C/C++, and LINUX scripting) and quantitative analytical methods is essential. Applicants should demonstrate the ability to effectively communicate both orally and in writing. Duties will include designing and implementing experiments, data collection and analysis, and writing and presenting results.

The CBIG is a newly formed group of the Breast Imaging Division of the Radiology department with a mission to act as a translational catalyst between computational imaging science and clinical breast cancer research. CBIG collaborates with faculty within Radiology (http://www.uphs.upenn.edu/radiology/research/), the Abramson Cancer Center, the Institute for the Translational Medicine and Therapeutics, and the Center for Clinical Epidemiology and Biostatistics. Affiliated faculty include experts in informatics, medical physics, genetics, pathology, oncology, biostatistics, epidemiology and primary care. Successful applicants will join a vibrant collaborative research environment and will have the opportunity to work closely with clinical investigators and gain a first-hand experience of our clinical breast imaging program (http://www.uphs.upenn.edu/radiology/patient/services/women/).

Applications should indicate the research area of interest and include a letter of motivation, a curriculum vitae, and names and addresses of three references. Salary is based on the NIH scale. Starting date for the position is flexible.

For more details and to apply contact:
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The University of Pennsylvania is an equal opportunity employer.