The Penn Image Computing and Science Laboratory (PICSL) is seeking candidates for multiple Postdoctoral Fellow positions. We are looking for candidates with a strong track record of independent research in computational image analysis methods, computer vision, or machine learning who are interested in pursuing a research career in biomedical image analysis. The Postdoctoral Fellows will support NIH-funded collaborations between PICSL and several clinical and translational research groups at the University of Pennsylvania. Currently funded collaborations include research in:

- Advanced neuroimaging biomarkers for aging and dementia (Penn Memory Center)
- Quantitative 4D morphology of pediatric heart valves (Gorman Cardiovascular Research Group and CHOP)
- Placenta image analysis and morphometry (Division of Maternal-Fetal Medicine at Penn ObGyn)

The position involves developing new advanced image analysis methods; improving existing techniques; supporting and establishing new collaborations with clinical investigators; contributing to the specific aims of funded grants; and participating in the development of open-source software. Applicants must have a Ph.D. or equivalent degree, an excellent background in mathematics and computational sciences, and a strong track record of independent research in medical image analysis, computer vision, or machine learning. Successful applicants will have first-author multiple papers in competitive conferences such as CVPR, ICCV, IPMI, MICCAI, NIPS and/or leading journals in their respective fields. Applicants with expertise in one or more of the following areas are particularly encouraged to apply:

- Automated image segmentation using multi-atlas and deformable modeling techniques;
- Geometrical modeling for biomedical applications, including medial axis approaches and FEM methods;
- Machine learning and statistical methods for image-based inference;
- Python and C++ programming, particularly using the Insight Toolkit (ITK) and Visualization Toolkit (VTK)

The University of Pennsylvania is consistently recognized as one of the best universities in the United States. The School of Medicine, and the Department of Radiology in particular, are consistently among the top five recipients of biomedical research funding in the nation. PICSL is a dynamic and growing group in the Department of Radiology that is involved in many exciting biomedical imaging projects, including multi-modality neuroimaging, animal imaging, geometric and statistical modeling of imaging data, diffeomorphic registration and multi-atlas segmentation. We are particularly well known for our open-source research software, such as ITK-SNAP and ANTS. PICSL is home to four faculty members and over 20 graduate students, postdoctoral fellows, and research staff members. PICSL fosters a friendly, noncompetitive, collaborative environment where each individual member of the laboratory is able to thrive, while also effectively contributing to the group’s overall programmatic aims. Past postdoctoral trainees at PICSL have been very successful in obtaining highly competitive positions in the academia and industry.

PICSL has just moved to newly renovated space in the Richards building, a designated National Historic Landmark designed by the renowned architect Louis Kahn. The Richards and adjacent Goddard buildings are being renovated to house virtually all neuroimaging and brain function research groups at Penn. Although the Penn campus is already very compact, consolidating the many faculty members involved in neuroimaging research in Richards/Goddard will facilitate broader participation in projects, seminars, workshops, and interdisciplinary training, and will provide an outstanding environment for trainees to interact with faculty and with each other. PICSL is located in minutes’ walk from various CT, MRI and PET scanners, including a new Connectome-grade 3T MRI scanner, as well as 7T human and 9.4T animal scanners. PICSL is located in Philadelphia, a vibrant city that offers many professional and cultural opportunities. The campus is in walking distance from the city center, which has experienced enormous growth and transformation in the last two decades. Philadelphia is famous for its history, independent arts, music, and theatre, and a rich food scene. It is one of the few major cities in the United States that is affordable for academic trainees, both in urban and suburban settings. The Philadelphia region has an excellent public transportation system that connects many distinctive urban and suburban communities. Some of the best schools in the state are located in the Philadelphia region. New York City, Washington DC, New Jersey beaches and Pocono Mountains are within 2-3 hours by car, bus, or train.

The University of Pennsylvania is an equal opportunity, affirmative action employer. Women and minority candidates are strongly encouraged to apply.

Please submit CV, a brief statement of research interests, and names of three references to Paul Yushkevich at pauly2@upenn.edu