



National Heart, Lung, and Blood Institute  
National Institutes of Health (NIH)  
Department of Health and Human Services

**Staff Scientist: AI image reconstruction for novel catheter-based image guided cardiovascular therapies in patients**

The National Heart, Lung, and Blood Institute (NHLBI), Division of Intramural Research (DIR) seeks to hire a Staff Scientist to pursue research in AI image reconstruction for novel catheter-based image guided cardiovascular therapies in patients within the Laboratory of Cardiovascular Intervention of in the Cardiovascular Branch (CB). The program develops novel catheter based treatments for cardiovascular disease and translates them into patients. <https://www.nhlbi.nih.gov/science/cardiovascular-intervention>

The applicant must have a Ph.D. or equivalent in biomedical engineering, computer science, or related disciplines; demonstrated experience in developing AI algorithms for medical imaging, with a focus on MRI and x-ray image reconstruction, accelerated signal acquisition, and real-time image processing; strong programming skills in Python, C/C++, MATLAB, or similar languages for algorithm development and implementation; knowledge of MRI physics and/or X-ray imaging is highly desirable; experience with deep learning frameworks such as TensorFlow, Keras, or PyTorch or equivalent; experience with image and signal processing techniques. The applicant should have a strong publication record in peer-reviewed journals and conference proceedings demonstrating contributions to the field of AI in medical imaging or cardiovascular interventions.

The applicant will join a unique multidisciplinary team of physicians, engineers, and imaging physicists that conceives new image-guided structural heart and valve interventional procedures and helps to bring them into clinical practice at cooperating medical centers. The candidate will focus on research and development of artificial intelligence (AI) methodologies directly applied to cardiovascular MRI, X-ray fluoroscopy, and bio-signal processing in patients undergoing non-surgical catheter treatment for structural heart and valve disease. Our group has created transcaval access and closure, LAMPOON and ELASTIC mitral leaflet modification; BASILICA aortic leaflet modification; cerclage and MIRTH ventriculoplasty; SESAME ventriculotomy, VINTAGE intramyocardial ablation, TRAIPTA tricuspid annuloplasty, clinical MRI catheterization, and others currently under development. The facility has a dedicated clinical biplane X-ray and (novel high-performance low-field) MRI interventional suite used mainly large-animal experiments. We work closely with advanced structural heart programs, especially Emory University (Greenbaum and Babaliaros), Medstar Washington Hospital Center (Rogers), and St Francis Hospital (Khan) to bring our technologies into patients. We have access to very large imaging datasets. The Scientist position is a unique opportunity to work closely with talented physicians eager to bring your technology into patients in first-human tests.

Appointees may be US citizens, resident immigrants, or non-resident immigrants with or eligible to obtain a valid employment authorized visa. Applications from women, minorities and persons with disabilities are strongly encouraged.

**TO APPLY:** Applicants should submit the following: 1) cover letter highlighting key qualifications and long term career goals; 2) current curriculum vitae with complete bibliography; and 3) three letters of reference (via email only) to:

Maria G. Stoltzfus  
[gonzamar@mail.nih.gov](mailto:gonzamar@mail.nih.gov)

The review of applications will begin on rolling basis as complete application packages are submitted. Applications will be accepted until the position is filled.

*DHHS and NIH are Equal Opportunity Employers. Positions are subject to a background check*

*The NIH is dedicated to building a diverse community in its training and employment programs*

Salary is commensurate with education and experience and a full Civil Service package of benefits (including retirement, health, life, and long-term care insurance, and a Thrift Savings Plan) is available.

There are also programs at the NIH to provide parental leave, as well as opportunities for on-site childcare. The research is funded by the intramural research program and does not require applications for grants or external support.