Postdoctoral Positions in Dr. Song Hu’s Lab at Washington University in St. Louis

Dr. Song Hu’s lab in the Department of Biomedical Engineering at Washington University in St. Louis focuses on the development of cutting-edge optical and photoacoustic technologies for high-resolution structural, functional, metabolic, and molecular imaging and sensing in vivo, with applications spanning from bench to bedside.

Postdoctoral positions are immediately available in the following three research areas:

- **Multimodal light microscopy.** The candidate will focus on advancing and integrating photoacoustic microscopy (PAM) and nonlinear optical microscopy (e.g., two-photon microscopy and stimulated Raman microscopy) to enable in vivo functional-metabolic-molecular imaging at subcellular, cellular, and tissue levels. The candidate is expected to have a strong background in biomedical optics/photoacoustics and microscopy system design. This line of research is supported by NIH NS120481, AG079503, and NS125677.

- **Lab-on-fiber (LOF) technology.** The candidate will focus on developing next-generation multifunctional fiber devices for in vivo imaging and sensing of internal tissues and organs with minimal invasiveness, by merging fiber optics and micro/nano-photonics. The candidate is expected to have a strong background in fiber optics, 3D photolithography (e.g., laser direct writing and two-photon polymerization), or functional materials. This line of research is supported by NIH AT012283 and AG077720.

- **Super-resolution functional-molecular photoacoustic imaging.** The candidate will focus on developing localization-based super-resolution photoacoustic imaging to extend our pioneering functional-molecular PAM techniques beyond the optical diffusion limit. The candidate is expected to have a solid background in photoacoustic/ultrasound imaging or tomographic image reconstruction. This line of research is supported by the Chan Zuckerberg Initiative Frontiers of Imaging Award.

Candidates will have abundant opportunities to engage and collaborate with researchers across the engineering and medical schools at Washington University and beyond. Also, they will have opportunities to supervise trainees and write research proposals. Exceptional candidates may be considered for appointments as a research scientist or research assistant professor.

If you have a strong passion for advancing biomedicine through the development of innovative imaging and sensing technologies, please contact Dr. Hu (songhu@wustl.edu).