Research Assistant, MRI RF Hardware

Vanderbilt University Institute of Imaging Science (VUIIS) is seeking a Research Assistant to work on MRI RF hardware. The VUIIS (https://vuiis.vumc.org) is a University-wide interdisciplinary initiative that unites scientists whose interests span the spectrum of imaging research- from the underlying physics of imaging techniques to the application of imaging tools to address problems such as understanding brain function. The Research Assistant will work with PIs on the design and fabrication of novel hardware for 3T, 7T, 9.4T and 15 T MRI scanners. Anyone with an interest in MR instruments is encouraged to apply.

Specific tasks:
- Traveling/standing wave to highly improve imaging quality in Transcranial MR-guided focused ultrasound (tcMRgFUS) neurosurgery
- Transmit and receive RF coils for 7T human imaging
- Transplantation of clinical scanners’ state-of-art RF coil technologies to small-bore preclinical scanners
- Flexible, wearable, and stretchable self-decoupled dense arrays

Requirements:
- Bachelor’s Degree in Electrical Engineering, Biomedical Engineering or Physics
- Knowledge of RF/Microwave circuit
- Experiences of soldering and assembly
- Self-driven, highly motivated

Highly desired:
- Familiarity with MRI
- Familiarity with electromagnetic simulation
- Familiarity with PCB and mechanical design

Facilities:
- Two 3-Tesla and one 7-Tesla Philips whole-body human scanners, and a bunch of Bruker and Varian animal scanners from 4.7 Tesla to 15 Tesla.
- RF lab with all kinds of instruments and equipment, including VNAs, PCB milling machine, dielectric probe, etc.
- Machine shop with two 3D printers, and a full-time mechanical engineer can assist the individual with RF coil housing design.

How to apply:
Please send a full CV to Dr. Xinqiang Yan (xinqiang.yan@vanderbilt.edu).