Research Assistant Professor

The Department of Electrical and Computer Engineering (ECE) invites applications for three Research Assistant Professors (non-tenure track) in the area of Electrical and Computer Engineering, with emphasis on the development of modeling electromagnetic behavior of active and passive implantable medical devices during magnetic resonance (MR) scanning, and assessing the related safety issues which include but are not limited to heating, rectification, and malfunction. The research assistant professor’s primary responsibility, as assigned by his/her supervisor, is to conduct research on behavior modeling of active/passive implantable medical devices under MR, and design of related measuring methods and instruments to validate the modeling and evaluate the MR safety for active/passive implantable medical devices. The candidate is expected to have a strong theoretical and experimental background on MRI safety analysis, electromagnetic theory, microwave engineering, computational electromagnetics, with strong background on electromagnetic modeling using HFSS/SEMCAD, electromagnetic compatibility analysis. A proven record of MR safety knowledge, electromagnetic modeling and analysis, waveguide modeling, bioheat transfer simulation, and simulations and measurements for MR safety issues are required for appointment. The University of Houston MR safety research is conducted by highly dynamic team members with diverse backgrounds. This appointment is for 12 months and is renewable dependent on funding for the position. The anticipated position start date is November 1, 2017.

The University of Houston is a Carnegie Tier 1 public research university located in a park-like campus close to major oil and gas companies and the Texas Medical Center. The Cullen College of Engineering has outstanding faculty that includes 13 National Academy of Engineering members that conduct cutting-edge research in state-of-the-art facilities. Houston is the fourth largest city in the United States that has an internationally diverse population, first rate recreational opportunities, excellent schools, and affordable housing.

The University of Houston is a designated Hispanic-Serving Institution (HSI) and has the second most ethnically diverse student population among major research universities. The University of Houston is an ADVANCE institution, one of a select group of universities in receipt of NSF funds in support of our commitment to increase the number and success of women faculty in the STEM fields.

The University of Houston is an Equal Opportunity/Affirmative Action institution. Minorities, women, veterans and persons with disabilities are encouraged to apply.

**Qualifications:** Applicants must have an earned doctorate in Electrical Engineering or closely related field at the time of application with some Post-Doctoral experience and a proven record of scientific publications, patent applications, and contribution to national and international scientific meetings. Strong experience in electromagnetic modeling and analysis for active/passive implantable medical devices under MR especially the B1 field related analysis is a must.

A proven record of MR safety knowledge, electromagnetic modeling and analysis, waveguide modeling, bioheat transfer simulation, and simulations and measurements for MR safety issues are required for appointment. Prior experience on the supervision of masters, PhD and/or Post-Doctoral level team members, and excellent oral
and written communication skills, as evidenced by peer-reviewed publications and presentations are also required.

**Preferred Qualifications:** In addition to the minimum qualifications, a proven record of measurement system design and implementation, numerical analysis using C++/Matlab/python, knowledge of MR scanner is strongly preferred. Strong background on experimental measurement of heating induced by active/passive medical implantable devices under MR is strongly desired.

**Notes to Applicant:** Official transcripts are required for a faculty appointment and will be requested upon selection of final candidate. All positions at the University of Houston are security sensitive and will require a criminal history check.

*Apply Online*

---

The University of Houston is an Equal Opportunity/Affirmative Action institution. Minorities, women, veterans and persons with disabilities are encouraged to apply. Additionally, the University prohibits discrimination in employment on the basis of sexual orientation, gender identity or gender expression.

© University of Houston Cullen College of Engineering, Department of Electrical and Computer Engineering