UNIVERSITY of HOUSTON | ENGINEERING

Department of Biomedical Engineering

Seminar

New Frontiers in X-Ray Imaging

Friday, September 16, 2016

SEC 204: 12-1PM

Speaker: Dr. Mini Das

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Abstract: Nonionizing imaging modalities such as optical, magnetic resonance, and ultrasound imaging are consistently being investigated as alternatives to x-ray imaging for deep-tissue applications. However, none of these modalities can match the full slate of important advantages provided by x-rays, which include deep penetration, low cost, high resolution, system reliability, ease of operation and robustness. Given these advantages, the use of x-rays for clinical imaging looks to continue for the foreseeable future. Thus improving x-ray based contrast and detection mechanisms have the potential for high impact. Current x-ray imaging techniques use a simple absorption based contrast mechanism and energy integrating detectors as it has been for more than a century. In this talk I will describe some of the latest advances in the field of x-ray imaging such as x-ray phase contrast imaging and development of spectral detectors which has the potential to transform the current radiological imaging.

Bio: Dr. Mini Das is Assistant Professor of Physics at the University of Houston (UH). She also holds a joint appointment in the UH Biomedical Engineering Department. Her research interests include novel x-ray imaging techniques, x-ray optics, image science, multimodality imaging, breast imaging techniques and psychophysics. She is a recipient of a Career Development Award from the National Cancer Institute (NCI) and a recent Breakthrough Award from the Department of Defense, Congressionally Directed Medical Research Program (CDMRP).