

Bioengineering Seminar

10 AM; Wednesday, June 25, 2008

Johnson Center, 3rd Floor, Meeting Room A

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Ultrasound Characterization of the Vulnerable Carotid Plaque

Abstract - Ultrasound Strain Imaging allows the study of arterial wall thickness waveforms. The wall thickness is affected by artery diameter changes and, in theory, by the filling/emptying of microvascular structures in the wall. Large intraplaque neovascularization, coupled with hemodynamic forces due to high intrastenotic velocity may be the cause of carotid plaque rupture and stroke.

Bio - Dr. Kirk Beach is an Emeritus Research Professor in the Department of Surgery at the University of Washington, Seattle, with Adjunct appointments in the Departments of Bioengineering and Electrical Engineering. He is also the Associate Director for Applied Research, Center for Industrial and Medical Ultrasound. He is the Principal Investigator for the CREST Ultrasound Reading Center for Carotid Artery Stenting. He is an Honorary Professor of Medical Engineering at Cardiff University. He has degrees in Electrical Engineering, Chemical Engineering, and Medicine and has over 25 years experience as a research epidemiologist/physiologist studying vascular diseases using methods such as ultrasound. He was active in the development and clinical adoption of the standard method of classifying carotid artery stenoses by ultrasonic Doppler examination.