

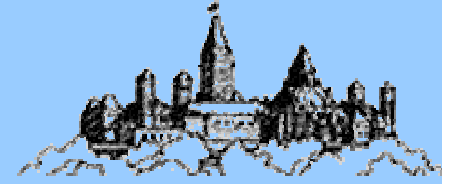


Celebrating 125 Years
of Engineering the Future

Ottawa Section

IEEE 125th EMBS Seminar Series

Distinguished Lecture



Low field, portable MRI for medical and non-medical applications

Dr. Andrew Marble

Assistant Professor, Dept of Systems and Computer Engineering, Carleton University

MRI has become a pretty common tool for medical diagnostics. The technology is primarily used in high value applications such as cancer screening, heart and brain imaging, and sports medicine. MRI deployment is limited by the high cost (millions of dollars) of the equipment. This means long wait times and lack of access in remote communities and developing countries. Furthermore, MRI could potentially be used in more routine medical procedures (for example, body fat measurement), but lack of availability means resources must be prioritized to diagnosis of life threatening conditions. There are also countless non-medical applications for which the technology is not used due to cost constraints. This lecture discusses the development of low field, portable MRI equipment as a solution to the above problems. A survey of the present state of the art of hardware and pulse sequence design will be given. Applications to both medical and non-medical inspection / diagnosis will be discussed.

Jan 13, 2010

admission is free

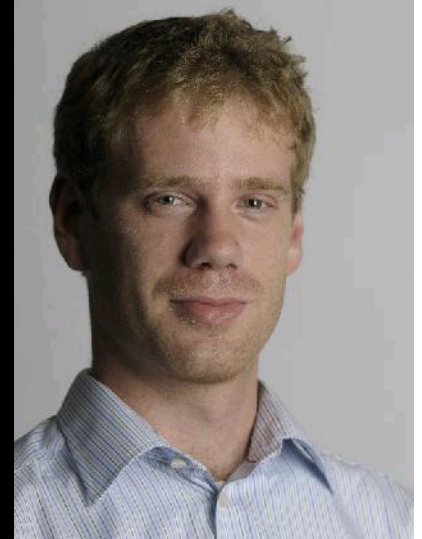
18:00 – 19:30 pm

ME-3356

Carleton University

Light refreshment will be served

Andrew Marble is an Assistant Professor in the Department of Systems and Computer Engineering at Carleton University. He received his Ph.D. from the University of New Brunswick in 2007, and worked for a year at St. Francis Xavier University before coming to Carleton. Andrew's research interests are low-field MRI, magnetostatics, image processing and optimization.



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