055:191
Electrical & Computer Engineering Graduate Seminar
SPEAKER: DR. R. ALFREDO SIOCHI
“What does a PhD Medical Physicist Do?
Assistant Professor in the Department of Radiation Oncology at the University of Iowa Hospitals and Clinics

Thursday February 28, 2008 3:30-4:20 PM  Room 3315 SC

Abstract:
The radiation oncology department at UIHC is setting up a graduate program in Medical Physics. Our goal is to enroll 2 students in a PhD program starting in the fall of 2010. The students should have an M.S. in a related discipline and should take a number of related courses that are already being offered in a number of departments. The presentation will detail what these courses are, and how these dovetail into the work that a PhD medical physicist does. The clinical, teaching, and research duties that one might expect to perform as a member of our profession will be described. These include equipment commissioning, troubleshooting, quality assurance, safety analysis, process, software and hardware development, room design, treatment planning and patient interaction. These activities span over several topics such as conventional, 3D conformal, intensity modulated, image guided and 4D radiation therapy, brachytherapy, shielding design, computed tomography, ultrasound, positron emission tomography, SPECT, magnetic resonance imaging, conventional radiography and fluoroscopy, nuclear medicine, and novel imaging methods.

Bio:
Dr. Siochi is an Assistant Professor in the Department of Radiation Oncology at the University of Iowa Hospitals and Clinics. He has been involved with the establishment of many of the patient related QA software tools for plan parameter comparisons and dosimetry, especially for intensity modulated radiation therapy (IMRT). He has also worked at St. Jude Children’s Research Hospital and Siemens Medical Systems, where he did research on IMRT, specifically in the field of leaf sequencing, and has been responsible for technological developments that have provided shorter radiation treatment times. His current interests are in the field of 4D radiation therapy, specifically in the area of patient related QA, respiratory signal analysis and phantom dose calculations. He has recently been appointed the Director of Medical Physics Education within the department of Radiation Oncology.

All ECE graduate students are required to attend.

For more information contact:
Professor Milan Sonka, ECE Dept. 335-6052, sonka@engineering.uiowa.edu

Individuals with disabilities are encouraged to attend all University of Iowa-sponsored events. If you have a disability that requires accommodation to participate in this program please contact the Electrical and Computer Engineering Department in advance at 335-5197.