Thursday, Jan. 31st
Scaife Hall Auditorium
Room 125 at 4:30 p.m.
Refreshments at 4:00 p.m.

Radu S. Jasinschi
Philips Research Europe
Eindhoven, The Netherlands

Radu S. Jasinschi obtained his B.Sc. (1975), M.Sc. (1978), and his D.Sc. (1983) in Physics at the University of S. Paulo, Brazil. He did his post-doctoral studies in Physics between 1983 and 1986 at the University of S. Paulo and at Harvard University. He was research scientist at The Robotics Laboratory of CMU in the group of Prof. Takeo Kanade from 1986 to 1988, and at the Center for Automation Research of the University of Maryland in the group of Prof. Azriel Rosenfeld from 1988 to 1992. From 1992 to 1995 he did his Ph.D. studies at the ECE Department of CMU with Prof. Jose’ M. F. Moura. After this he taught for two semesters at the ECE Department of CMU. He worked at Tektronix from 1978 to 1999 on MPEG-7 standardization. From 1999 to 2002 he worked at Philips Research, Briarcliff, USA, on multimedia indexing. From 2002 to 2004 he worked at Philips Research, Eindhoven, The Netherlands, on methods to improve the visual quality of TVs. Since 2005 he has been working on medical image processing. He has over 40 publications in refereed international conferences and journals. He was Associate Editor of the IEEE Transactions on Signal Processing from 1997 to 2001 (two terms) and an Associate Editor of the IEEE Transactions on Multimedia from 2001 to 2005 (two terms). He holds 15 US patents and has 21 pending.

Neuroimaging & Neurodegenerative Diseases:
The Role of Visual Markers

The use of magnetic resonance imaging (MRI) for the scanning of brains of healthy and diseased patients has become a fundamental tool in the diagnosis of patients with neurodegenerative diseases, brain tumors, as well as in the diagnosis of neuropsychiatric diseases and the modeling of normal brain activities.

We discuss the use automatic and semi-automatic methods for the segmentation, quantification, and representation of MRI brains for various neurodegenerative diseases, such as, atherosclerotic risk factors, Huntington’s disease, and Alzheimer’s disease. In particular, we discuss the relationship between MRI visual markers, scan types, and diagnostic features for each disease. This is illustrated with results of experiments done on MRI data of various brain studies with field strength ranging from 1.5 Tesla to 7 Tesla.

ECE Seminar Hosts
Lujo Bauer, chair <lbauer@cmu.edu>
Soummya Kar <soummyak@ece.cmu.edu>
Gianluca Piazza <piazza@ece.cmu.edu>