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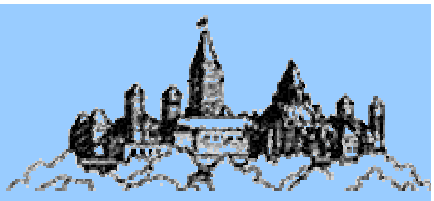

Decision Support Systems for Care & Management of Epilepsy

Mr. Rajeev Yadav

Centre for Signal Processing and Communication (CENSIPCOM), Concordia University

Epilepsy is a common chronic neurological disorder characterized by a predisposition to epileptic seizures, and by the neurobiologic, cognitive, psychological, and social consequences of the condition. The primary diagnostic tool in the epilepsy is the electroencephalogram (EEG), in which epileptic seizures become apparent as characteristics, usually rhythmic signals, often coinciding with or even preceding the earliest observable changes in behavior. Their detection can, thus, be used to react to impending of ongoing seizure or to differentiate epileptic seizures from other conditions with paroxysmal seizure-like symptoms. Several attempts have been made so far to automatically detect seizures. However, none of these methods have found widespread application. One may raise an obvious question as to why seizure recognition is so difficult. This talk will cover generic techniques for automatic detection of epileptic seizures, and how we address the challenges in its recognition by a computationally simple architecture.

Wed Oct 6, 2010

admission is free

18:00 – 19:30 pm
ME-3328
Carleton University

Light refreshment will be served

Rajeev Yadav received his Bachelor of Science (Physics) degree in 1998 and Master of Science (Electronics) degree in 2000 both from the Gorakhpur University, Gorakhpur, India. After finishing the graduate degree, he joined Centre for Biomedical Engineering (CBME) at Indian Institute of Technology, Delhi and All India Institute of Medical Sciences (AIIMS), New Delhi, India as a research scholar/associate. He worked at CBME from Jan 2001 until December 2004 on a variety of biomedical projects. Later, Rajeev joined Dept. of Electrical and Computer Science, Concordia University, Montreal for his doctoral studies (PhD) and is expecting to graduate in Fall 2010. During his doctoral studies at Concordia University, he mentored several graduate students in the successful completion of their graduate biomedical research projects. He also worked with Ottawa Hospital Research Institute (OHRI), Ottawa from August 2008-Dec 2009 to develop a clinical decision support system for applications in the ICU. Rajeev is currently working at Centre for Signal Processing and Communication (CENSIPCOM), Concordia University, Montreal, and is developing a clinical decision support system for automatic characterization of pathological brain tissues.

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