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Ottawa Section

IEEE 125th EMBS Seminar Series

Methods and technologies for detecting and preventing the stroke

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Heart diseases and strokes are a major cause of mortality that comprises 31% of all deaths in Canada. Each year more than 15 million people suffer from stroke worldwide according to World Health Organization. The high mortality rate (5 million) and in survivors the high rate of disabilities (5 million) is a social and economical burden to the west. A faster detection of these life threatening events and an earlier start of the therapy will save many lives and reduce successive handicaps. Currently only tomographical imaging modalities (like Computer Tomography (CT) and Magnetic Resonance Imaging (MRI)) can detect and visualize the stroke. New modalities like MIT (Magnetic Induction Tomography) and EIT (Electrical Impedance Tomography) have been under research to provide an early detection and a bedside solution for continuous monitoring. This disease has such a serious consequence, but you will be surprised to know how easy it is to prevent it (over 80 percent of all strokes) from happening at the first place.

Wed Sept 29, 2010

admission is free

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

Light refreshment will be served

Dr. Mamatjan is a Postdoctoral Fellow at the Systems and Computer Engineering, Carleton University. Currently, he is working on electrical impedance tomography (EIT). The aim of his project is to investigate prolonged continuous monitoring of mechanically ventilated patients. His research interests are in the areas of electrical impedance tomography (EIT) and other imaging modalities - MIT and CT.

He obtained his PhD in Medical Computing from University of Glamorgan, UK in Feb. 2009. He was a Marie Curie Research Fellow at the Philips Research Lab in Germany in 2009, where he worked on patient monitoring project using Magnetic Induction Tomography (MIT) to monitor bleeding in the brain. Dr. Mamatjan received the M.Sc. from both Chalmers University of Technology in 2003 and Jönköping University, Sweden in 2005.

He did research on efficient wearable hardware architecture design at the Saab Training Systems AB, Sweden 2004-2005. He had research visit at CINECA – the Interuniversitary Computing Centre, Italy in 2006 and the French National Computing Centre and Laboratory of Computer Sciences, Paris 6 in 2007. He also worked as a software engineer at the Faculty of Advanced Technology, University of Glamorgan, UK from 2008-2009.

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