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# Ottawa Section

## IEEE 125<sup>th</sup> EMBS Seminar Series



# EEG spike sorting

**Dr. Rajeev Yadav**

***System Scientist and NSERC Industrial R&D Fellow at Genia Photonics***

The seminar will focus on EEG spike sorting- i.e. the classification of neural spikes which is a very challenging problem and the first step in the basic and clinical neuroscience research. A short summary as to why spike sorting is so vital will be provided. A brief description of various technical issues encountered in the sorting process will be discussed without going into the mathematical details. This will be followed by a specific clinical application in epilepsy.

**Wednesday**  
**Nov 28, 2012**  
*admission is free*

**16:00 – 17:30**  
**ME-3356**  
**Carleton University**



Rajeev Yadav received his Bachelors and Masters of Science degree both from the Deen Dayal Upadhyay Gorakhpur University in 1998 and 2000, respectively, and Ph.D. degree in Electrical Engineering from Concordia University, Montreal, Canada in the area of neural signal processing and classification from the Center for Signal Processing and Communication (CENSIPCOM) in 2012. He is currently a System Scientist and NSERC Industrial R&D Fellow at the Genia Photonics Inc. and a consulting Scientist in the EEG signal processing with Neurolmage Inc. since 2011. He worked with Leap Medical Inc. as a Research Scientist on the development of non-invasive photonics-based techniques for cerebral hemorrhage detection from 2011 to 2012. Prior to this, he was an Embedded Programmer at Om Software Solutions, India, in 2001, a Computer Programmer at the All India Institute of Medical Sciences (AIIMS), India, from 2001 to 2002, a Research Scholar at the Indian Institute of Technology (IIT), Delhi, India, from 2002 to 2004, a Research Assistant and Teaching Assistant at Concordia University, Montreal, from 2005 to 2008, a Teaching Fellow at Concordia University in 2008, a Researcher at the Ottawa Hospital Research Institute (OHRI), Ottawa, from 2008 to 2010, and a Researcher at Concordia University from 2010 to 2011. He is member of various biomedical engineering societies including the IEEE and CMBES, co-founder of the ITIE Knowledge Solutions; and has served as Editorial Member and Reviewer to several leading biomedical engineering journals and conferences including the IEEE EMB, CAS and SP societies. His research interests include biomedical signal processing, biophotonics and pattern recognition with emphasis on their application to non-invasive diagnostics, critical care and basic/clinical neuroscience research.



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