

CALL FOR PAPERS - SPECIAL ISSUE

# INTERNATIONAL JOURNAL OF NEURAL SYSTEMS

*Founded in 1989*

**Impact Factor: 6.056**

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## **IWSP7: Epilepsy Mechanisms, Models, Prediction & Control**

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The international workshop on seizure prediction (IWSP) series is the leading international, cross-disciplinary conference focused on using a deeper scientific and medical understanding of epilepsy, in concert with advanced engineering techniques, to develop new diagnosis, treatment, and intervention options for patients with epilepsy. The seventh conference in this series, **IWSP7: Epilepsy Mechanisms, Models, Prediction & Control** ([www.iwsp7.org](http://www.iwsp7.org)), will focus on the engineering and science of epilepsy, covering basic mechanisms and imaging, computational modeling for analysis and prediction, and feedback control of epilepsy. Three key themes will be addressed. (1) Seizure prediction from months-to-years long recordings. (2) Model-based data assimilation for time series analysis, neuro-intervention, and feedback control. (3) Multi-modal neuroimaging and computational modelling to assess the spatial origin of seizures and the epileptic network at multiple scales. The following traditional IWSP themes will also be covered: automated seizure detection, prediction and control, seizure physiology mechanisms at multiple scales, high frequency oscillations, epileptic networks, and computational modeling of epilepsy.

Following the success of the special issues on *Synchronization in Neural Systems* published as issue 17:2, April 2007, *Neuromodulation and Seizure Control* as issue 19:3, June 2009, *Neuromodulation in Epilepsy* as issue 21:2, April 2011, *Bioelectromagnetism in Neuromodulation and Epilepsy* as issue 23:1, February 2013, and *Computational and Technological Innovations for Epilepsy Diagnosis and Control* as issue 24:2, March 2014, the **International Journal of Neural Systems**, now in its 25<sup>th</sup> year of publication, is planning another special issue for the conference **IWSP7: Epilepsy Mechanisms, Models, Prediction & Control** to be published in 2016.

Following the conference, which will be held in Melbourne, Australia, during 3-6 August 2015, invited speakers and researchers submitting the best abstracts will be invited by the guest editors and the editor-in-chief to submit a manuscript. If invited, please inform the guest editors and the editor-in-chief about your intention to submit a manuscript for possible publication in the special issue as soon as possible. For timely publication of the issue we are asking the contributors to submit their original contributions prepared according to the journal template as a PDF file by **September 1, 2015** with a statement that the manuscript

is your “*original unpublished work and the manuscript or any variation of it has not been submitted to another publication previously*” but this deadline can be extended. Your paper will be reviewed expeditiously. The following paper published in the 2009 special issue received the inaugural *Hojjat Adeli Award for Outstanding Contribution in Neural Systems*: A. Shoeb, J. Guttag, T. Pang, S. Schachter, “Non-invasive computerized system for automatically initiating vagus nerve stimulation following patient-specific detection of seizures or epileptiform discharges,” *International Journal of Neural Systems*, 19:3, 2009. Papers accepted for publication in the planned special issue will be considered for the 2016 *Hojjat Adeli Award for Outstanding Contribution in Neural Systems*.