IMIA WG/SIG Report

Biomedical Pattern Recognition (Updated April 2013)

Website of the WG: http://www.imia-medinfo.org/new2/node/136
Chair (2010-2013)
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Objectives

To promote applications in medicine and biology focusing on methods of pattern recognition and interpretation.

Recent Activities

- July 2012. The 7th Biomedical Signal and Interpretation (BSI2012) Workshop has been held in Como, Italy next July 2-4th 2012. The workshop is an initiative by the IMIA, IFMBE and IEEE-EMBS. IMIA WG7 has been deeply involved in the organization of the event: the WG7 chair is the Programme Chair of BSI2102 and a few members of the WG7 were involved in the Scientific Committee. The workshop aims at exploring the fields of biosignal interpretation including model based signal analysis, data interpretation and integration, medical decision making extending the existing signal processing methods and technologies for the effective utilization of biosignals in a clinical environment as well as for a deeper understanding of biological functions from the whole organism, system, to cellular, protein and gene scales. The workshop had a hundred of attendees coming from worldwide.

- July 2012. Two satellite symposia were organized in relation to BSI2012. The first one is on “Signal Processing in Dialysis Treatment” and the second on “PSYCHE: a Personalised monitoring SYstems for Care in mental HEalth”. These symposia addressed current challenges of signal processing and biomedical pattern recognition methods in nowadays clinical practice.

Future Activities

- The WG7 are planning to have a special issue (to be published on Methods of Information in Medicine) based on the selection of top 20-25 papers among those presented at the 7th International Workshop on Biosignal Interpretation (BSI). In line with the mission of the Workshop and the WG7, the selected papers deal with the most recent advances in medical informatics and biosignal processing methods that can be applied to biological and physiological systems so that interpretation of the results can lead to better detection, diagnosis and treatment of various diseases.

- December 2012-January 2013: The remaining contributes presented at the BSI2012 workshop will be published on special issues of the International Journal of Bioelectromagnetis (IJBEM). Two volumes have been already published (volume 14, 2012 and volume 15, 2013), others are in press.