

Postgraduate student: **Katerina Koukolia**

Thesis Title:

Interconnection of medical sensors and electronic child psychiatry record for the recording of behavioristic and biometric parameters

Abstract:

The object of the present thesis is the incorporation of interactive recording patients' behaviouristic and biometric characteristics in a novel electronic child psychiatry record. Analytically we study the new possibilities generated by the interconnection of an electronic child psychiatry record with suitable medical sensors for the monitoring of the above characteristics of a patient, via the use of web services technology. In detail we describe the main protocols of wireless data transmission that currently apply to modern medical sensors. Moreover, we present an overview of the web services technology which will be used for the transmission of medical data that are dispatched by medical sensors in the patient's site, to the computer station that hosts the electronic child psychiatry record. Finally, we analyze the functionalities of the electronic child psychiatry record, which offer connection to the sensors and cumulative presentation of their measurements. For the needs of this project, a user interface was developed for the export of statistical data and report concerning the total number of patients. The export of the statistical data and the relevant reports is specialized with respect to the role of the doctor and the role of researcher, providing anonymisation of personal data in the case of exporting patient data to an independent researcher. Using this approach the measurements of biometric and behaviouristic parameters of patients are offered for the conduct of epidemiologic studies without compromising the patients' personal data.

Examining Committee

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