

# Eye Ball Movement Detection Based on the Continuous Wavelet Transform

Mihai Munteanu<sup>\*</sup>, Corneliu Rusu<sup>†</sup>

<sup>\*</sup> Technical University of Cluj-Napoca, Faculty of Electrical Engineering, Cluj-Napoca, Romania,  
Mihai.Munteanu@et.utcluj.ro

<sup>†</sup> Technical University of Cluj-Napoca, Faculty of Electronics, Telecommunications and Information  
Technology, Cluj-Napoca, Romania, Corneliu.Rusu@bel.utcluj.ro

*Abstract*— This paper presents a method to detect eye balls movements for patients who are executing some displacements of the eye ball, without blinking. The implementation procedure uses LabView platform. Initially, we have tried to emphasize these movements by the mean of Pan-Tompkins algorithm. Since the outcomes were not convincing, the new approach on the topic was based on the Continuous Wavelet Transform, which give appropriate outcomes. Experimental results are also provided.