



Third Laureate Applied Research



Project Title: Eight channel telemetry electromyography system
(BLUEMYO)

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Abstract:

BLUEMYO™ is an ultra-light and portable electromyography system. This system is designed to address challenges of applications in which subject has to move freely.

Electromyography represents muscle activation level and has numerous applications such as diagnosis and rehabilitation of neuromuscular deceases, biomechanical and ergonomic studies, prosthetic limbs control. In this system electromyography signal is measured using active surface sensors and is transmitted to target through Bluetooth™.

Designed active electrodes are able to reduce environment noise considerably and eliminate motion artifacts effectively. System software is able to analyze information on-line and offline in time and frequency domains which enables quick and precise measurement and analysis of information. Additionally software can record video signal synchronized with measured signal. This system is designed based on the practical requirements of the users and the handicaps of the available solutions.