Student Project

Real time ECG analysis for acute pain detection

Supervisor
Yonina Eldar Ph.D. SAMPLES lab (yonina@ee.technion.ac.il)
Shai Tejman-Yarden MD MSc EMR lab Sheba Medical Center (tegmanya@gmail.com)

Project description
This is a biomedical project for **real time ECG analysis for acute pain detection**. Analysis of the heart rhythm using the Orthogonal Matching Pursuit has achieved accurate pain detection in both healthy young adults and in patients under general anesthesia. The process was performed off line, using ECG recordings. This project involves signal processing, of real time ECG monitoring using advanced signal processing methods. This project after its initial phase will involve real time analysis in the operating room in Sheba Medical Center for evaluation of the developed system.

Required background
Signal and systems (essential), Matlab (essential), Random signals (desirable)

Environment
MATLAB

For further details, please contact harel: harelm@technion.ac.il