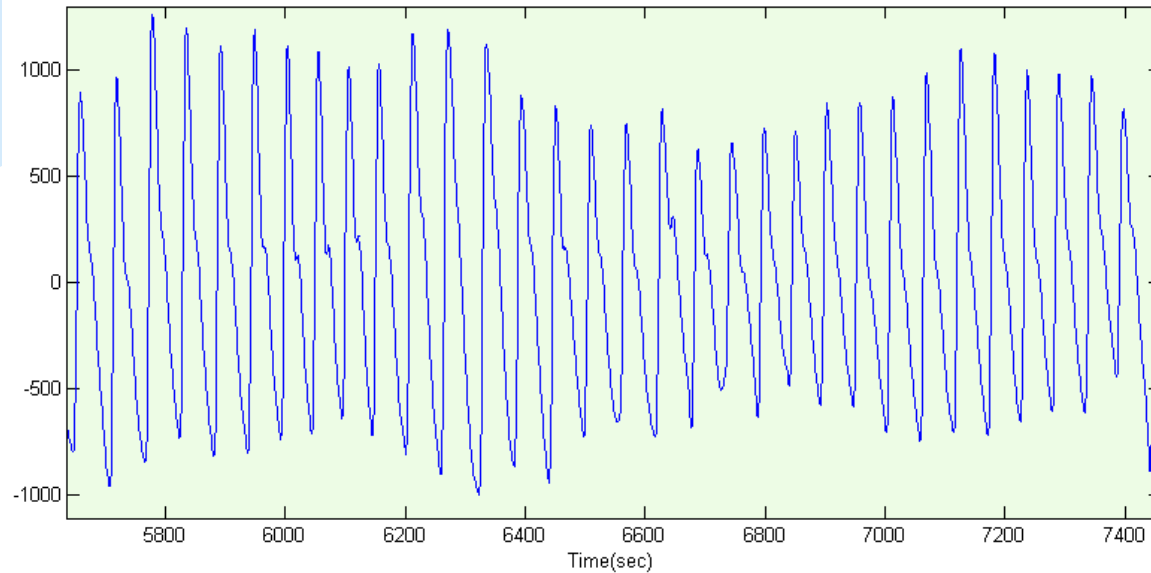


Cardiovascular System Analysis Based on PPG Signal



Biological Signal Project
3 June 2014

Alex Bazko
Aditya Iman Rizqy

What is PPG (Photoplethysmography) ?

- *PPG is optical measurement that detects blood volume changes in the microvascular bed of tissue
- *A photodetector is placed on a tissue's surface alongside the LED and records the reflected light
- *Light is attenuated by oxygenated and deoxygenated hemoglobins, and other components in muscle and skin.
- *Reductions in light intensity = relative increases in blood volume and *vice versa*

Task :

In the GUI (Graphical User Interface) :

- 1.Importing the raw signal from a Biopac text export
- 2.Entering a sampling frequency
- 3.Displaying plots of the raw signal
- 4.Displaying Peak to Peak, Pulse Height
- 5.(within a chosen time interval).
- 6.Computing Mean Arterial Pressure and Heart Rate Variability

GUI Demonstration . .