

Abstract of the Research proposal:

Title: **“Development of Cardiovascular Waveform Simulator for Training of Medical Professionals”**

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The proposal is aimed to develop a cardiovascular waveform simulator for medical professionals (students, entry level doctors and technicians). An integrated system is to be developed which will consist of a software and a hardware (optional). The system will be able to generate the Electrocardiogram (ECG) and Photoplethysmogram (PPG) waveforms of different abnormal categories under interactive mode in a computer/ mobile phone. During the development stage, the ECG and PPG from different cardiovascular patients of different age group will be collected and a mathematical model will be developed which can generate simulated waveforms as per the degree of abnormality. At the same time the software will be able to generate these waveforms as voltage signals through an interface hardware for equipment testing.