6th CSI-InApp National Student Project Awards 2017

DECLARATION BY PRINCIPAL/ HEAD OF THE INSTITUTION

I certify that the above students are full time engineering students of this Institution and the Project work/Idea showcased is an original work done.

Name and Signature

Dr. Hemanth D Sai

Date 10/02/17

GIVE TWO PAGE ABSTRACT OF THE PROJECT (NOT EXCEEDING 450 WORDS, CHARTS/DRAWINGS MAY BE ANNEXED)

Abstract

- **Project Idea**

Present-day advances in the computing and signal processing have allowed biometric systems to uniquely identify and authenticate humans in a computationally feasible manner. Biometric systems depend on a number of features including fingerprints, face, etc. However, both face and fingerprint can be compromised employing counterfeit credentials. Researchers have begun investigating electrocardiogram(ECG) signal as a biometric trait to identify individuals.

The purpose of this research project is to develop a real time system for biometric authentication with the electrocardiogram (ECG) signal. Like a fingerprint, the ECG is unique to an individual, because ECG waveforms depend on the anatomic features of the human heart and body. Also, it provides benefits such as resilience to replay attacks and spoofing. By examining the feature vectors obtained by processing ECG signals, and extracting unique features using discrete wavelet transform, our research investigates the possibility of biometric human identification based on the ECG.