Abstract

Non audible murmur is a body conducted silent speech through which the vocally handicapped can communicate. We propose a method of acquisition of Non Audible Murmur (NAM), (i.e., inaudible speech produced without vibrations of the vocal folds) from the vocally handicapped using the MEMS accelerometer, followed by its de-noising and Statistical Feature Extraction. The murmur is acquired by placing the sensor bonded to the surface of the skin over the soft-cartilage bone behind the ear. The resulting electrical signal is de-noised using Discrete Wavelet Transform (DWT). Statistical Features are extracted from the detailed co-efficients of the de-noised murmur.

References

4. Jim Lambers,'Introductino to Wavelet Analysis'.
5. Duraisamy Sundararajan,’Fundamentals of the Discrete Haar Wavelet Transform’

Index Terms

Computer Science

Control Systems

Keywords
NAM, MEMS accelerometer, DWT, De-noising, Feature Extraction, Vibration sensor.