

6. Conclusion

The development of an automated diagnosis system for heart sounds was investigated based on time domain parameters of heart sound. The investigation was implemented using Matlab FASTICA for heart and lung sounds separation. From the investigation result, although the produced lung sound were not similar to normal lung sounds the algorithm can be further refined. Moreover heart sound signals were similar to the normal heart sounds and they were further classified to identify two diseased heart sounds namely Aortic Stenosis and Aortic Regurgitation.

References

- [1] Josh Yudkin, "Cardiovascular Health: Addressing Hypertension in Rural India", Lectures on Implementing Public Health Interventions in Developing Countries, (www.ictph.org.in)
- [2] B.Hemakumar, "A Fuzzy expert system design for analysis of body sounds & design of an unique Electronic stethoscope (Development of HILSA kit)", Biosensors and Bioelectronics, Elsevier Publications, Vol.22 (2007), pp 1121-1125.
- [3] AnandBhaskar, "A simple electronic stethoscope for recording and playback of heart sounds", AdvPhysiolEduc, American Physiological Society, 36: pp 360-362, 2012. M. T.
- [4] Pourazad¹, Z. Moussavi¹, F. Farahmand¹, R. K. Ward, "Heart Sounds Separation From Lung Sounds Using Independent Component Analysis", Proceedings of IEEE Engineering in Medicine and Biology 27th Annual Conference, 2005.
- [5] Michael Syskind Pedersen, "A Survey of Convolutional Blind Source Separation Methods", Springer Handbook on Speech Processing and Speech Communication
- [6] Zahra Moussavi, "Fundamentals of Respiratory Sounds and Analysis", Synthesis Lectures On Biomedical Engineering #8, Morgan & Claypool Publishers, First Edition, 2006.