# Speech Segregation Based-on Binaural Cue: Interaural Time Difference (ITD) and Interaural Level Difference (ILD)

**Mifta Nur Farid, Dhany Arifianto**

Dept. of Engineering Physics, Faculty of Industrial Technology, Institut Teknologi Sepuluh Nopember, Kampus ITS Sukolilo, Surabaya 60111, Indonesia

E-mail: miftanurfarid@gmail.com

**Abstract.** In a conversation at a cocktail party, a person can focus on single conversation even though the background sound and other people conversation is quite loud. This phenomenon is known as the cocktail party effect. In an early study, explained that binaural hearing have an important contribution to the cocktail party effect. So in this study, will be performed separation on the input binaural sound with 2 microphone sensors of two sound sources based on both the binaural cue, interaural time difference (ITD) and interaural level difference (ILD) using binary mask. To estimate value of ITD, is used cross-correlation method which the value of ITD represented as time delay of peak shifting at timefrequency unit. Binary mask is e stimated based on pattern of ITD and ILD to relative strength of target that computed statistically using probability density estimation. Results of sound source separation performing well with the value of speech intelligibility using the percent correct word by 86% and 3 dB by SNR.


The conclusion goes here.

**References**