# HUMS2015

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# ABSTRACT SUBMISSION FORM

**Abstract submission closes on 21st Jul 2014. Late submission of an abstract may only be accepted subject to the discretion of the HUMS2015 committee.**

### Title:

DEVELOPMENT OF DIAGNOSIS ALGORITHM FOR HUMS

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### Abstract (200 words max):

HUMS is widely applied to develop the helicopters gear, bearing and shaft fault detection system, and the problem about a signal processing method for vibration signal is mainly focused on. In the signal processing method, Fast Fourier transform (FFT) is a useful method to evaluate the gear, bearing and shaft problems and also which is a powerful method to detect faults occurred on rotating machinery. However, the exact signal processing method for HUMS is not developed yet. Therefore, in this paper three technique are based on fault classification which are Envelope analysis (power spectrum), DET for feature extraction and SVR for fault classification. In addition, Envelope analysis is compared with FFT. According to the results, it can be known that Envelope analysis can be a better signal processing method for the condition monitoring system for HUMS.