

## Document details

[Back to results](#) | 1 of 1CSV export [More...](#)[Full Text](#) [View at Publisher](#)International Journal of Electrical and Computer Engineering  
Volume 8, Issue 1, February 2018, Pages 372-378**Development of quranic reciter identification system using MFCC and GMM classifier** (Article) (Open Access)Gunawan, T.S.<sup>1</sup> , Saleh, N.A.M.<sup>2</sup>, Kartiwi, M.<sup>2</sup> <sup>1</sup>Department of Electrical and Computer Engineering, International Islamic University Malaysia, Jalan Gombak, Kuala Lumpur, 53100, Malaysia<sup>2</sup>Department of Information Systems, International Islamic University Malaysia, Malaysia

## Abstract

[View references \(14\)](#)

Nowadays, there are many beautiful recitation of Al-**Quran** available. Quranic recitation has its own characteristics, and the problem to identify the **reciter** is similar to the speaker recognition/**identification** problem. The objective of this paper is to develop **Quran reciter identification system** using Mel-frequency Cepstral Coefficient (**MFCC**) and Gaussian Mixture Model (**GMM**). In this paper, a database of five Quranic reciters is developed and used in training and testing phases. We carefully randomized the database from various surah in the **Quran** so that the proposed **system** will not prone to the recited verses but only to the **reciter**. Around 15 Quranic audio samples from 5 reciters were collected and randomized, in which 10 samples were used for training the **GMM** and 5 samples were used for testing. Results showed that our proposed **system** has 100% recognition rate for the five reciters tested. Even when tested with unknown samples, the proposed **system** is able to reject it. © 2018 Institute of Advanced Engineering and Science. All rights reserved.

## SciVal Topic Prominence

Topic: [Speech](#) | [Verification](#) | [text-independent speaker](#)

Prominence percentile: 95.727

## Author keywords

[GMM](#) [MFCC](#) [Quranic recitation](#) [Speaker identification](#)

## Funding details

Funding sponsor	Funding number	Acronym
Ministry of Higher Education, Malaysia	,	MOHE
Ministry of Higher Education, Malaysia	FRGS15-194-0435	MOHE
Ministry of Higher Education		MOHE

## Funding text

The authors would like to express their gratitude to the Malaysian Ministry of Higher Education (MOHE), which has provided funding for the research through the Fundamental Research Grant Scheme, FRGS15-194-0435.

ISSN: 20888708  
Source Type: Journal  
Original language: EnglishDOI: 10.11591/ijeec.v8i1.pp372-378  
Document Type: Article  
Publisher: Institute of Advanced Engineering and Science

## References (14)

[View in search results format >](#)☐ All [CSV export](#) [Create bibliography](#)

- ☐ 1 Lawrence, B.  
(2014) *The Quran: A Biography (A Book that Shook the World)*  
Atlantic Books Ltd