

# HUMAN BEHAVIOUR RECOGNITION, IDENTIFICATION, AND COMPUTER INTERACTION

Edited by

**Othman Omran Khalifa**, B.Sc., M.Sc., Ph.D.,  
International Islamic University Malaysia

**Shihab A. Hameed**, B.Sc., M.Sc., Ph.D.,  
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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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## Chapter 12

### Towards Malaysian Sign Language Database

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#### 12.1 Introduction

Sign language is the verbal language for the people who have hearing impairment. Those people who have those kinds of problems are widely known as the deaf people. Basically the word of deaf is referred into two; the Deaf (with capital D) is the hearing impairment person who understands sign language and the deaf (with small d) is the person who does not have capability in understanding the sign language. In this article, the “deaf” (with small d) will be used to cover the entire people with hearing impairment and disability [1]

The sign language is the way of the deaf people to communicate to normal people. But, unfortunately the number of people who understand the sign language is small. Besides, many the deaf people does not understand the sign language [1]. These cause the difficulties in the communication between the normal people and the deaf people. Sign language has a complicated structure. The sign is based on the manual gestures and the communication consists of movement and orientation of hand/arm that conveys symbolic meaning. Meanwhile, non- manual signals are mainly facial expression, head movement, posture and orientation of body and torso [2].

Sign language is constructed based on the hand movement, hand shape, and face expression. These three are the important features that need to be recognized in order to understand the meaning of the sign. The hand movement is defined as the direction of hand when do signing, either one or two hands. The hand shape is the size and shape of the hand when expressing any word. Finally, the face expression is an additional signing, in order to show the expression of the one who talks in sign language.