

# **Abstract**

**Mohamed B Abdelhalem Osman**

## **Analyzing and Measuring Human Joints Movements using a Computer Vision System**

Range of motion patterns of movement estimation is a crucial concern for clinicians in the diagnostic and functional assessment of patients with musculoskeletal disorder. To obtain a record of the degree of permanent impairment of an individual, Range-Of-Motion (ROM) measures are used. Currently, clinicians use all any of numerous assessment instruments, a universal goniometer, an inclinometer a tape measure to make these estimations. However, such tools appear to have major drawbacks in measuring ROM. Markerless vision-based human motion analysis can provide an inexpensive, non-obtrusive solution for range of joint motion measurement. This paper outlines the problem of measuring human joints movements using a computer vision system that supports the physiotherapist as a diagnosis tool to aid rehabilitation of joint movement disorders and its treatment plan.