

ABSTRACT

The kinematic walker mechanism is a complex mechanical system designed to imitate the walking motion of humans or animals. It involves a skeletal structure, leg joints, an actuation system, and potentially sensory feedback systems. This abstract summarizes the key aspects of the kinematic walker mechanism, including its construction, working principles, and potential applications. The construction of a kinematic walker mechanism begins with a sturdy skeleton structure made of rigid materials. Legs are attached to this structure through joints, allowing for the bending and extending motion required for walking. An actuation system, typically consisting of motors or actuators, drives the leg movements. This system is controlled by a computer or microcontroller, coordinating the sequence and timing of leg motions. Sensor feedback systems can be integrated into the mechanism to enhance stability and adaptability. Sensors provide real-time data about the walker's position, orientation, and ground contact, enabling adjustments in the walking motion. The working principle of the kinematic walker mechanism involves a predetermined leg movement sequence, where legs are lifted, swung forward, placed on the ground, and repeated in a continuous motion. This sequence aims to mimic the natural walking motion observed in humans or animals. The kinematic walker mechanism has diverse applications, including robotics research, biomechanics studies, rehabilitation, and entertainment. It offers a platform for exploring locomotion principles and understanding the complexities of walking in various environments.

Keywords: Kinematic walker mechanism ,Walking motion Leg joints ,Actuation system, Sensor feedback, Construction, Working principles, Applications, Robotics