

EMG Controlled Prosthetic Limb

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Certificate

We accept the work contained in this report as a confirmation to the required standard for the partial fulfillment of the degree of BS (EE).

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Dedication

This Project is dedicated to our beloved parents who always pray for our success in every phase of life, faculty Members and our friends who helped us during the difficult times of our project. Without their assistance and support, our project would not have been possible. We are especially thankful to our supervisor who has been the core motivator and mentor in our project. Our efforts and work are devoted to all the previously mentioned individuals. Thank you for your support and guidance.

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Abstract

A large number of people are living with limb loss and need high-tech devices that better mimic human function. There are two types of limb prosthesis out of which we are focusing on lower extremity prosthesis. Prosthetic devices can give these people a temporary solution to help them gain back control of the body. We have proposed a system to control prosthetic limb through electromyography and nerve stimulation. The ankle allows people to walk normally. When the user presses against the surface, the prosthetic ankle plantar flexes and when lifts up dorsiflexion is performed. This will help the user add additional push off force when walking and gives the user a sense of control over the device. This research would help millions of people around the world.

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