IntelliCane: A Cane System for Individuals with Lower-Limb Mobility and Functional Impairments

Authors : Adrian Bostan, Nicolae Tapus, Adriana Tapus

Abstract : The purpose of this research paper is to study and develop a system that is able to help identify problems and improve human rehabilitation after traumatic injuries. Traumatic injuries in human’s lower limbs can occur over a life time and can have serious side effects if they are not treated correctly. In this paper, we developed an intelligent cane (IntelliCane) so as to help individuals in their rehabilitation process and provide feedback to the users. The first stage of the paper involves an analysis of the existing systems on the market and what can be improved. The second stage presents the design of the system. The third part, which is still under development is the validation of the system in real world setups with people in need. This paper presents mainly stages one and two.