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Title	Design and Development of a Cost-effective Prosthetic Hand for Upper Limb Amputees
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Abstract

Myoelectric prosthetic arms are becoming widely used in the 21st century by people who have gone through upper limb amputation. In developing countries, more people have to go through amputation as the number of limb losses due to accidents or diseases is increasing. In most cases, patients are unable to bear the cost of a functional prosthetic hand as the overall price surpasses their affordability. In this paper, we have proposed a cost-effective, affordable prosthetic hand that will use the Electromyography (EMG) signal from the residual part of the amputated limb of the patient. For controlling the prosthetic hand, we have used both a commercially available EMG sensor and an EMG extraction circuit which can be developed using locally available resources. The prosthetic hand that we used in this research was designed in SOLIDWORKS and printed using a 3D printer. The developed hand can grab and grasp objects according to the will of its user.