

ABSTRACT

Hand Prosthesis is an innovation in the development of rehabilitation aids for individuals who have lost the function of their hands, which has a mechanism resembling a human hand. The method for creating Prosthetic Hand models using 3D technology is also an integral part of this research to ensure optimal levels of precision and accuracy. This research aims to design, develop and implement a precision prosthetic hand. In this research, printing prosthetic hands using PLA filament as the basic material has obtained good results. Every component and anatomical detail is realized with precision. The results of this research create a prosthetic hand that is not only functional but also ergonomic. The PLA filament material was chosen because it has strong durability as proven by the test results using an electric oven at 100° C for 30 minutes and there was no change whatsoever. The final result is a prosthetic hand with a servo motor on each finger as a driver that can imitate human finger movements even though it still lacks flexibility in use or strength when grasping objects and in daily use.

Keywords: *Arduino Uno, Hand Prosthetic, Prosthesis, 3D print.*