THE ADL ARM

"**The ADL Arm is a functional below-elbow prosthetic arm that is optimized to assist trans-radial amputees in the performance of bimanual Activities of Daily Living.**"

Presently, open source prosthesis are not optimised to assist the dominant hand in performing bimanual Activities of Daily Living (ADL). This research study was thus geared towards the design and experimental validation of an open-source below-elbow prosthetic arm, called the ADL arm, that is functionally optimised for the performance of ADL in the unilateral Trans-radial amputee population.

The ADL arm is entirely 3D printed and through a variety of tests conducted using the Anthropomorphic Hand Assessment Protocol as well as the usability assessment, the ADL arm was found to be functionally competent, relatively acceptable with proven ability to assist in the performance of ADLs in a simulated-use environment.

A number of design modifications and clinical tests are however recommended to overcome the limitations of the current design and corroborate the results obtained in this study.