

# Prosthesis Socket Diagnostic Tool Evaluation

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Department of Mechanical and Industrial Engineering  
University of Massachusetts, Amherst

We are conducting a research study to help in the development of a new diagnostic tool for use when fitting prosthesis sockets to lower and upper limb amputees, and are looking for suitable test subjects. The benefits of this study would be to help people missing limbs have better fitting sockets consistently, which would help amputees to regain activity levels lost after amputation. Data would potentially help other future projects as well.

## **Who is eligible?**

- Trans-humeral (above elbow) and trans-femoral (above knee) amputees who use their prosthesis daily.
- Ages 18-69 years.
- Free from any chronic pain, arthritis or any other disabilities.
- Free from any other medical conditions.

## **What will you be asked to do?**

- Spend 2 hours at the Mechatronics and Robotics Research Lab or Biomechanics Lab at UMass Amherst.
- Wear motion capture sensors on your body, using medical adhesives.
- Wear your everyday use prosthesis socket instrumented by your prosthetist, or instrumented test socket fabricated by your prosthetist.
- Go through a series of everyday motions like walking, standing, moving your limb freely, pushing on an immovable structure such as a bench or wall, and moving your limb with additional weight attached to the prosthesis while wearing your daily use prosthesis.

## **Compensation**

- Test subjects will be compensated \$25.00 for their time. Data collection is expected to last between 1-2 hours.

If you have any questions or are interested in participating, please contact us.

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