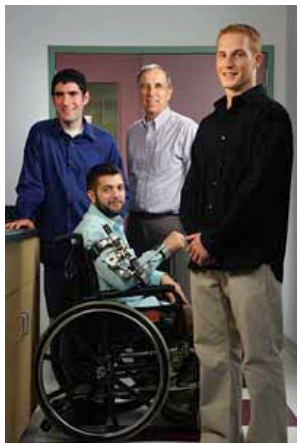
## The ATRC

- Serves as a central information source for Assistive Technology (AT)
- Provides education about AT devices
- Provides networking between organizations and agencies serving persons with disabilities
- Provides technical resources from the selection, modification, design, and development of assistive devices

**Goals**

The ATRC strives to disseminate technical information regarding the availability and use of assistive devices for individuals with disabilities. The ATRC focuses on mechanical and electro-mechanical devices



## Recent Publications

- *"Development of a Prototype Bumper System for Powered Wheelchairs"*
- *"Teaching Disability Awareness and Universal Design to Middle School Students"*
- *"Changes in ADC Caused by Tensile Loading of Rabbit Achilles Tendon: Evidence for Water Transport"*

## Contact information


**Assistive Technology Resource Center**

Worcester Polytechnic Institute
Mechanical Engineering Department
100 Institute Road
Worcester, MA 01609
(508) 831-6056
Fax: (508) 831-5680
E-mail: atrc@wpi.edu

**Personnel**

Allen H. Hoffman, PhD., Co-Director
(508) 831-5217
Holly K. Ault. PhD., Co-Director
(508) 831-5498


**Extended Information**

For further information about our activities please visit our website:

Http://www.me.wpi.edu/Research/ATRC

The ATRC welcomes new requests for assistance from cooperating agencies and organizations

# ASSISTIVE TECHNOLOGY RESOURCE CENTER

OF

WORCESTER POLYTECHNIC INSTITUTE · 1865 · WPI

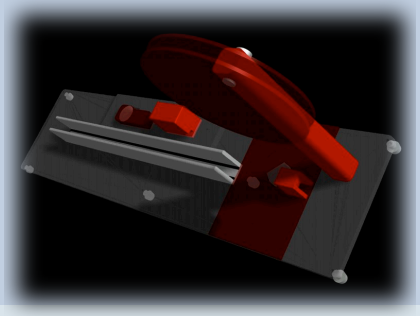
**WORKING TOGETHER TO DESIGN A MORE ACCESSIBLE TOMORROW...**

# Assistive Technology Resource Center Projects

## Improved Multi-Passenger Van Accessibility

Three student teams developed a linked step stool to assist disabled passengers while entering or exiting a passenger van. The stool was developed using a series of linkages, this design allows the unit to fold for easy storage, while being secure and extremely stable.

## Tape application device



Students involved within an Engineering Design course constructed several prototypes to assist workers with disabilities in applying tape to tiles.

## Arm Orthosis

Graduate students worked to develop a body-mounted arm orthosis to aid persons with Duchenne Muscular Dystrophy (DMD.) The device employs multiple motors supporting 2-axis movement. This movement provides for powered shoulder flexion/extension, abduction/adduction, humeral rotation and elbow flexion/extension to assist in daily activities.

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## Glide Control Device

A project group developed a device that would effectively reduce the wheelchairs glide. The glide was controlled through the use of a friction belt. When the wheelchair was moving backwards hubs would engage. Once engaged, a belt would ride over the hubs, thereby creating friction and slowing the glide.

## Keyguard for a Brailler

Students worked to develop a keyguard for a brailler to assist a blind client with cerebral palsy (CP.)

## Powered Wheelchair Bumper System

A senior student design team designed and evaluated a bumper system for a power wheelchair to eliminate both injury to the occupant and damage to the chair, particularly in sports.