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 electromechanical 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”

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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
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Description</th>
<th>Image</th>
</tr>
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<tbody>
<tr>
<td>Improved Multi-Passenger Van Access</td>
<td>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.</td>
<td><img src="image1" alt="Stool Image" /></td>
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<tr>
<td>Glide Control Device</td>
<td>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.</td>
<td><img src="image2" alt="Glide Control Device Image" /></td>
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<tr>
<td>Tape application device</td>
<td>Students involved within an Engineering Design course constructed several prototypes to assist workers with disabilities in applying tape to tiles.</td>
<td><img src="image3" alt="Tape Application Device Image" /></td>
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<tr>
<td>Arm Orthosis</td>
<td>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.</td>
<td><img src="image4" alt="Arm Orthosis Image" /></td>
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<tr>
<td>Keyguard for a Brailler</td>
<td>Students worked to develop a keyguard for a brailler to assist a blind client with cerebral palsy (CP.)</td>
<td><img src="image5" alt="Keyguard for a Brailler Image" /></td>
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<tr>
<td>Powered Wheelchair Bumper System</td>
<td>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.</td>
<td><img src="image6" alt="Powered Wheelchair Bumper System Image" /></td>
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