IV. TRAINING AND DEMONSTRATION ACTIVITIES

Responsible Staff: Elaine Trefler, RERC Faculty

Overview

Training and demonstration activities are an important aspect of any RERC’s mission. This activity at the University of Pittsburgh RERC embodies both formal and continuing education for rehabilitation professionals, as well as providing learning experiences for users of assistive technology. This aspect of the Center’s program can be subdivided into four inter-related activities: graduate education, research training, continuing education, and consumer training. Support for student training came from several NIDRR training grants plus the Graduate Student Researcher (GSR) support provided directly by the NIDRR-RERC grant.

TR-1 GRADUATE EDUCATION

The RERC contributes to the Department of Rehabilitation Science and Technology’s graduate level education program by providing an environment where students gain research and development experiences. The RERC dedicated laboratories were regularly used for classroom demonstrations and other activities in which students are exposed to the practice of research aimed at improving wheelchair technology. For example, equipment and experimental test setups for RERC projects are presented as examples of research activities in the course entitled “Fundamentals of Rehabilitation Engineering.” Information resources, developed with support by the RERC, also contributes to the graduate education program by making available a convenient and comprehensive source of reference information related to assistive technology. Further information on the RST Department, the faculty, research activities and degree course offerings can be reviewed on the RST WWW site: http://www.RST.UPMC.edu.

TR-2 RESEARCH TRAINING

The RERC-supported faculty have served as research advisors for 17 graduate students working on RERC tasks. The table on page 73 is a list of these students, the task(s) worked on, and responsible faculty advisors.

The RERC also provided advanced student degree thesis experiences for four students from Dalarna University, Borlange, Sweden.

TR-3 CONTINUING EDUCATION

Post-service education for practicing professionals and interested consumers is the third forum used to provide educational and training experiences in assistive technology. Participation in workshops and seminars is an effective way to share information with others. The following is a summary of five-year training activities.

Bertocci GE, Special Needs in Student Transportation, State College, PA, June 1996.


Cooper, RA, Approach to rehabilitation, Ankara Numune Hospital & University of Pittsburgh Medical Center 1st Joint Symposium, Ankara, Turkey, May 1997
<table>
<thead>
<tr>
<th>Student</th>
<th>Degree Program</th>
<th>Tasks</th>
<th>Faculty Advisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preetam Alva, BS, MS ME</td>
<td>Ph.D. ME</td>
<td>PM1, PM6</td>
<td>Hobson</td>
</tr>
<tr>
<td>Thomas Ault, BS Computer Eng.</td>
<td>Ph.D. CS</td>
<td>S2</td>
<td>Brienza</td>
</tr>
<tr>
<td>Randy Bernard, BS, MS Ind. Design</td>
<td>Ph.D. SHRS</td>
<td>PM6</td>
<td>Hobson</td>
</tr>
<tr>
<td>Gina Bertocci, MS</td>
<td>Ph.D. Bioeng.</td>
<td>T1-4</td>
<td>Hobson</td>
</tr>
<tr>
<td>Dalthea Brown, MS Physical Therapy</td>
<td>Ph.D. SHRS</td>
<td>S4, S5</td>
<td>Trefler</td>
</tr>
<tr>
<td>Jonathan Evans, Undergraduate</td>
<td>B.S. M.E.</td>
<td>PM1, PM 6</td>
<td>Hobson</td>
</tr>
<tr>
<td>Jess Gonzalez, BS</td>
<td>M.S. Bioeng.</td>
<td>STD1</td>
<td>Cooper</td>
</tr>
<tr>
<td>Thomas O'Connor, B.S.</td>
<td>Ph.D. SHRS</td>
<td>STD1</td>
<td>Cooper</td>
</tr>
<tr>
<td>Khondukar Mostafa, BS EE</td>
<td>M.S. EE</td>
<td>PM1b, S3</td>
<td>Brienza</td>
</tr>
<tr>
<td>Wonchul Nho, BS, MS EE</td>
<td>Ph.D. EE</td>
<td>PM1c, PM3, S1, S3</td>
<td>Brienza</td>
</tr>
<tr>
<td>James Protho, BS CS</td>
<td>M.S. RST</td>
<td>PM3, S1</td>
<td>Brienza</td>
</tr>
<tr>
<td>Heather Rushmore, BS Speech Path.</td>
<td>M.S. RST</td>
<td>WP1</td>
<td>Trefler</td>
</tr>
<tr>
<td>Tracy Saur, BS Occupational Therapy</td>
<td>M.S. OT</td>
<td>S4</td>
<td>Boninger</td>
</tr>
<tr>
<td>Jue Wang, BS EE, MS Bioeng.</td>
<td>Ph.D. RST</td>
<td>S1, S2</td>
<td>Brienza</td>
</tr>
<tr>
<td>Linda Van Roosmalen</td>
<td>Ph.D. SHRS</td>
<td>T-2, T-3, PM-6</td>
<td>Hobson</td>
</tr>
<tr>
<td>Tom Bursick</td>
<td>MSc. RST</td>
<td>S-6</td>
<td>Trefler</td>
</tr>
<tr>
<td>Bert Joseph</td>
<td>MSc. RST</td>
<td>S-6</td>
<td>Trefler</td>
</tr>
</tbody>
</table>

Cooper, RA, Sports fitness equipment for people with disabilities, Sports & Fitness for Individuals with Disabilities, Springfield College, Springfield, MA, May 1997


Schmeler, M.R. “Strategies for powered mobility evaluation and readiness training,” AOTA 76th Annual Conference, Chicago, IL, April 1996.


Trefler E and faculty, Training Program for Rehabilitation Technology Suppliers, Home Study and Distance Education Program, 1994-98

Trefler E and faculty, Wheelchair Seating and Positioning, Review Course for Rehabilitation Technology Suppliers (RTS) preparing for the RESNA Generalist Exam, Reno, Nov, June 1995


Regarding major conference activities, the International Seating Symposium was hosted in Pittsburgh in 1995 and 1997, with co-sponsorship in Vancouver Canada in 1994, 1996 and 1998. Over 800 practicing professionals, suppliers, manufacturers and consumers attended annually in Pittsburgh. This is possibly the most important annual educational event in wheelchair technology. The RERC staff took advantage of the opportunity to organize and co-present a series of pre-conference workshops on: wheelchair transportation safety, beginner level seating and a review course for Rehabilitation Technology Suppliers.

RESNA ’97 was also held in Pittsburgh June 20-24. This provided a unique opportunity to share information with a larger audience and to invite interested researchers, students and wheelchair users to tour our research facilities and discuss common interests.

As part of the dissemination and education program of the RERC and the RST, a distance education program for Rehabilitation Technology Suppliers (RTS) was developed. Along with reading materials and videotape demonstrations, students are being provided with an entry-level training program in assistive technology. Wheelchair suppliers are the primary audience because in the changing health care market consumers sometimes choose to go directly to suppliers for wheelchair technology. In order to ensure a minimal level of expertise, the suppliers organization, The National Registry of Rehabilitation Technology Suppliers (NRRTS), endorsed the University of Pittsburgh in the development of this program. NRRTS encourages RTSs to take the certification exam offered by the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA).

Consumer education has been an ongoing part of many RERC events, such as those indicated above. Wheelchair user education also occurred as a natural component of the focus group meetings that were held in conjunction with Tasks PM3, PM6, T1, T2 and T3. This direct involvement created opportunities for consumers to learn more about the research process and wheelchair and seating technology. For several years the RERC was a co-sponsor of the local Assistive Technology Tech Fair which created unique opportunities for consumer participation and learning experiences. And finally, the RERC sponsored consumers and guest speakers to attend the annual SHOUT/Pittsburgh Employment Conference that features the creation of employment opportunities for persons using augmented communication.