

IV. TRAINING AND DEMONSTRATION ACTIVITIES

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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.

Bertocci GE and Hobson, DA, Special Needs in Student Transportation. International Seating Symposium - Vancouver, BC, March 1996.

Bertocci GE. "Special Needs in Student Transportation", Pupil Transportation Association of Pa. - 25th Anniversary Conference, State College, PA, June 1996.

Brienza, D.M. RESNA Annual Conference, Session Chair, "Seating and Positioning Technology." Salt Lake City, Utah, June 1996.

Brienza D.M., Schuch J, and Sprigle S. "Wheelchair Seating and Positioning: Improving Your Services from Assessment through Follow up." University of Virginia, Charlottesville, VA, September 22 and 23, 1995. Continuing Education Workshop.

Cooper, RA, Approach to rehabilitation, Ankara Numune Hospital & University of Pittsburgh Medical Center 1st Joint Symposium, Ankara, Turkey, May 1997

Student	Degree Program	Tasks	Faculty Advisor
Preetam Alva, BS, MS ME	Ph.D. ME	PM1, PM6	Hobson
Thomas Ault, BS Computer Eng.	Ph.D. CS	S2	Brienza
Randy Bernard, BS, MS Ind. Design	Ph.D. SHRS	PM6	Hobson
Gina Bertocci, MS	Ph.D. Bioeng.	T1-4	Hobson
Dalthea Brown, MS Physical Therapy	Ph.D. SHRS	S4, S5	Trefler
Jonathan Evans, Undergraduate	B.S. M.E.	PM1, PM 6	Hobson
Jess Gonzalez, BS	M.S. Bioeng.	STD1	Cooper
Thomas O'Connor, B.S.	Ph.D. SHRS	STD1	Cooper
Khondukar Mostafa, BS EE	M.S. EE	PM1b, S3	Brienza
Wonchul Nho, BS, MS EE	Ph.D. EE	PM1c, PM3, S1, S3	Brienza
James Protho, BS CS	M.S. RST	PM3, S1	Brienza
Heather Rushmore, BS Speech Path.	M.S. RST	WP1	Trefler
Tracy Saur, BS Occupational Therapy	M.S. OT	S4	Boninger
Jue Wang, BS EE, MS Bioeng.	Ph.D. RST	S1, S2	Brienza
Linda Van Roosmalen	Ph.D. SHRS	T-2, T-3, PM-6	Hobson
Tom Bursick	MSc. RST	S-6	Trefler
Bert Joseph	MSc. RST	S-6	Trefler

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

Hobson, D.A. and Bertocci, GE. Wheelchair Transportation Industry Update, RESNA, 1996 Mid Atlantic Regional Planning Committee Conference, Philadelphia, PA, November 16, 1996.

Hobson, D.A. Overview of Activities in the Rehabilitation Engineering Program, Disability Awareness Days, Pittsburgh, PA, October 4, 1996.

Hobson, DA, Bertocci, G, Karg, PE. "Wheelchair Transportation Safety Workshop", Transporting Students with Disabilities Conference, March 5-6, 1996, Birmingham, AL.

Hobson, DA, Bertocci, G. "Factors Influencing Wheelchair Transportation Safety", Vancouver International Seating Symposium, March 1996.

Hobson DA , Bertocci GE, and Karg PE, Transportation Forum: Factors Influencing Wheelchair and Occupant Crash Response. (Invited forum raising current issues). Conference on Transporting Students with Disabilities: Birmingham, AL, March 1996.

Hobson, D.A. Dundee '97 International Conference on Wheelchairs and Seating, Invited Lecturer, Dundee, Scotland, September 8 - 12, 1997.

Hobson, D.A. and Bertocci, G. Wheelchair Transportation Safety Workshop, RESNA Conference, Pittsburgh, PA, June 20, 1997.



- Hobson, D.A. and Bertocci, G.E. Transporting Students with Disabilities: Wheelchair Safety, Education Service Center, Houston, TX, February 21, 1997.
- Hobson, D.A. Wheelchair Standards, Assistive Technology Training Program, University of Pittsburgh, Pittsburgh, PA, March 13-15, 1977.
- Hobson, D.A., Bertocci, G.E. and Karg, P.E. Wheelchair Transportation Safety Seating Symposium Preconference Workshop, ISS, Pittsburgh, PA, January 22, 1997.
- Hobson, D.A. Overview of ANSI/RESNA wheelchair standards. Assistive Technology Training Program for Rehabilitation Technology Suppliers and Others. University of Pittsburgh, Pittsburgh, PA, February 6-7, 1998.
- Hobson, D.A, Bertocci, G. Wheelchair transportation safety. 14th International Seating Symposium, Vancouver, BC, February 26-28, 1998.
- Hobson, D.A. Presenter, American Society on Aging 44th Annual Meeting, San Francisco, CA. March 25-28, 1998,
- Hobson, D.A., "Issues and Standards on Transporting People Who Use Wheelchairs in Motor Vehicles", keynote speaker, Medtrade '98, Atlanta, GA November 1998.
- Letchipia, J and Pelleschi T, "Implementation of a Comprehensive Assistive Technology Service Delivery Program as a Hub of a Regional Network of AT Services." RESNA 19th Annual Conference, Salt Lake City, UT, June 1996.
- Karg, P. "Update on Wheelchair Transportation Standards", Breakout Session-5th National Conference and Exhibition on Transporting Students with Disabilities, Birmingham, AL, March 1996.
- Karg, P. Session Chair, "Wheelchair and Seating Biomechanics", RESNA 19th Annual Conference, Salt Lake City, UT, June 1996.
- Karg, P., Bertocci, G., "Wheelchair Transportation Safety Standards Update and Factors Influencing Wheelchair Transportation Safety", Pittsburgh Assistive Technology Association (PATA) Meeting, February 1996.
- Karg PE and Bertocci GE, Wheelchair Transportation Safety Workshop and Breakout Session, Pittsburgh Assistive Technology Association (PATA) Meeting, Feb. 1996.
- Schmeler, M.R. "Powered Mobility: Alternative and integrated controls." NYSOYA Annual Conference, Fishkill, NY, October 1995.
- Schmeler, M.R. "Reasonable accommodations: Providing assistive technology assessments and interventions in the workplace." Westchester Consortium of Vocational Counselors, White Plains, NY, September 1995.
- Schmeler, M.R. Wheelchair seating and mobility. Beverly Health Systems rehabilitation managers. Spokane, WA. October 1996.
- Schmeler, M.R. "Strategies for powered mobility evaluation and readiness training." AOTA 76th Annual Conference, Chicago, IL, April 1996.
- Schmeler, M.R., "Positions for Function: Seating and workstations in the classroom." RESNA 19th Annual Conference, Salt Lake City, UT, June 1996.
- Schmeler, M.R., Brienza, D. and Shapcott, N. Wheelchair seating: Seat cushion selection. RESNA Mid-Atlantic Regional Conference, Philadelphia, PA November 1996.
- Schmeler, M.R., Shapcott, N. Pelleschi, T. and Dugan, J. Assistive Technology Service Delivery. Mt. Aloysius College OT/PT faculty. Cresson, PA. August 1996
- Schmeler, M.R. and Boninger, M.L. Appropriate setup and prescription of wheelchairs. Shoulder Pain in Wheelchair Users: Prevention, Assessment and Treatment Conference, Pittsburgh, PA, May 1997.
- Schmeler, M.R. et al. Introduction to wheelchair seating and mobility. Preconference workshop, ISS, Pittsburgh, PA January 1997.
- Schmeler, M.R. Wheelchair seating and mobility in long-term care facilities. Vencor, Inc. therapists and rehabilitation managers, Clarkston, WA, May 1997.
- Schmeler, M.R. et al. Rehabilitation Technology Supplier Modular Training Course. University of Pittsburgh, Pittsburgh, PA. March 1997.
- Schmeler, M.R., Angelo, J.A., Doster, S., Larson, B., Ellexson, M. and Armstrong, F. Assistive Technology as a reasonable accommodation. AOTA 77th Annual Conference, Orlando, FL, April 1997.

Schmeler, M.R., Shapcott, N. Dugan, J. Petersen, B., Pelleschi, T. Sanna J. and Lego, F. Strategies for providing model assistive technology services within vocational rehabilitation. RESNA Annual Conference, Pittsburgh, PA June 1997

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

Trefler, E. "Single Subject Research: A Research Method for Seating and Mobility Clinicians. "Comparison of Anterior Trunk Supports for Children with Cerebral Palsy." The Canadian Seating and Mobility Conference, Toronto, Canada, Sept 1995.

Trefler, E. and Angelo, J. "Surveying Users of Integrated Controls - A Pilot Study." Proceedings, ARATA pp. 17-19. Adelaide, Australia, Oct 1995.

Trefler, E. "Single Subject Research: A Research Method for Seating and Mobility Clinicians. "Comparison of Anterior Trunk Supports for Children with Cerebral Palsy." ARATA Conference, Adelaide, Australia. Oct 1995.

Trefler, E., "The Use of Integrated Controls: Comparison of Anterior Trunk Supports for Children with Cerebral Palsy". ISS 12th Annual Conference, Vancouver, BC, Feb 1996.

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).

TR-4 CONSUMER TRAINING

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.

