



# UNIVERSITY OF DELAWARE DEPARTMENT OF PHYSICAL THERAPY ALUMNI NEWSLETTER

Volume 9,  
Spring 2008

Editors: Jennifer Tola, DPT Class of 2008 & Jessie Haury, DPT Class of 2009

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**WANT TO SAVE TREES AND DEPARTMENT MONEY?** If you would like to read the alumni newsletter on-line instead of receiving the printed publication, e-mail Mrs. Lynn McDowell (lynnmc@udel.edu) your name and email address and request to be added to the alumni e-mail list. We will e-mail you a web link for the newsletter each time it is completed. Thanks!

### MESSAGE FROM THE CHAIR



**G**reetings once again,

I first want to thank my assistant, Cyndi Haley, and two of the Department's graduate assistants, Jessie Haury and Jen Tola for all of their hard work in putting together this year's Newsletter. I think they did a great job! I also want to thank all of the contributors for taking time out of their busy schedules and sharing their perspectives and information with all of us.

The stated mission of the Doctor of Physical Therapy Program at the University of Delaware is *"to advance physical therapy practice through the integration of education, clinical practice and research. We foster critical thinking, life-long learning and appreciation of diversity using an evidence-based curriculum, on-site physical therapy practice clinics and state of the art research."* In looking back on this past year, I am very pleased to note that the Department has continued to grow and I believe that we are doing a great job of serving our mission. Our students are recognized as being some of the best trained PT students in the nation, our clinics and the clinical staff continue to receive awards and acknowledgements, and our faculty publish in the best journals and receive the most competitive grants in the nation.

In addition to growth, this past year has brought about many changes. As many of you already know, Ken Seaman, our long time ACCE and graduate of this program retired this past year. We wish Ken the best and certainly miss his presence around the Department. Laura Schmitt and Cathy Ciolek have reduced their clinic hours and have joined Stacie Larkin as our Directors of Clinical Education. In addition, as you will read within our clinic updates, we have also had to say goodbye to PTs Megan Schaefer and Mandy Merritt and have welcomed Grace Keenan, Angela Hutchinson, and Tracy Stoner to the Department. Grace, Angela, and Tracy are all graduates of our program and we are thrilled to have them back.

Finally, I would once again like to thank the many alumni and friends who have provided financial support to the department over the past year. Your continued support of the department is much appreciated and adds significantly to the opportunities we can offer our students.

Best wishes for a happy and healthy year,

Stuart A. Binder-Macleod, PT, PhD, FAPTA  
Edward L. Ratledge Professor and Chair

### Calendar of Events

APTA National Conference	June 11-14, 2008, San Antonio, TX
Graduation DPT Class of 2008	January 10, 2009
Combined Sections Meeting (CSM)	February 9-12, 2009, Las Vegas

## CLASS OF 2007 GRADUATION



## Congratulations DPT Class of 2007!

Listed Alphabetically:

Erin E. Balmford, Elizabeth D. Bauske, Jennifer L. Binkley, Janelle K. Cannon, Jessalyn A. Ciampa, Kathryn G. Curtis, Catalina D. S. David, Tyesha M. Dwight, Kyle T. Fennemore, Lauren E. Grieder, Lakisha Freeman-Fulton, Thomas A. Handling, Krista A. Horne, Christine L. Keighley, Samantha J. Lefkowitz, Karrie Lowry, Valerie Martineau, Faith V. Morton, Krystal L. Perrone, Melissa J. Ronan, Lisa R. Saltzman, Jennifer A. Schmidt, Matthew G. Scott, Julienne R. Sinkosky, Tiffany S. Strawn, Kelsey L. Vagnoni, Rachel L. Whitlock, Jennifer M. Zambito, Teresa L. Zoltak

**M**essage from Janelle Cannon, Vice President of the Class of 2007:

January 5<sup>th</sup> marked the end of one journey and the start of a new one for us! The past two and a half years we have grown as individuals and together as a cohesive group. Although we are all going our separate ways, we will always know that we have an amazing support network in our classmates that started our first day of class, and that will last a lifetime. Thank you to the UDPT faculty and staff for their time, knowledge and support that has led us to be the therapists we are today. We would also like to thank our family and friends that supported us in multiple ways throughout the program and for sharing our special day with us.

*To the graduating class:*

- Faculty Award: to **Julienne Rose Sinkosky** for exemplary qualities of integrity, cooperation, initiative and leadership in the UDPT program.
- Director's Award: to **Melissa Jean Ronan** for special contributions to the UDPT program.
- Scholarship Award: to **Melissa Jean Ronan & Tiffany Sue Strawn** for a high level of scholastic achievement in the UDPT program.
- Charles B. Barker, Memorial Award: **Elizabeth Bauske**; award donated by Chuck Barker, UD PT alumnus, in memory of his father Dr. Charles Barker.

*To Alumni:*

- Cossoy Award: to **Jie Yang** for extraordinary contributions of time and effort to the UDPT program.
- Catherine Dozer Kohlenstein Clinical Educators Award: to **Ann Morrison**, for outstanding contributions to the clinical education of UD students.
- Alumni Award: to **Timothy Crunk** who made outstanding contributions to the Physical Therapy Department.

Also the Sports Fellowship Award was presented to Sarah DeBroka, the Orthopedic Fellowship Award was presented to Megan Sions, and the Geriatric Fellowship Award was presented to Angela Robertson for completion of the Physical Therapy Residency Programs.

## STUDENT NEWS

### Moving along... Class of 2008 Written by: Doug Adams, SPT



As the class of 2008 has moved into our second year we have found great success and increasing challenge. The class has had their first full time clinical experience in the Acute Care setting this summer, and has begun their part time clinical experiences in the Sports & Ortho and NOA clinics. It has been a great experience to begin using all the information we have learned inside the classroom in a real-world

situation.

We have been just as busy outside of the classroom as inside. Our Pitt-Marquette fundraising efforts have awarded us honorable mention for the third year in a row. The University of Pittsburgh has decided to withdraw from the competition after ten years of winning, so look for UDPT to step up their fundraising efforts. Plans for fundraising include a continuing education course that will be occurring late Spring or early Fall 2008. The class of 2008 has also been very involved in APTA conferences with over 20 people from the class attending both CSM in Boston and NSC in Valley Forge. We thank the DPTA

for offering funding to help students with travel and registration for the NSC!

Fundraising and charity has been a large focus in the past year as well. We have continued to run the MS and Stroke clinics which have both shown tremendous success. Students have also participated in: Relay for Life, work with Special Olympic athletes, volunteering with children at AI Dupont, Thanksgiving Food drive with over 400lbs of food, and massages at MS Bike to the Bay. This past fall, along with the class of 2007 and 2009, we also helped to raise over \$4,000 for a UDPT student who was recently diagnosed with Ulcerative Colitis.

As we have begun a new calendar year and our last year in the program there is much to look forward to. Please watch out for our continued education class in the Spring/Fall and other fundraising efforts for the Pitt-Marquette Challenge.



DPT II's practicing mobilizations and manipulations during PHYT808: Spine Management

### Time Flies...Class of 2009 Written by: Chris Runkle, SPT

"Whoa!" So you are telling me we are about to release the class list of UDPT 2010?" This is the reaction of many students from the class of 2009, including myself when realizing that we are already almost done our first year of the program.

As our first year got underway back in June of 2007, we jumped in quickly with the Gross Anatomy course led by Dr. Mettler. We spent our first six weeks learning everything we could about human anatomy, and we also had the chance to learn a lot about our classmates. Between the many hours spent in cadaver lab, osteology lab, and lecture, we learned not only about our classmates' personalities, but also about their bony abnormalities.

Our first Fall semester was a learning experience for both our class and the faculty. We took on a course schedule that was heavier than any Fall year 1 before due to some changes in the curriculum. While we spent many hours in the classroom, we continued to grow as a class and had the chance to interact with the full spectrum of distinguished faculty here at UDPT. As exhausted as we all were, while welcoming the Christmas break, the fall was a great start to our time here at UDPT.

Now that the class of 2009 is turning the last corner of our first year as Physical Therapy students, I am glad to report that we have begun to fill the big shoes of our predecessors. We now have many students treating patients in the University of Delaware

clinic, an experience that you and we both know is a memorable one. Both the APTA student conclave in Valley Forge, PA and the APTA CSM in Nashville, TN saw a great turn out from the first year class from UD. I must say, the thirteen hour drive was well worth it when we got the chance to learn a good ol' line dance with our classmates in the heart of country music's most notable city!

We continue to strive for excellence both academically, and in the community, by always looking to add on new service learning opportunities. Events such as the Multiple Sclerosis Bike to the Bay, Multiple Sclerosis Clinic, and Newark Community Day continue to play a large role in our experience here at UDPT. We have also continued the tradition of helping numerous people/patients who have

requested assistance from our program.

To sum it all up, we must reflect back on the opening statement, "Whoa!" As our class prepares to enter the second year of our experience at UDPT, we slowly but readily prepare to turn over our throne as the "first years" and fill the crown as the "second years". As we look back on the first year, we realize that we have so many great experiences and have learned a wealth of useful information in our time here so far. We now continue our journey with great excitement about our next steps towards our promising future as Physical Therapists from the University of Delaware.



## FEATURED ALUMNI

**Timothy Crunk, PT, MS, OCS, CFMT, FAAOMPT**

## Recipient of the 2007 Alumni Award



**T**imothy Crunk graduated from the University of Delaware with a B.S. degree in Physical Therapy in 1990. Since that time he has completed numerous continuing education courses in the area of Orthopaedic Manual Therapy and Sports Medicine. He re-

ceived his Certification as a Strength and Conditioning Specialist in 1993 and completed his Manual Therapy Certification at Ben-El Therapeutics in Patchogue, NY under the direction of Jeffrey J. Ellis, MS, PT, MTC, FFCFMT. In August of 1999 he became a Certified Functional Manual Therapist with Distinction through the Institute of Physical Art. Mr. Crunk also completed his Advanced Masters in Orthopaedic Physical Therapy with an emphasis in Manual Therapy through Touro College in LI, NY and is a Board Cer-

tified Clinical Specialist in Orthopaedics through the American Physical Therapy Association. Mr. Crunk is also a Fellow of the American Academy of Orthopaedic Manual Physical Therapy.

Mr. Crunk teaches nationally through IMTS – Integrative Manual Therapy Solutions and the IPA – Institute of Physical Art where he is a Primary Instructor and Trainer for Lumbo-Pelvic Integration, Cervical-Thoracic Integration, Integrative Motion Diagnostics and Integrative Prescriptive Exercise. He serves as Vice President of

the board and an examiner for the Functional Manual Therapy Certification offered through the Institute of Physical Art.

Mr. Crunk and his wife Cindy and children Ashley and Jonathan live in Greenville, SC where he is Owner of Crunk Physical Therapy, PC.

**Marty Fontenot, PT, DPT**

## Recipient of the 2007 Mary McMillan Scholarship

**M**arty Fontenot, University of Delaware Physical Therapy Class of 2006 graduate received the 2007 Mary McMillan Doctoral Scholarship Award. The \$5,000 McMillan Doctoral Scholarships are awarded to physical therapist doctoral students with outstanding potential for doctoral studies. A total of 10 doctoral students around the country received this award in 2007.

“I am very humbled by this recognition, but more importantly, I am so very proud to be representing the University of Delaware’s PT department. I truly feel that I’m not even in the discussion for this recognition if I had not attended UDPT and been able to spend 2.5 amazing years here. I want to say a very special thanks to Dr. Lucca, who spearheaded my nomination and made

all of this possible.”

The Mary McMillan Scholarship is awarded by the Foundation for Physical Therapy Board of Trustees, a national, independent non-profit corporation dedicated to the goal of improving the quality and delivery of patient care.

Currently, Marty has returned to the University of Delaware to complete his Sports residency.



Marty Fontenot, treating a patient in UD's Sport and Orthopaedic Clinic

## ALUMNI NEWS

### Congratulations!

The following information was collected from those who responded to our "Let's Keep in Touch" article from the Spring 2007 Newsletter:

### Degrees Conferred



#### Katherine L. Mercer

- DPT from Medical College of Virginia Campus of Virginia Commonwealth University
- OCS Certification 2001

### New Positions



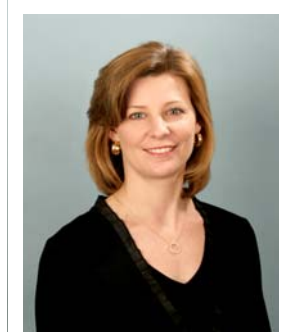
#### Karen Liberi

- Took position teaching Women's/Men's health elective at the University of New England's DPT program

\*Please visit our complete listing of alumni updates online at [www.udel.edu/PT/alumni/happenings.html](http://www.udel.edu/PT/alumni/happenings.html)

## Tara Jo Manal, PT, DPT, OCS, SCS

### Recipient of the 2007 Signe Brunnstrom Award



Tara Jo Manal, UD Physical Therapy alumni and current Director of UD's Physical Therapy Clinic, was awarded the 2007 Signe Brunnstrom Award for Excellence in Clinical Teaching.

This award was established in 1986 to acknowledge an individual who has made significant contributions to physical therapy clinical education through excellence in clinical teaching, has served as a role model in clinical teaching, and has demonstrated

expertise in at least one area of practice to which the clinical teaching has been directed as exemplified in the professional and teaching career of Signe Brunnstrom.

Dr. Manal was presented the Signe Brunnstrom Award during the APTA's Annual Conference in Denver last June. The APTA names one individual each year for this prestigious award.

## DEPARTMENT NEWS

### Crohn's and Colitis Foundation Fundraiser



The University of Delaware's Physical Therapy Department hosted a fundraiser during Fall 2007 at Shaggy's on Main Street to benefit the Crohn's and Colitis Foundation of America (CCFA) and Elizabeth Bauske, third year DPT student, due to extensive medical bills following hospitalization during the summer.

Elizabeth began experiencing abdominal symptoms which quickly sent her to the hospital. She was soon diagnosed with a severe case of Ulcerative Colitis (UC), an inflammatory bowel disease, in which the only cure is to have her colon removed. Elizabeth initially spent 42 of 44 days in the hospital over three admissions dealing with the UC and various complications.

Throughout her extended stay in the hospital, the UD DPT students provided amazing support for her, ranging from spending time with her to taking notes for class. The fundraising event took place on

October 16<sup>th</sup> to benefit both the CCFA and Elizabeth's medical bills. The event was a huge success with many people from the department attending and several professors guest bartending! Donations came from throughout the department as well as from various people throughout the country. The students also obtained raffle prize items from willing businesses in the community to help the cause. Over \$4,200 was raised, of which 50% went to both the CCFA and Elizabeth's medical bills.

The donations from the event provided Elizabeth &

her husband with tremendous assistance. She was able to graduate with her fellow classmates this past January. Currently, Elizabeth and her husband reside in Chicago, and she works as a licensed PT in orthopedics. She continues to visit with many doctors in hopes of staying healthy and in remission. Elizabeth is eternally grateful for everything the DPT students and department have done for her. The UD DPT students truly stepped up to the plate to assist a fellow student in need in the summer and fall of 2007.

## DEPARTMENT NEWS

**Babies Driving Robots** Article based from Neil Thomas

Picture by  
Kathy Atkinson, UD

**J**ames (Cole) Galloway, associate professor of physical therapy, along with Sunil Agrawal, professor of mechanical engineering at the University of Delaware have combined forces to develop robot-enhanced power mobility devices which provide independent mobility for children with special needs who are unable to fully explore the world on their own. The research project, affectionately titled “Babies Driving Robots” has gained national press over the past year, from research

journals and local newspaper articles to national and international television interviews such as with The Discovery Channel.

The implications of the work are clear: allowing children with mobility limitations to explore their world independently will facilitate both social and cognitive development, and allow for the daily experiences similar to that of their mobile peers. Currently, power mobility is not typically offered to these children until 5-6 years of age, severely limiting their exploration and interaction with their world, and ultimately their broader development. The reason for the delay in power mobility is largely due to the issue of safety.

“The current clinical practice is to avoid power mobility until the child can follow adult commands,” Galloway said. “Your parents didn’t wait until you followed their every command before they let you walk – they held your hand, they

required you to stay near them, and alerted you to obstacles in your way. This is the way infants learn real world navigation, and it is exactly these safety features that are being built into our mobile robot.”

The first prototype, named UD1, is ringed with sensors that can determine the obstacle-free space. If the baby drives too close to an obstacle, the robot either allows the driver to bump obstacles (which is a normal part of exploration) or will take control from the infant and drive around the obstacle itself (to avoid mom’s favorite lamp). The next prototype, UD2 will build on the current technology to provide additional control to a parent, teacher, or other supervising adult. The new prototype will also have a new “training joystick” that will show the baby how to turn the robot to avoid obstacles: as the baby and robot come up to an obstacle, the robot will select a safe route around it while transmitting signals that move the joystick in the same way the robot

is driving. This allows the baby to feel what the joystick motion should be to avoid such obstacles.

As the project moves on, the goal is to place multiple mobile robots with special needs infants in communities throughout Delaware and to gather data to analyze how they are used and what the children learn so that the research team can continue to make modifications towards a market-ready power wheelchair.....for babies!

“But time is of the essence because there is a baby being born right now who could use this today. That is the race we are in, so back to work.”

To see videos and read additional articles on this project, visit Dr. Galloway’s webpage @ [www.udel.edu/PT/faculty/galloway\\_CV.html](http://www.udel.edu/PT/faculty/galloway_CV.html) If you have questions, comments or ideas about this project, contact Dr. Galloway at [jacgallo@udel.edu](mailto:jacgallo@udel.edu).

**Geriatric PT residency receives national credentials** Article based from UD Daily

**J**n December 2007, the geriatric physical therapy residency program at the University of Delaware became only the second such program in the United States to receive credentialed status from the American Physical Therapy Association (APTA).

The geriatric physical therapy residency is a doctorate-level program of post-professional clinical and didactic education that seeks to advance significantly the physical therapist’s preparation as a provider of patient care services in a defined area of clinical practice.

“We are thrilled to be lead-

ing the way in residency training of physical therapists who aspire to become leaders in the field,” Tara Manal, director of Physical Therapy Clinic Services and assistant professor of physical therapy, said. “The geriatric residency at UD is only the second in the nation, and we are the only physical therapy program with three credentialed residency programs.”

Other APTA credentialed residency programs at UD are the sports residency and orthopedic residency. To become credentialed, clinical faculty members must possess several qualifications to effectively conduct the necessary activities of a residency or fellowship program,

including:

- Advanced clinical skills, with at least one faculty member who is certified by the American Board of Physical Therapy Specialists in the content area;
- Expertise in teaching; and involvement in scholarly and professional activities.

All clinical faculty members at UD are certified by the American Board of Physical Therapy Specialists and mentor physical therapy residents and physical therapy students.

UD’s physical therapy clinics provide clinical education experience for physical therapy

students and offer clinical research opportunities for faculty and students, while providing services to patients at UD and in local communities.



Angela Robertson Dorr, first graduate of UD’s Geriatric Residency Program, pictured with Cathy Ciolek, Geriatric Residency Director

## DEPARTMENT NEWS

### 2007 Community Service

Over the past year both DPT classes have continued UDPT's tradition of community service, and were involved in a number of community service opportunities:

- Hosted a fundraiser to assist DTP student Liz Bauske with recent medical bills and to benefit the Crohn's and Colitis Foundation of America
- Collected can goods for the Thanksgiving food drive
- Bike to the Bay to benefit the National MS Society
- Pitt-Marquette challenge
- Relay for Life
- Clothing drive to benefit the Friendship House of Delaware
- Stroke support group/ balance assessment and training
- Scoliosis screenings at Newark Charter School
- 5K run for Scott Mackler to benefit the ALS Foundation
- MS Clinic
- Stroke Clinic
- Newark Community Day booth to educate the community about PT
- Sold tickets and worked as spotters for UD's Field Hockey and Lacrosse games
- Volunteered in the recreation room at Al duPont Hospital for Children
- Students have also volunteered to work with various patients as a supplement to the physical therapy they are currently receiving from UD's Clinics or as a continuation of their therapy after discharge from PT.

### UD PT Department Part of History Making Training Grant



Drs. Delitto, Mueller, and Binder-Macleod, from the University of Pittsburgh, Washington Univ. and UD are the three leaders of the newly award K-12 training grant

The University of Delaware, along with Washington University in St. Louis and the University of Pittsburgh, was awarded a \$4,800,000 5-year grant from the NIH to help junior faculty members acquire the research skills necessary to become inde-

pendent investigators in rehabilitation approaches. The grant, funded by the National Center Medical Rehabilitation Research, the National Institute of Child Health and Human Development, and the National Institute Neurological Disorders

and Stroke of the National Institutes of Health (K12 HD055931) was the first of two grants ever awarded to a PT or OT program. The program is a collaboration of seven universities: three lead institutions (Washington University School of Medicine, the University of Pittsburgh, and the University of Delaware) and four partnering institutions (Emory University, The Johns Hopkins University, University of Miami, and the University of Iowa). Collectively these institutions have a rich history of developing basic

and applied rehabilitation scientists. Faculty members of any accredited PT or OT program in the US can apply to become a scholar. Selected scholars will spend the first two years at one of the seven participating institutions. The last three years of the scholar training will be based at their home institution.

### 2007/2008 Professional/Staff Promotions, New Hires, Retirements

#### Promotions 2007:

Lynn McDowell promoted to Senior Records Analyst/Coordinator, Chair's Office

Donna Moore promoted to Staff Assistant, Chair's Office

#### Retirements 2008:

Kenneth Seamen, Clinical Education Coordinator

#### New Hires:

**2007:** Terri Reed, Senior Secretary, Chair's Office

Sasha Quintana, Billing/Front Desk, UD Clinic

Karen Rodalunas, Billing/Front Desk, UD Clinic

**2008:** Terri Reed, Staff Assistant. Admissions

Karen Setting, Sr. Secretary, Chair's office

Grace Keenan, Physical Therapist, UD Clinic

Angela Hutchinson, Physical Therapist, UD Clinic

Tracy Stoner, Physical Therapist, UD Clinic



## INTEGRATED CLINICAL EXPERIENCES UPDATE

### Neurologic and Older Adult (NOA) Clinic Written by Dr. Cathy Ciolek

The NOA Clinic continues to expand and grow to serve our students and the community! I am excited to announce that we hired an additional staff person due to our growth and development! Grace Keenan, PT, DPT (Class of 2006) joined us at 80% this past January. It is great to have one of our Alumni join the NOA team! Additionally, Billy Thompson, PT, DPT (Class of 2006 and current BIOMS PhD student) continues to serve as a CI, along with our current Geriatric Resident Jessalyn Ciampa, PT, DPT (Class of 2007). BIOMS PhD student Christine Malecka, PT, DPT, NCS also joins us as a CI this

year.

December 2007 was an exciting month for the NOA clinic. During December we were officially credentialed by the APTA for our Geriatric Physical Therapy Residency Program- becoming only the second credentialed residency in geriatrics in the US! It was also the last official month for Angie Robertson, PT, DPT who was our first geriatric residency graduate. She will be sitting for the GCS exam in March 2008 and then traveling some before moving to Colorado for her next position!

Our Journal Club continues to meet on the third Tuesday of every month at 8:00 am. We are moving to some other clinics throughout the year, so please visit the website for updates on articles and our meeting locations. Please consider having our journal club at your facility or joining us to discuss clinical care for older adults and patients with neurologic issues.

This past fall, Cathy Ciolek, Associate Director of the NOA clinic was certified as a Multiple Sclerosis Clinical Specialist. This certification is offered through the Consortium of

MS Clinics and is valid for 5 years.



It has been a year of remarkable growth and change for the SO Clinic. Our long time CCCE and full time PT, Laura Schmitt PT, DPT, OCS, SCS is now sharing a position as the Director of Clinical Education while maintaining a role as a part time Physical Therapist in the SO Clinic. Mandy Merritt (UD MPT) was here part-time but in December took the opportunity to become the Associate Athletic Trainer/ Physical Therapist at Notre Dame - Best of Luck Mandy! We have been fortunate enough to have Angela Hutchinson (UD DPT 2006), as our newest addition to the SO clinic. Angela has worked on ACL research and at the Hospital for Special Surgeries in NYC - we are excited to have her join the team.

### Sports and Orthopedic (SO) Clinic Written by Dr. Tara Manal

Awards:

- Airelle Hunter-Giordano PT, DPT, SCS, OCS received her Orthopedic Specialist Certification
- Doctor of Physical Therapy Degrees: Airelle Hunter-Giordano, Noel Goodstadt, and Lynn Patterson-Sturgill
- Tara Jo Manal received the Signe Brunstrom Award for Excellence in Clinical Education from the APTA
- 2006 Residency Graduates attained specialist certifications at CSM 07: Mark Baughman PT, OCS and Kaja Kilburn PT, SCS

Residency Corner:

2007 Residency Graduates included Sarah DeBroka (Sports Residency Graduate) and Megan Sions (Orthopedic Residency Graduate)

- We have expanded our residency program to include 2 Sports and 2 Orthopedic Residencies. Our start dates are January and June. Erin Burlovich (UD DPT 2004) returned to Delaware for the June Orthopedic Residency and our new January Residents are: Marty Fontenot (UD DPT 2006) and Teonette Velasco.

Our staff has been very productive over the past year, presenting at multiple local, national and international conferences: CSM 2007, the Rehabilitation International Congress on University and Sports Progress in Prevention and Treatment of Sports Injuries (Torino, Italy), the APTA Annual Conference in Denver, the APTA Educational Leadership Conference, the APTA Student Conclave, and in Tel Aviv for the Israeli Physio-

therapy Association.

Current clinical research projects in effort with Dr. Snyder-Mackler's lab include perturbation training in the ACL deficient population who are non-copers, collaboration with colleagues in Norway on perturbation training in potential copers and recruitment is underway for multiple knee OA studies and a new TKA study.

If you are ever in town- please stop by the Clinic and say hello- we love to connect with Alumni and update our contact list!





## INTEGRATED CLINICAL EXPERIENCES UPDATE

### Pediatric Clinic Written by Dr. Tara Manal

The Peds clinic has undergone another transformation. We were very sad to lose Megan Schaefer PT, DPT, PCS this Fall. She took an opportunity to work at University of the Sciences in Philadelphia as a Director of Clinical Education. This move fit with her goal to move back to an area closer to her family to

help support husband Jerry and son Will with the adoption of their twin girls: Ellie and Maggie Schaefer! They just landed from Poland and we are very happy for all of them.

Tracy Stoner (UD PT 1990 ) PT, PCS has returned to her alma mater to support our pediatric wing. We are thrilled to have her on board

for patient care, clinical instruction and pediatric expertise. Welcome Back Tracy!



Megan Schaefer pictured here with her daughters

### Stroke Clinic Written by Dr. John Scholz

The University of Delaware's Stroke Assessment Clinic will meet on March 14, April 18 and May 9, 2008. The mission of the clinic is to provide comprehensive evaluations, exercise recommendations and referrals for individuals who have suffered a stroke, who no longer receive therapy,

and who would like to determine if they would benefit from additional treatment. The Stroke Clinic is designed for the additional purpose of fostering the academic mission of the Department of Physical Therapy to advance physical therapy practice through the integration of education, clinical practice

and research.

The clinic is run by physical therapy student volunteers under the supervision of Dr. John Scholz, faculty advisor. Currently, Mrs. Karen Setting serves as scheduling coordinator. The clinic meets once monthly through the academic year. Patients can contact Mrs.

Setting at 302-831-8521 for an appointment. We would be grateful for referrals of appropriate patients in the tri-state area.

### Multiple Sclerosis Assessment Clinic Written by Dr. Cathy Ciolek

Now in our ninth year, the University of Delaware MS Assessment Clinic continues to provide free, multi-disciplinary evaluations to persons battling Multiple Sclerosis. After performing a complete neurological and musculoskeletal evaluation, second-year Physical Therapy students provide each participant with an individualized home program.

Local professionals from other health disciplines, including Occupational Therapy, Nutrition, Counseling, a representative for Durable Medical Equipment, and a staff member from the MS Society Delaware Chapter generously volunteer their time to the clinic. These professionals provide an initial assessment and then make a referral if further evaluation appears necessary.

This year the clinic is working to incorporate more evidence based tests and measures and screening forms in each of the domains that are assessed to better communicate with the neurologists and specialists in the community. This allows our DPT students to become more familiar with these tests and measures and prepares clinicians that are experienced in best practice for persons with

MS.

If you have a client who has MS who would benefit from participation in the MS Assessment Clinic, please have them contact Cathy Ciolek at 302-831-2430.

## 2007 HONOR ROLL OF DONORS

We gratefully acknowledge the following alumni and friends for their financial contributions and the encouragement their support represents. This Honor Roll includes gifts contributed to the Department and recorded throughout the 2007 calendar year.

Every effort has been made to assure accuracy of this report. Please notify our Department of any errors or omissions, and please accept our apologies for any discrepancies. For information on how to make a contribution, please contact the Physical Therapy Department at [pt-admissions@udel.edu](mailto:pt-admissions@udel.edu) or call 302-831-4576.

# Thank You!!

Randee Allen  
Fariba Ansari  
Jeremie Axe  
George Barrett  
Dr. and Mrs. Philip A. Beutel  
Joshua Billings  
Dr. and Mrs. Stuart A. Binder-Macleod  
Jonathon Borger  
Mr. and Mrs. Bruce H. Burcat  
Laura Whitney Byrne  
Dr. and Mrs. Carmen Campanelli  
Brian Catania  
Susan Cecere  
Christiana Care Health Services  
Cathy Ciolek  
Melissa Cole  
Robert Cole  
Annamaria Concannon  
Stanley A. Cossoy  
Nancy J. Coto  
Richard Crossland  
Kathryn Marie Cunningham  
Laura Del Duca  
Julie A. Demgen  
Lois R. Deming-Hedman  
Mr. and Mrs. Marc J. Douek  
Diana P. Duque

Carl O. Eaton  
Carol S. Einhorn  
Vongi A. Ellison  
Amy P. Enriken  
Ergoworks Consulting, LLC  
Mr. and Mrs. Frank Fedorczyk  
Susan F. Feldman  
Virginia F. Fisher  
Jacquelynn Gardella  
Jennifer L. Gasko  
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Kris Kehler-Triolo  
Mr. and Mrs. Robert Keighley  
Julie M. Knolmayer  
Mr. William Knowles and Dr. Julie Moyer-Knowles  
Jeffrey G. Konin  
Mr. and Mrs. Zachary J. Koutsandreas  
Lynn E. Kozimbo  
JoAnne M. Kreis  
Jeffrey D. Kremer  
Amy L. Krzyzaniak  
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Jane F. Lodato  
Miriam Loughry  
Joseph A. Lucca  
Dr. Scott A. Mackler and Dr. Lynn Snyder-Mackler  
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## FACULTY: AWARDS & DEGREES CONFERRED AS WELL AS GRANTS & PUBLICATIONS IN 2007



**STUART BINDER-MACLEOD**, PT, PhD, FAPTA, (Medical College of Virginia), Edward L. Ratledge Professor and Chair of Physical Therapy: Effects of electrical stimulation parameters on muscle performance.

**Publications:** Lee SC, Braim A, Becker CN, Prosser LA, Tokay AM, Binder-MacLeod SA. Diminished fatigue at reduced muscle length in human skeletal muscle. *Muscle Nerve*. 36(6):789-97, 2007

Ding J, Chou LW, Kesar TM, Lee SC, Johnston TE, Wexler AS, Binder-MacLeod SA. Mathematical model that predicts the force-intensity and force-frequency relationships after spinal cord injuries. *Muscle Nerve*. 36(2):214-22, 2007.

Chou LW, Binder-MacLeod SA. The effects of stimulation frequency and fatigue on the force-intensity relationship for human skeletal muscle. *Clin Neurophysiol*. 118(6):1387-96, 2007.

Stackhouse SK, Binder-MacLeod SA, Stackhouse CA, McCarthy JJ, Prosser LA, Lee SC. Neuromuscular Electrical Stimulation versus Volitional Isometric Strength Training in Children With Spastic Diplegic Cerebral Palsy: A Preliminary Study. *Neurorehabil Neural Repair*. 21(6):475-85, 2007.

Maladen R, Perumal R, Wexler AS, Binder-MacLeod SA. Relationship between stimulation train characteristics and dynamic human skeletal muscle performance. *Acta Physiol*. 189(4):337-46, 2007.

Maladen RD, Perumal R, Wexler AS, Binder-MacLeod SA. Effects of activation pattern on nonisometric human skeletal muscle performance. *J Appl Physiol*. 102(5):1985-91, 2007.

Scott WB, Lee SC, Johnston TE, Binkley J, Binder-MacLeod SA. Effect of electrical stimulation pattern on the force responses of paralyzed human quadriceps muscles. *Muscle Nerve*. 35(4):471-8, 2007.

Agrawal A, Sangwan V, Banala SK, Agrawal SK, Binder-MacLeod SA. Design of a Novel Two Degree-of-Freedom Ankle-Foot Orthosis. *J. of Mechanical Design*, 129:1137-1143, 2007.

**Grants:** NIH 1R01NR010786 (PI: Binder-MacLeod) 9/12/07 - 5/31/12  
Title: Fast Treadmill Training/Functional Electrical Stimulation to Improve Walking: The overall goal of this multidisciplinary research partnership project is to develop a physiologically based intervention to improve functional ambulation in individuals who have sustained a stroke. The Specific Aims are to: 1) develop and test a fast treadmill training and functional electrical stimulation (FastFES) intervention that improves the walking patterns and energy efficiency during treadmill-walking in individuals who have sustained a stroke, 2) develop and test a 12-week training protocol using FastFES to improve body structure and function in individuals who have sustained a stroke, and 3) demonstrate the feasibility and potential effects of FastFES training compared to traditional treadmill training on body function, activity, and participation in individuals who have sustained a stroke. A total of 60 stroke survivors will be rigorously studied over the course of this five-year grant. Role: PI

NIH K12-HD055935 (PI: Mueller) 9/15/07 - 8/31/12  
Title: Multicenter Career Development Program for Physical and Occupational Therapists: The goal of this multicenter training program is to provide training for new investigators to acquire the research skills necessary to become independent investigators in rehabilitation approaches. The core institutions are Washington University, University of Pittsburgh, and University of Delaware but training also can occur at John Hopkins University, Emory University, University of Miami, or the University of Iowa  
Role: Program Director

NIH P20 RR1658 (PI: Buchanan) 6/1/07 - 5/31/12  
Title: COBRE for Women in Science & Engineering on Osteoarthritis  
The goal of this grant is to develop a center for biomedical research excellence at the University of Delaware that focuses on the mentoring of women scientists and engineers and the prevention and treatment of osteoarthritis. Role: Scientific Advisory Board member and mentor

NIH R01 HD 38582 (PI: Buchanan) 8/1/02 - 7/31/07  
Title: FES and Biomechanics: Treating Movement Disorders: The goal of this bioengineering research partnership (BRP) project is to assist patients with CNS dysfunction to produce improved walking patterns through a combination of functional electrical stimulation (FES), robotic-assistive training, and biomechanical modeling. This project is presently in a no cost extension. Role: Co-PI

NIH T32 HD 7490 (PD: Binder-MacLeod) 5/1/03 - 4/30/08  
Title: PT / PhD Predoctoral Training Program: The goal of this training grant is to increase the number of individuals qualified to conduct research in physical rehabilitation. This grant is currently in its eighth year of funding.  
Role: Program Director and Mentor

NIH R01 HD043859 (PI: Samuel CK Lee) 7/1/04 - 3/31/09  
Title: Strength Training Using NMES for Children with Cerebral Palsy: The goal of the project is to identify the effects of using electrical stimulation for strength training in children with cerebral palsy.  
Role: Investigator

NIH P20 RR1658 (PI: Buchanan) 6/1/07 - 5/31/12  
Title: COBRE for Women in Science & Engineering on Osteoarthritis: The goal of this grant is to develop a center for biomedical research excellence at the University of Delaware that focuses on the mentoring of women scientists and engineers and the prevention and treatment of osteoarthritis.  
Role: Scientific Advisory Board member and mentor



**CATHY CIOLEK**, PT, DPT, GCS, (Ithaca), Associate Director Neurologic & Older Adult Clinic, Director Geriatric Clinical Residency

**Awards:** Joan Mills Award from the Section on Geriatrics, APTA Combined Sections Meeting 2007; Certified as a Multiple Sclerosis Clinical Specialist through the Consortium of MS Clinics



**IRENE DAVIS**, PT, PhD, FACSM, (Penn State), Professor: Biomechanical analysis of running injuries, relationships between lower extremity structure, mechanics and injury.

**Awards:** PhD students Brian Noehren & Joaquin Barrios received 2007 American Physical Therapy PODS Awards

**Publications:** Noehren, B, Davis, I, and Hamill, J (2007) A prospective study of the biomechanical factors associated with iliotibial band syndrome. *Clinical Biomechanics* Award Winner 2006. *Clinical Biomechanics* 22:951-956

Milner, C, Davis I (2007). Are knee mechanics during early stance related to tibial stress fractures in runners? *Clinical Biomechanics* 22(6):697-703.

Butler, R.J., Royer, T. & I.S. Davis (2007) The effect of a subject specific amount of lateral wedge on knee mechanics in patients with medial knee osteoarthritis. *J. Ortho. Res* 25(9):1121-1127

Dierks, T and Davis, I (2007). Discrete and continuous joint coupling measures in uninjured recreational runners. *Clinical Biomechanics* 22(5):581-591.

Butler, R.J., J. Hamill & I.S. Davis. (2007) Effect of footwear on high and low arched runners' mechanics during a prolonged run. *Gait and Posture* 26(2):219-225.

Butler, R.J., H.Hillstom, J. Song, C.J. Richards & I.S. Davis. (2007) The arch height index measurement system: Establishment of reliability and normative values. (in press) *J Am Pod Assoc*

Davis, IS, Ireland, ML and Hanaki, S. (2007). ACL Injuries: The Gender Bias. *Research Retreat III. JOSPT*, 37(2):A1-A32.

McCrory JL, Quick NE, Shapiro R, Ballantyne BT, and Davis IM (2007). The effect of a single treatment of the Protonics system on lower extremity kinematics during gait and the lateral step up exercise. *Gait and Posture*, 25(4):544-548.

**Grants:** NIH (In review)  
Title: Improving Gait Mechanics in Runners with Patellofemoral Pain Syndrome; \$1.5 million.

NIH 06/01/07-06/01/10  
Title: Gait Retraining to Reduce Loading in Runners. \$1.1 million  
Department of Defense 06/01/07-06/01/09  
Title: The Effect of Reduced Loading during Running on Tibial Strain: A Modeling Study; \$200,000.



**NOEL GOODSTADT**, PT, DPT, OCS, CSCS, (Hahnemann University), Associate Director Orthopedics, Orthopedic Clinical Residency Coordinator, Sports and Orthopedic Clinic.



## Awards, Degrees, Grants &amp; Publications continued



**JAMES (COLE) GALLOWAY**, PT, PhD, (Arizona), Associate Professor: Development of infant motor behaviors, neuromotor development of reaching and novel early interventions for infants under 6 months.

**Publications:** Bhat, A., Lee, HM., Galloway, JC. (2007) Toy-oriented changes during early arm movements II: Joint Kinematics. *Infant Behavior and Development*. 30: 307-324.

Bhat, A., Galloway, JC. (2007) Toy-oriented changes during early arm movements III: Constraints on Joint Kinematics. *Infant Behavior and Development*. 30:515-522.

**Abstracts:** Bhat A.N.; Galloway, J.C.; Landa R. (2007) Learning, Visusal Attention, Affect, and Coordination in young infants at risk for autism and typically developing infants. SRCD

Lee, H.M; Bhat, A.; Galloway, J.C., "Coordination of arm movements in healthy full term infants from pre-reaching to the onset of reaching," American Physical Therapy Association Combined Sections Meeting 2007

**Presentations:**

"Babies Gone Wild: Recent Adventures of the Infant Behavior Lab" Delaware Biotechnology Institute Seminar Series, September 2007

**Grants:** NIH NICHD R01 HD051748-02 Role: PI (15%)  
Title: Motor learning and coordination in pre-term infants; \$1,250,000.



**GREGORY HICKS**, PT, MPT, PhD (University of Pittsburgh), Assistant Professor: Interventions for low back pain, rehabilitation strategies focused on trunk muscle function, and understanding factors that impact body composition and physical function in older adults.

**Awards:** Honorary Membership conferred, Israeli Physical Therapy Society

**Publications:** Miller RR, Hicks GE, Shardell MD, Cappola AR, Hawkes WG, Yu-Yahiro JA, Keegan A, Magaziner J. Association of Serum Vitamin D Levels with Inflammatory Response Following Hip Fracture \* The Baltimore Hip Studies. *J Gerontol A Biol Sci Med Sci*. 2007 62: 1402-1406.

**Grants:** 1K12HD055931-01 (M. Mueller) 01/01/08–12/31/09  
Title: NICHD Multicenter Career Development Program for Physical and Occupational Therapy (Comprehensive Opportunities in Rehabilitation Research Training-CORRT): The overall goal of this proposal is to establish a Multicenter Physical Therapy and Occupational Therapy Career Development Program (PT/OT CDP) designed to provide new investigators with the skills needed to lead research programs that validate rehabilitation approaches, optimize treatments, and incorporate new technologies to maximize the potential of all people. Role: Faculty Scholar

No number (G. Hicks) 06/01/07–05/31/08  
University of Delaware Research Foundation, Inc.

Title: Trunk Muscle Training to Improve Function in Older Adults with Chronic Low Back Pain: A Pilot Trial: The purpose of this project is to examine the effectiveness of trunk muscle training augmented by neuromuscular electrical stimulation, to reduce pain and improve functional capacity of older adults with chronic low back pain. This work will serve to collect pilot data for future randomized trials on this topic. Role: Principal Investigator; \$25,000.



**AIRELLE HUNTER-GIORDANO**, PT, DPT, SCS, OCS, CSCS (Delaware), Associate Director of Sports Physical Therapy, Sports Clinical Residency Coordinator, Sports and Orthopedic Clinic, CCCE.

**Awards:** Named as the new Clinical Coordinator of Clinical Education for the University of Delaware Sports and Orthopedics Clinic; received OCS certification.



**STACIE LARKIN**, PT, DPT, MEd, (Boston University), Academic Coordinator of Clinical Education.

**Awards:** Elected Chief Delegate for the Delaware Physical Therapy Association for 2008-2009.



**JOSEPH LUCCA**, PT, DPT, PhD, GCS, (Delaware), Associate Professor: Health care delivery systems for the elderly.



**TARA JO MANAL**, PT, DPT, OCS, SCS, (Delaware), Director of Clinical Services, Physical Therapy Clinics.

**Awards:** The 15th Reipient of the Signe Brunnström Award for Excellence in Clinical Teaching from the APTA to acknowledge an individual who has made significant contributions to physical therapy clinical education through excellence in clinical teaching, has served as a role model in clinical teaching, and has demonstrated expertise in at least one area of practice to which the clinical teaching has been directed as exemplified in the professional and teaching career of Signe Brunnström; Named the Residency and Fellowship Education Coordinator for the Orthopedic Section of the APTA

**Publications:** Manal TJ, Delitto A. (2007). Spine: Regional sport and exercise injury. In Kolt and Snyder-Mackler (Eds.), *Management in Physical Therapies in Sport and Exercise* Ed.2. London, UK: Churchill Livingstone.

Manal TJ, Snyder-Mackler L. (2008). *Electrical Stimulation for Pain Modulation. Clinical Electrophysiology In Robinson and Snyder-Mackler (Eds.), Electrotherapy and Electrophysiologic Testing* Ed 3. Baltimore, MD: Williams and Wilkins.

Manal T. (2007). *Diseases and Disorders*. In Jolyon Goddard and Anne Hildyard (Eds), *Slipped disk: Volume 2*. Tarrytown, NY: Marshall Cavendish.



**PAUL METTLER**, PT, EdD, (Northeastern), Associate Professor: Higher education administration.



**DARCY REISMAN**, PT, PhD, (Delaware), Research Assistant Professor, Academic Director of Neurologic and Older Adult Clinic: Understanding the mechanisms of movement dysfunction following stroke, as well as how and why different treatments improve this dysfunction.

**Publications:** Reisman DS, Silver K, Wityk R, Bastian AJ. Locomotor adaptation on a split-belt treadmill can improve walking symmetry post-stroke. *Brain*, 130: 1861 – 1872, 2007.

**Grants:** AHA 0765314U 7/1/2007-6/30/2009  
Title: Relationship Between Speed and Walking Function Post-stroke Principal Investigator: Darcy Reisman (20% effort), Co-Investigators; Katherine Rudolph, William Farquhar; \$100,000.



**KATHERINE RUDOLPH**, PT, PhD, (Delaware), Assistant Professor: EMG to characterize movement strategies in people with orthopedic and neurologic conditions and the development of therapeutic equipment.

**Awards:** ACR 07000767– Mentor for REF/Abbott Health Professional Graduate Student Research Preceptorship. 7/1/2007 - 8/31/2007

**Publications:** Schmitt LC, Rudolph KS. Muscle Stabilization Strategies in People with Medial Knee Osteoarthritis: The Effect of Instability. *J Orthop Res* (in press)

Rudolph KS, Schmitt LC. Age-related changes in strength and walking patterns: Are they related to knee osteoarthritis?. *Phys Ther*. 2007 Sep 4. [Epub ahead of print].

Schmitt LC, Rudolph KS. Influences on Knee Movement Strategies during Walking in Persons with Medial Knee Osteoarthritis. *Arthritis Rheum* 2007, Jul 30;57(6):1018-1026.

Ramsey DK, Snyder-Mackler L, Lewek MD, Newcomb W, Rudolph KS. Effect of Anatomical Realignment on Muscle Function During Gait in Patients with Medial Compartment Knee Osteoarthritis. *Arthritis Rheum* 2007 57(3):389-397.

## Awards, Degrees, Grants & Publications continued

Briem K, Ramsey DK, Rudolph KS, Newcomb W, Snyder-Mackler L. Effects of the amount of valgus correction for medial compartment knee osteoarthritis. *J Orthop Res.* 2007 Mar;25(3): 311-8.

**Presentations:** Rudolph KS, Reisman DS, Wagner C. The influence of speed on walking function after stroke. International Society for Posture and Gait Research. Burlington, VT. July 2007

Rudolph KS, White J, Kumar D, Sun JQ. Use of a Smart Knee Brace to Challenge Walking. Innovations in Balance and Locomotor Rehabilitation: The Translation from Fundamental Science to Clinical Applications. The Jewish Rehabilitation Hospital and the Gustav Levinschi Foundation. Montreal, Quebec July 13, 2007

Rudolph, KS. Smart Knee Brace Applications. Kessler Institute for Rehabilitation, June 19, 2007.

Rudolph KS, Sun JQS, Reisman DS, Hauck K, White J. Development of a Smart Knee Brace. APTA Combined Sections Meeting, Boston, MA February, 2007

Schmitt LA. Rudolph KS. Muscle Stabilization Strategies in Persons with Medial Knee Osteoarthritis: The Effect of Instability. APTA Combined Sections Meeting in Boston, February 14-18, 2007.



**STEVE TEPPER**, PT, PhD, (U. of Maryland), Clinical Professor.

**Awards:** Outstanding Service by the Geriatric Rehabilitation Education and Training Institute, January 2007

**Presentations:** Participated in Panel Discussion at the National APTA meeting in Denver, 2007, entitled "Physical Fitness: Promoting Health & Wellness in All Patient/Client Populations" on the topic "Cardiovascular Fitness, Prevention, and Management of Disease." Discussion can be found free for APTA members at: <http://www.apta.org/AM/Template.cfm?Section=Media&TEMPLATE=/CM/HTMLDisplay.cfm&ContentID=42333>



**LAURA A. SCHMITT**, PT, DPT, OCS, SCS, ATC, (Temple), Academic Coordinator of Clinical Education

**Presentations:** Platform at APTA Combined Sections Meeting 2008: Management of a Patient with Bilateral Knee Multiligament Involvement



**JOHN SCHOLZ**, PT, PhD, (Connecticut), Professor: Study of basic processes of motor coordination and control, including movement dysfunction in patients with problems affecting the central nervous system.

**Publications:** Krishnamoorthy V, Scholz JP, Latash ML (2007). The use of flexible arm muscle synergies to perform an isometric stabilization task. *Clinical Neurophysiology*, 118: 525-537.

Yang JF, Scholz JP, Latash ML (2007). The role of kinematic redundancy in adaptation of reaching. *Exp. Brain Research*, 176: 54-69.

de Freitas SMSF, Scholz JP, Stehman AJ (2007). Effect of motor planning on use of motor abundance. *Neuroscience Letters*, 417: 66-71.

Reisman D, Scholz JP (2007). Deficits in surface force production during seated reaching in people after stroke. *Phys. Therapy*, 87:326-366.

Latash ML, Scholz JP, Schöner G. (2007). Toward a new theory of motor synergies. *Motor Control*, 11: 275-307.

Schöner G, Scholz JP (2007). Analyzing multi-degree-of-freedom movement systems based on variance: Uncovering structure vs. extracting correlations. *Motor Control*. 11: 258-274.

Agrawal SK, Banala SK, Fattah A, Sangwan V, Krishnamoorthy V, Scholz JP, Hsu W-L (2007). Assessment of motion of a swing leg and gait rehabilitation with a gravity-balancing exoskeleton. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. 15: 410-420.

Hsu W-L, Scholz JP, Schöner G, Jeka J, Kiemel T (2007). Control and estimation of posture during quiet stance depends on multijoint coordination. *Journal of Neurophysiology*, 97(4):3024-35.

Scholz JP, Schöner G, Hsu W-L, Jeka JJ, Horak F, Martin V (2007) Motor equivalent control of the center of mass in response to support surface perturbations. *Experimental Brain Research*, 180: 163-79.

Zhang W, Scholz JP, Zatsiorsky VM, Latash M (2008). What do synergies do? Effects of secondary constraints on multidigit synergies in accurate force-production tasks. *Jrnl of Neurophysiology*. 99: 500-513.

**Conference Presentations:** De Freitas SMSF, Scholz JP. Selective use of motor abundance in persons with left and right post-stroke hemiparesis. Annual meeting of the Society for Neuroscience, San Diego, CA, November 3-8, 2007, Poster #623.8

Scholz JP, Kim S-H, Banala S, Agrawal SK. Alteration of the walking pattern of healthy subjects following robotic training. Annual meeting of the Society for Neuroscience, San Diego, CA, November 3-8, 2007, Poster #82.25

Scholz JP, Hsu W-L, Schöner G, Jeka JJ, Kiemel T. Control and estimation of posture during quiet stance depend on multijoint coordination. 18th International Society for Posture and Gait Meeting, Burlington, VT, August 14-18, 2007.

De Freitas SMSF, Scholz JP, Stehman AJ. Does Movement Planning Influence the Use of Motor Abundance In Reaching? Progress in Motor Control VI, Santos, Brazil. August 9-12, 2007.



**LYNN SNYDER-MACKLER**, PT, ScD, FAPTA, (Boston University), Alumni Distinguished Professor: Examination of rehabilitation protocols following ACL reconstruction, examining rehabilitation following ACL injury, osteoarthritis, high tibial osteotomy, and total knee Arthroplasty.

**Publications:** Barrance PJ, Williams GN, Snyder-Mackler L, Buchanan TS. Do ACL-injured copers exhibit differences in knee kinematics?: An MRI study. *Clin Orthop Relat Res.* 2007 Jan;454:74-80.

Briem K, Ramsey DK, Rudolph KS, Newcomb W, Snyder-Mackler L. Effects of the Amount of Valgus Correction for Medial Compartment Knee Osteoarthritis. *Journal of Orthopedic Research.* 2007 Mar;25(3):311-8.

Higgins M, Halstead PD, Snyder-Mackler L, Barlow D. Measurement of impact acceleration: mouthpiece accelerometer versus helmet accelerometer. *J Athl Train.* 2007 Jan-Mar;42(1):5-10.

Hurd WJ, Snyder-Mackler L. Knee instability after acute ACL rupture affects movement patterns during the mid-stance phase of gait. *J Orthop Res.* 2007 Oct;25(10):1369-77.

Farquhar SJ, Snyder-Mackler L: Electrical Stimulation of Muscle: Techniques and Applications. Chapter 6 in *Clinical Electrophysiology Electrotherapy and Electrophysiologic Testing*. Eds: Snyder-Mackler L, Robinson A, 3rd Edn, Williams and Wilkins, Baltimore MD 2007

Kolt G and Snyder-Mackler L (eds) *Physical Therapies in Sport and Exercise*. Edition 2 Churchill Livingstone, 2007

Petterson, S.C., Raisis, L., Bodenstab, A., and Snyder-Mackler, L. Disease-Specific Gender Differences Among Total Knee Arthroplasty Candidates. *J Bone Joint Surg Am.* 2007;89:2327-2333.

Ramsey DK, Lewek MD, Rudolph KS, Newcomb W, Snyder-Mackler L. The Effect of Anatomical Realignment on Muscle Function in Medial Knee OA. *Arthritis Care & Research.* 2007;Apr;57(3).

Ramsey DK, Briem K, Axe MJ, Snyder-Mackler L. A Mechanical Theory for the Effectiveness of Bracing for Medial Compartment Osteoarthritis of the Knee *J Bone Joint Surg Am.* 2007;89:2398-2407.

Robinson AJ, Snyder-Mackler L: *Clinical Electrophysiology: Electrotherapy and Testing Procedures* (ed 3) Lippincott Williams Wilkins, Baltimore MD, 2007

Snyder-Mackler L, Schmitt LA, Rudolph KS, Farquhar SJ: *Electro-physical Agents in Sport and Exercise Injury Management*. Chapter 13 in *Physical Therapies in Sport and Exercise*, Eds: Snyder-Mackler L, Kolt G, 2nd Edn, Elsevier London, UK 2007

**Grants:** NIH - 5P20RR016458 02/01/2007-01/13/2012  
Title: COBRE for Women in Science & Engineering on Osteoarthritis (PI Buchanan) *Joint Loading and the Progression of Osteoarthritis following TKA* (PI Snyder-Mackler)

NIH 1 R01 AR048212-01A1 01/01/2005-11/30/2009  
Title: Can Neuromuscular Training Alter Movement Patterns? Role: PI

NIH S10RR022396-01 04/01/2006-03/31/2007  
Title: Motion Analysis System for Study of Human Movement Dysfunction  
Role: PI

NIH R44 HD055019-01 03/01/2007-09/01/2009  
Adaptive High Intensity Electrical Stimulation for Post-Surgical Rehabilitation. Role: Investigator

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**“My doctor told me to start my exercise program  
very gradually. Today I drove past a store  
that sells sweat pants.”**





## Let's Keep in Touch!

We will continue to include a page in the Newsletter that highlights the Alumni updates we receive throughout the year. To be included: weddings, births, academic achievements, and also deaths. In addition, all alumni information received will be entered online, and organized by graduating year.

We'd like to hear from you and share your news with other alumni! Please mail this completed form to: Cyndi Haley, 301 McKinly Lab, University of Delaware, Physical Therapy Department, Newark, DE 19716, or fax to (302-831-4234). You may also e-mail us your news at: [www.udel.edu/PT/alumni/updatenews.html](http://www.udel.edu/PT/alumni/updatenews.html)

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