



UNIVERSITY OF DELAWARE DEPARTMENT OF PHYSICAL THERAPY  
**ALUMNI NEWSLETTER**

Volume 11,  
 Spring 2010

Editors: Mackenzie Roby, DPT Class of 2010 & Holly Whitney, DPT Class of 2011

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**MESSAGE FROM THE CHAIR**



**G**reetings,  
 I just finished reading through this year's Alumni Newsletter and I am beaming. Not only am I re-

mindful of the major accomplishments and awards that the faculty have gathered over the past year, but I am also impressed with the accomplishments of our alumni. It was great to see the 14 alumni who received American Board of Physical Therapy Specialist (ABPTS) Certification over the past year. Hearty congratulations to you all. Also it is great reading about your personal and professional accomplishments. I hope that we can expand our Alumni news section next year to include even more good news. Please do not be shy about sharing your news. We love to hear from you.

I am also excited about this year's Forum and Reunion Weekend. I am especially looking forward to formally welcoming the Class of 2000 during their 10<sup>th</sup> Reunion Celebration (thanks Bryan). There will be tours of the Department and the College will showcase the work

of Drs. Davis and Galloway. The University will once again put up a huge tent on the Green (known to many of you as the Mall) for Mug Night. It was lots of fun last year and I think it will only get better. I hope you will be able to attend this year and will consider organizing class reunions in the future.

Once again, I would 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 certainly appreciated. Finally, I would like to thank Cyndi Haley and the DPT students, Mackenzie Roby and Holly Whitney, for all of their hard work in putting together this newsletter. I think you will agree that they have done a great job.

Best wishes,

*Stuart Binder-Macleod*

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

**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. Cyndi Haley (chaley@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!

Calendar of Events	
APTA Annual Conference	June 16-19, 2010, Boston
APTA Student Conclave	October 29-31, 2010, Cherry Hill, NJ
Graduation DPT Class of 2010	January 8, 2011
Combined Sections Meeting (CSM)	February 9-12, 2011, New Orleans

## CLASS OF 2009 GRADUATION



### Congratulations DPT Class of 2009 !

Listed Alphabetically:

John Ahern, John Battles, Lisa Brothwood (Vice President), Anthony Carroll, Carri Cook, Laura Danberg (Treasurer), Erin Fleming, Hayes Glanden, Ross Haley (Social Chair), Jay Hartnett, Jessie Haury (Secretary), Kristin Koziak, Melissa Lim, Alieda Lynch, Kristen Mansfield (Fundraising Chair), Andrea Newman, Tim Newton, Lisa Parton, Chris Robson, Kendal Ross, Chris Runkle (President), Andrew Russell, Ryan Scheller, Christy Shannon, Kristy Shimabukuro (APTA Liason), Andrea Smith, Leslie Stanley, Casey Vogler, Chris Wagner

**M**essage from Chris Runkle,  
President of the Class of 2009:

The Class of 2009 has finally cleared the finish line...of school of course! Now the real journey begins. The entire class would like to give out many thanks to all the families, friends, and faculty members who have supported us along the journey through the University of Delaware Physical Therapy program. It has been one that no one will forget and a stepping stone towards the real challenge of making our mark on the physical therapy profession.

With Many Thanks,  
UDPT Class of 2009

*To the Graduating Class:*

- Faculty Award: to **Anthony Carroll** for demonstrating exemplary personal qualities deemed most valuable to the PT profession, including integrity, cooperation, initiative and leadership.
- Director's Award: to **Jessica Haury** for special contributions of time and effort to improving the UDPT program and helping the faculty and director fulfill the missions of education, scholarship, and service.
- Scholarship Award: to **Ross Haley** and **Jessica Haury** for a high level of scholastic achievement in the UDPT program as demonstrated by the highest grade point average in the class.

*To Community Members & Alumni:*

- Cossoy Award: to **Paul Pusecker** for extraordinary contributions to the UDPT program from outside the department.
- Catherine Dozier Kohlenstein Clinical Educators Award: to **Lauren Grieder** for outstanding contributions to the clinical education of UD students.
- Alumni Award: to **Tami Wright** who made outstanding contributions to the Physical Therapy Department.

*To UD Physical Therapy Residents:*

- Certificate of Completion of the Orthopedic Residency was presented to Jennifer Flug
- Certificate of Completion of the Sports Residency was presented to Doug Adams and Eric Greenberg
- Certificate of Completion of the Geriatric Residency was presented to Kelly Danks

## STUDENT NEWS

### Class of 2010 Written by John Mayer, SPT

Coming off of a well-deserved spring break, the Class of 2010 is gearing up to finish our last full semester of classes in the UDPT program before venturing out on our second, third and fourth full-time clinical rotations. The majority of the class is currently finishing up their remaining integrated clinical experiences in the Sports and Orthopedics Clinic, the Neurological and Older Adult Clinic, or at one of the various pediatric facilities affiliated with UDPT. It is hard to believe we are well into our last calendar year in the program. Less than a year left until graduation, not that anyone is counting!

I would like to take a moment to congratulate UDPT's new graduates on a job well done! They have been an invaluable resource to our class during our time in the program, and we wish them the best of luck as they begin their professional careers. I would also like to extend a fond farewell to the renowned Dr. Lucca! My class had the distinct privilege of taking the last course he taught here, and he will certainly be missed.

Recently, the UDPT students successfully organized a CEU course as a fundraiser for the Foundation for Physical Therapy through the Miami-Marquette Challenge.

Wendy Hurd PT, PhD, SCS generously donated her time to present a two-day course on April 10<sup>th</sup> and 11<sup>th</sup> titled "An In-depth and Evidence-Based Examination of the Shoulder Complex." This has been an exciting opportunity to encourage quality continuing education AND support the Foundation for Physical Therapy in promoting future physical therapy research. We hope this event will be one of many annual spring CEU courses organized by the UDPT students to benefit the Foundation for Physical Therapy, so keep an eye out for future courses!

Several student representatives also made the trip to San Diego, CA for this year's Combined Sections Meeting (CSM). While there, the students had the opportunity to gain insight on the latest and greatest in the PT profession. They were also able to network with UDPT alumni who were excited to learn how the program has evolved since they graduated.

Additionally, students have been working hard to fundraise for our annual PT Prom. Fundraising efforts include working at UD Men's and Women's Varsity Lacrosse games, setting up a massage table at the Caesar Rodney half marathon in Wilmington, and promoting a fundraiser at Peace a Pizza.



DPT 2 classmates celebrate Christmas and the completion of finals together at the end of the Fall 2009 semester!

In the coming month, the 1<sup>st</sup> and 2<sup>nd</sup> year classes will be participating in Relay for Life, an event that is held annually at the University of Delaware to support the American Cancer Society.

I trust you are enjoying the warmer weather and wish you the best in this spring season!

John Mayer, President

UDPT Class of 2010

### Class of 2011 Written by Leslie O'Neill, SPT

Almost a year ago, the University of Delaware DPT Class of 2011 was welcomed to the UDPT community. All of us are excited to be a part of such an excellent program and are grateful to the faculty, staff, and students who have helped us adapt.

The "1<sup>st</sup> years," as we are affectionately known, have had a very busy time thus far. Like many classes before us, Dr. Paul Mettler shepherded us through an intense, yet very exciting, first summer of Gross Anatomy. In September, we started our first full semester. The fall term included classes such as Basic Evaluation Techniques, Biomechanics, and PT in the Acute Care Setting.

In collaboration with the UD nursing and theater departments, fall semester provided us with an opportunity to practice patient care in a new patient simulation experience. UDPT professor Laura Schmitt arranged for theater students to act as patients in a replicated acute care environment. Working in cooperation with nursing students to treat these "patients" was a great opportunity that gave us all a taste of practical experience as well as the team-

work required in an acute care setting.

We're proud to say that in our short time here, The Class of 2011 has made positive contributions to the UDPT department as well as to the profession. This semester, we created an APTA Student Special Interest Group for the state of Delaware. Not only will this group be active in promoting student involvement in the APTA, it will also serve as a means to enhance our connections to other local DPT and PTA programs.

Thanks to our efforts, for the first time ever UDPT now has representation in the University's Graduate Student Senate. The Senators from the first year class are working diligently to keep their classmates informed of events and issues within the graduate community. We will also be participating in the Relay for Life for the first time in several years.

Currently, close to half of the 1<sup>st</sup> years are in our first ICE, or integrated clinical experience. It's been rewarding to put our didactic knowledge to clinical use in the treatment of real patients. As our first year comes to a close we find ourselves very excited to welcome the UDPT class of 2012.



The DPT 1 class celebrates Halloween at the 2009 Halloween Luncheon

We can't wait to share all that UD has to offer and assist them in becoming the family that we have become. It will be a great experience to help motivate them to live up to the expectations that our class has created.

Leslie O'Neill, President

UDPT Class of 2011

## FEATURED ALUMNI

## Tami Wright, PT, DPT

## Recipient of the 2009 Alumni Award



**T**ami Wright (formerly Tami Blusk) graduated from the University of Delaware with a Doctoral Degree in Physical Therapy in January 2006. Since then, she has worked for Christiana Care Outpatient Rehabilitation Services in

Newark, Delaware. She has worked as part of a rehabilitation team in the Stroke and Brain Injury Program. During her four years at Christiana, Tami started a rehabilitation aquatic program, served as a clinical instructor, took a myr-

riad of continuing education courses, and also served as a teaching assistant for the UD DPT students taking their Neurophysiologic Evaluation & Treatment course.

Working with the stroke population has been a primary interest of Dr. Wright. In March 2010, Tami took a full time position at the University of Delaware as a Research Physical Therapist. She is working in Dr. Darcy Reisman's and Dr. Stuart Binder-Macleod's labs studying the effect of Functional Electrical Stimulation (FES) and Fast Walking on daily function and quality of life in people with hemiparesis after stroke. She also plans to be involved with a Split Belt Treadmill project researching the effect this has on gait

symmetry and function in people post-stroke.

Tami has continued to be an active participant in the Neurological and Older Adult monthly Journal Club at UD. She also has helped assist a number of DPT students with their service learning projects after her patients reached a plateau in function in the outpatient rehabilitation setting.

In her spare time, Tami enjoys doing Yoga, hiking and Zumba.

We would like to thank Tami for her dedication to the UD DPT Program and for continuing to promote excellence in the profession!

## Alumni, Colleagues, Students And Friends Gather To Celebrate Dr. Joe Lucca



Dr. Lucca is embraced by Ben Massey, former president of the APTA.

**O**n June 12, 2009 people of all ages were gathered at the Baltimore Hilton dressed in luau-themed clothes, enjoying food and sharing stories. The common thread bonding these people – Dr. Joe Lucca.

After 35 years as a

professor, Joe Lucca had decided to retire. Students, alumni, colleagues and friends gathered in Baltimore, MD during the APTA National Conference to celebrate the impact Dr. Lucca has made on the PT profession and on each and every person in attendance.

This night was also a surprise to Dr. Lucca when it was revealed that the Cossoy Scholarship was renamed the Cossoy-Lucca Scholarship in his honor. Alumni had been making contributions to the fund all year. Dr. Lucca said, "This was THE BEST retirement party that I have ever attended. I'm glad it was mine!" He also commented on what an honor it was to have his name associated with Barbara Cossoy's. "One of the rea-

sons it is an honor to have my name alongside that of the late Barbara Cossoy, is that she was the one who hired me right out of graduate school. Barbara Cossoy was dedicated to UD, the profession, and to the APTA."

If you would like to make a gift in support of the Cossoy-Lucca Scholarship, you may do so online by going to [www.udel.edu/makeagift](http://www.udel.edu/makeagift) and designate your donation to the

Physical Therapy Department, Cossoy-Lucca Scholarship. Your financial support provides many opportunities for students to benefit from a quality education!

Dr. Lucca would also like to dispel the myth that he is retired! "I am alive and well, working full-time in my Part-B home care practice and loving it...something I have wanted to do for a long time...LIFE IS GOOD!"



Friends and faculty members display their luau-themed clothes!

## ALUMNI UPDATES

### Alumni News

The following news was collected from responses to "Let's Keep in Touch" in the Spring 2009 Newsletter and via e-mail request. Congratulations to all of our graduates for their personal and professional accomplishments!



#### Class of 1977

*Susan Carol* is currently the supervisor of PT for Prince George County Public Schools in Maryland. She has been a school-based program administrator for the last 10 years after receiving her masters degree in Health Science at Towson University. She says, "Seeing Joe Lucca at the alumni reception/retirement party at Annual Conference caused me to want to reach out to other '77 grads and say hello. Please send me an email ([susan.cecere@pgcps.org](mailto:susan.cecere@pgcps.org))—I would love to hear from you!"

#### Class of 1993

*Tricia Delp* completed her Orthopedic Manual Therapy certification through the Gulf Coast Graduate PT Institute in 1997 and her DPT through Temple University in 2005. In October of 2009, *Fred Ireland* (also from the class of 1993) and Tricia opened CORE Physical Therapy in Leland, NC. Their clinic is staffed entirely by DPT's and each patient is seen for one-on-one, one hour sessions regardless of insurance reimbursement ([www.CorePTNC.com](http://www.CorePTNC.com)). The picture below is of the ribbon cutting ceremony.



#### Class of 1994

*Jeff Konin* was recently awarded fellowship status in both the American College of Sports Medicine (FACSM) and the National Athletic Trainers' Association (FNATA). There are only about six people in the country who have a fellow status in both of these organizations.

#### Class of 2000

*Bryan Fean* is planning a 10 year reunion for the Class of 2000. It will be held on June 4, 2010 from 6:00-8:00pm at McKinly Lab. All are encouraged to go to the reunion "mug

night" immediately afterward. The "mug night" requires that you sign up separately. Please contact Bryan with questions at [bafean@comcast.net](mailto:bafean@comcast.net).

#### Class of 2002

*Marc and Abby Douek* are still living in NC. Marc is a partner with his practice, Advanced Physical Therapy, which is outpatient orthopedics and sports. He is also in outpatient orthopedics specializing in runners and tri-athletes and working with the professional hockey team in Raleigh. Their son Landon is 2 and they just welcomed Lily Grayson on 1/23/10 (both pictured below).



#### Class of 2003

*Airelle Hunter-Giordano* says that "working at the University of Delaware is busy as usual!" She and her husband are expecting their first child on May 19th, 2010.

#### Class of 2006

*Billy Thompson* is currently a PhD candidate in the BIOMS program at University of Delaware. His dissertation work involves attempting to demonstrate a novel mechanism of mechanotransduction in mechanosensitive bone cells called osteocytes. He is hoping to defend his dissertation before the end of the year. On a personal note, Billy's wife gave birth to their first son, Kellen, on Feb. 17 2010.

#### Class of 2009

*Chris Runkle* has started a job in Richmond, VA specializing in PT for prosthetic and amputee gait training. He is enjoying the area of Richmond and is excited to finally be putting all his years of school to work.

**Congratulations** to Michael Lewek UDPT Alum (DPT '99 and PhD BIOMS '04) who received the Margaret L. Moore Award for excellence in research and teaching by a new faculty member. He joins UDPT faculty member Cole Galloway (2005 recipient), UDPT alumni Kathleen Mangione (1999 recipient) and Ryan Mizner (2009 recipient and DPT '00 and PhD BIOMS '05) as recipients of this APTA prestigious award.

**Congratulations** to the following UD Alum who received American Board of Physical Therapy Specialist (ABPTS) Certifications this year:

#### Residency Credentialed

*Ben Keeton* (06) Program Director for The Jackson Clinics Orthopedic Physical Therapy Residency Program, Middleburg, VA

#### Women's Health Physical Therapy

*Anne Duch* (97), PT, MPT, WCS  
*Karen Liberi* (96), PT, MPT, WCS  
*Anita Russek-Lendach* (00), PT, MPT, WCS

#### Geriatric Physical Therapy

*Jessalyn Ciampa* (08), PT, DPT, GCS  
*Grace Keenan* (06), PT, DPT, GCS

#### Neurological Physical Therapy

*Maria Loiacono* (05), PT, DPT, NCS

#### Sports Physical Therapy

*Marty Fontenot* (06), PT, DPT, SCS  
 (Recredentialed) *Tara Manal* (93), PT, DPT, OCS, SCS

#### Orthopedic Physical Therapy

*Erin Burlovich* (05), PT, DPT, OCS  
*Angela Crouch* (03), PT, MPT, OCS  
*Karen Godley* (00), PT, MPT, OCS  
*Angela Hutchinson* (06), PT, DPT, OCS, ATC  
*Ben Keeton* (06), PT, DPT, OCS  
*Michele Oelkers* (95), PT, MPT, OCS  
 (Recredentialed) *Laura Schmitt*, PT, DPT, OCS, SCS, ATC



#### EVENTS OF INTEREST TO UDPT ALUMNI:

##### Friday, June 4

6:00-8:00pm College of Health Sciences Alumni Reception—McDowell Hall Lobby (Free!)

##### Saturday, June 5

1:00-4:00pm College Showcases including presentations by Irene Davis (Barefoot Running) and Cole Galloway (Babies on Robots), Central Campus  
 1:00-4:00pm Open Labs and PT Clinic Open House, McKinly Lab (3rd floor and basement)

For more information or to register visit <http://www.udconnection.com/reunionweekend>

## DEPARTMENT NEWS

## UD Faculty Members Make History Winning Research Lifetime Achievement Award

For the second year in a row, a UDPT faculty member has been awarded the John H.P. Maley Award for Outstanding Contributions to Leadership in Research by the Research Section of the APTA. Dr. Stuart Binder-Macleod, the 2010 recipient of this peer-selected lifetime achievement award, joins Dr. Lynn Snyder-Mackler as the first faculty members from the same university to be bestowed this great honor.

John H.P. Maley was the CEO and chairman of the Chattanooga Corporation, now the Chattanooga Group, manufacturer of Physical Therapy and Rehabilitation products. Mr. Maley was a great supporter of the field of Physical Therapy, both research and clinical practice.

When asked how he felt about receiving such a prestigious award, Dr. Binder-Macleod beamed, saying that he was “really tickled, pleased and flattered.” The award was

made even more special by the fact that he was acquainted with Mr. Maley. Earlier in Dr. Binder-Macleod’s career, he often presented at continuing education courses and frequently came into contact with him. Sadly, Mr. Maley passed away several years ago, therefore Dr. Christopher M. Powers, President of the Section on Research, presented Dr. Binder-Macleod with the award this past February at the Combined Sections Meeting in San Diego, California.

Dr. Binder-Macleod’s background is in neurophysiology. His PhD advisor, Dr. H. Peter Clamann, was strictly a basic scientist; however, Dr. Binder-Macleod wanted to take what he had learned about segmental motor control, or how the spinal cord and brainstem control movement, into clinical application.

His early work focused on learning how electrical stimulation can be used to effect muscle force



Dr. Binder-Macleod shakes Dr. Powers’s hand after being awarded the 2010 John H.P. Maley Award.

by interacting with the nervous system. The research centered on identifying stimulation patterns that would result in the greatest force production with the least amount of fatigue.

His most recent venture, the FastFES Project funded by the National Institute of Health, studies the effect of FES and fast walking on daily function and quality of life in people with hemiparesis following stroke. Dr. Binder-Macleod has always been interested in working with patients post-stroke. During his Master’s Degree work, he

acted as a research associate studying EMG biofeedback in stroke patients. Eight years ago, Dr. Binder-Macleod collaborated with fellow UD faculty member Dr. John Scholz and the Department of Mechanical Engineering on a project that combined robotics and the treatment of stroke patients.

The University is incredibly lucky to have such esteemed faculty making great leaps forward in the field of Physical Therapy through their research efforts.

## 2009 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 CEU course featuring Dr. Wendy Hurd with proceeds donated to the Georgia State-Marquette Challenge
- Participated in Relay for Life
- Ran a 5K race for Scott Mackler to benefit the ALS Foundation
- Volunteered at MS Clinic
- Volunteered at Stroke Clinic
- Gave massages at the Caesar Rodney Half Marathon
- Staffed Newark Community Day booth to provide education about physical therapy
- Sold tickets and worked as spotters for UD’s Field Hockey and

Lacrosse games

- Assisted in running UD’s first track meet of the spring season
- Volunteered to work with a vast number of patients as service learning projects
- Promoted University of Delaware Physical Therapy Clinic at high school sporting events
- Volunteered at a Wheelchair Rugby Tournament
- Worked with children with disabilities doing therapeutic riding
- Participated and volunteered at Special Olympics Events including the second annual equestrian event



Caesar Rodney Half Marathon Massagers:

(back row) Greg Seymour, Dan Singles, Katherine Kozak, Anthony Carroll

(front row) Katie Monahan, Taima McCartney, Katie Barry, Holly Whitney

## DEPARTMENT NEWS

### 2009 Professional/Staff Promotions, New Hires, Retirements

#### New Hires:

- Anthony Carroll (orthopedic) and Ross Haley (geriatric), both graduates of the UDPT Class of 2009, began their residencies in January 2010.

#### Moving on...

- Doug Adams (sports) and Jen Flug (orthopedic), both graduates of the UDPT Class of 2008, completed their residencies in February 2010.

### Dr. Snyder Mackler's Legacy Is Her Students

"I am your great grandchild." Not the words that Dr. Lynn Snyder-Mackler was expecting to hear from a young man when visiting Brazil for a conference. He quickly clarified that one of her former PhD students taught someone who became a professor who then taught another student who became a professor who happened to be his professor. He was therefore her descendent in education, a branch on a very impressive academic family tree.

When speaking with Dr. Snyder-Mackler, she said to me "my former students are my legacy," as clinicians, PhD students, young faculty and researchers across the world. She lights up when speaking about the accomplishments of her academic offspring, those who "brought Delaware with them." It is easy to see why she was chosen as the winner of the 2009 Francis Alison Award, the University of Delaware's highest competitive award for faculty. Recipients of this award must characterize the "scholar-schoolmaster" exemplified by Francis Alison, the founder of the institution that is now the University of Delaware. It was said of him that "few schoolmasters (in the

American colonies) ever taught a larger number of pupils who afterwards acquired distinguished reputations."

To be considered for this award, faculty must have made great contributions as a scholar as well as an educator. Those who are awarded this great honor receive \$10,000 and membership in the prestigious Alison Society. When asked how she felt about receiving this award, a small smile spread across her lips and she explained how humbled she was. She gives so much credit to the incredibly supportive environment at the University and within the Physical Therapy Department, as well as to the fact that unlike so many other institutions, barriers are not an issue here.

Along with having sent so many successful students out into the world, Dr. Snyder-Mackler is internationally renowned for her research. Since she was a young clinician, she has been fascinated by the knee. She was particularly fascinated by the fact that in patients post intra-articular knee surgery, quad strength is compromised immediately. She kept asking "why," and every time she found an answer even more questions would arise. She de-

ecided to return to school in pursuit of a PhD in order to learn how to research and now she is passionate about integrating what is learned through her research into the clinic.

The Alison Award was not the only honor that Dr. Snyder-Mackler received during 2009. She was presented with the Steven J. Rose Award for Excellence in Orthopaedic Research for the article "A 10-Year Prospective Trial of a Patient Management Algorithm and Screening Examination for Highly Active Individuals with Anterior Cruciate Ligament Injury: Part 2: Determinants of Dynamic Knee Stability" (published in the January 2008 American Journal of Sports Medicine) written along with Michael Axe, MD and Wendy Hurd, PhD. This was Dr. Snyder-Mackler's second time receiving this award (the first was in 1996). She also was given the John H. P. Maley Award for Contribution to Physical Therapy Research in recognition of her accomplishments in this area over the span of her career. The University of Delaware Physical Therapy Department is extremely proud that our professors have won this award two years in a row (in 2010 Dr. Stuart Binder-Macleod was the recipi-



Dr. Lynn Snyder-Mackler PT, ATC, Sc.D, SCS, FAPTA

ent).

Despite all of her successes, Dr. Snyder-Mackler has no interest in slowing down. She absolutely loves her job, and describes it as "exciting, still fun, and I'm like a kid in a candy store!" Current and future students as well as the entire field of Physical Therapy are lucky to have the chance to learn from such an exciting and enthusiastic individual. To end with one of Dr. Snyder-Mackler's favorite quotes from the famous author and professor Isaac Asimov, "The most exciting phrase to hear in science, the one that heralds new discoveries, is not "Eureka" (I've found it), but "That's funny..."

## DEPARTMENT NEWS

## Dr. Irene Davis Chases Running Injuries



Dr. Irene Davis, PhD, PT

"We have evolved to run barefoot," comments Dr. Irene Davis in a *Time Magazine* article on the recent surge in barefoot running. "When we put shoes on, we're taking away the function of the foot." This is the kind of statement that has pushed Dr. Davis and the University of Delaware Running Research Laboratory into the spotlight over the past year. The lab, headed by Davis, has been featured not only in *Time Magazine*, but also in *Parade Magazine*, *Men's Health*, *Men's Journal*, *Physical Therapy Advance Magazine*, *The LA Times*, *The Washington Post*, *Runners World* and *Today in PT Magazine*. They are also set to appear in an upcoming Discovery Channel series on the mystery of the Tamahumara Runners, a group of Mexican Indians who routinely run ultramarathons in thin rubber sandals or wearing no shoes at all. Overall Davis and her lab have been working towards a greater understanding of footstrike patterns, lower extremity mechanics and injury risk, with secondary hopes of revealing the science behind barefoot running.

In one study Dr. Davis co-authored, it was observed that habitually barefoot endurance runners from Kenya strike the ground with their forefoot (FF) or midfoot (MF), whereas habitually shod American runners strike the ground with their rearfoot (RF). Davis's thought process is that, because the human foot has relatively little padding on the heel, barefoot runners tread more lightly, landing on their FF or MF. In contrast, cushiony running shoes allow runners to land hard on their heels, or their RF. RF strike has been shown to generate greater collision forces than FF or MF strike; these forces then travel up the body and may cause impact-related injuries to the feet and lower legs. Once a barefoot skeptic herself, Davis is now carrying out the supporting research, as well as logging in about 20 miles per week of barefoot running. And she has found that it doesn't hurt! "The harder the surface, the more lightly you land," she exclaims.

In addition to barefoot running, Dr. Davis has taken interest in gait retraining in order to improve gait mechanics associated with injuries. Her ultimate goal is to integrate her research findings into clinical practice. Exciting preliminary results suggest that runners who land hard, runners with genu varus and knee loading patterns similar to individuals with osteoarthritis, and runners with patellofemoral pain syndrome (PFPS) can use realtime feedback to learn how to run with improved lower extremity alignment and reduced knee loads. Davis notes that muscular strengthening alone is not

enough to change running mechanics, underscoring the need for clinical physical therapists to address underlying mechanics in gait-related injuries. In the clinic, Davis has already had success in retraining faulty gait patterns of runners with PFPS through the use of a mirror for visual feedback.

Somehow, amidst all the researching, Dr. Davis still finds the time to serve her PT community and teach the next generation of PTs. She currently serves as the "Past President" of the American Society of Biomechanics and as the Chair of the Biomechanics Interest Group of the American College of Sports Medicine. She organized and co-chaired the 1<sup>st</sup> International Research Retreat on PFPS and has plans to co-chair the Biomechanics Priority Conference this coming June. She also continues to teach Functional Anatomy and Lower Extremity Orthotics to UD DPT students. While Davis enjoys the opportunity to get to know students in the classroom, her favorite teaching environment is the clinic. "I love to watch students apply their problem solving skills to real patients leading to the development of clinical hypotheses!"

Dr. Davis's successes and contributions to the physical therapy profession have not gone unnoticed. The University of Florida College of Public Health and Health Professions, from which she graduated with a Bachelor of Science in physical therapy, awarded her the 2009 Outstanding Alumni Award for making significant contributions to her profession. Additionally the APTA Board of Directors awarded her the Cath-

erine Worthingham Fellowship for demonstrating excellence in research, education, practice, and advocacy and for the contributions she has made to advance the physical therapy profession. Davis says, "It has been an incredibly busy and exciting year for our lab and all of this would not be possible without the talented, energetic and fun group of students that I have had including Philip Crowell, Joaquin Barrios, Brian Noehren, Brad Bowser (post-doc), Rebecca Fellin, Rich Willy, Allison Altman, Margo Orlin, Chris Robson, Matt Westcott, Jess Rombach, Jillian Salerno and Robbie McGrath. I am grateful for their unwavering dedication to the mission of our lab."



Allison Altman, a PhD student in the Biomechanics and Movement Science Program and member of Davis's lab, runs across force plates in the motion analysis lab (MAL).

## INTEGRATED CLINICAL EXPERIENCE UPDATES

### Clinical Services & Sports/Orthopedic (SO) Update Written by Dr. Tara Manal



Teonette Velasco practices special tests for the spine on recent grad Jessie Haurly.

The clinical staff was very happy to host Dr. Josh Cleland last Spring for an evidence-based education course on Neck Pain doubling as a fund raiser for the DPT students. The clinic staff had lots of opportunities to socialize and engage in discussions on current treatment trends and the literature while helping the students raise money for the Foundation for Physical Therapy. The clinic has participated in many community outreach programs this year from sporting events and Wellness Fairs to Senior Center visits spreading the word about current research projects and the value of physical therapy.

Our Sport's Resident Eric Greenberg was featured on the APTA Sports Section website in the "Highlight a Resident" section. Please see [www.spts.org](http://www.spts.org) to read about his experience. Cathy Ciolek, Geriatric Residency director, was featured in an APTA Press

Release about fall risk and improper fit of canes and walkers. Tara Manal (MPT '93), director, was nominated to represent Delaware in attendance at the PASS sponsored by the APTA and along with Greg Hicks PT, PhD (MPT) was invited to the APTA's "Revitalizing Research through Clinical Practice and Practice through Clinical Research." More about these valuable conferences can be found at [www.apta.org](http://www.apta.org). Grace Keenan (DPT), NOA senior therapist, is pursuing specialization in Vestibular Rehabilitation and will sit for her certification this year. Tara Manal (MPT'93) and Laura Schmitt were both certified by the American Red Cross as Instructor Trainers for Emergency Response. They join Danny Smith PT, DHSc, SCS, OCS, ATC from Tennessee as the only identified physical therapist instructor trainers in the APTA Sports Section, certified to train therapists to be instructors of Emergency Response and other Red Cross Courses. Karla Bell was appointed to the Specialization Academy of Content Experts (SACE) as an item writer and joined the APTA's Residency committee for reviewing residency credentialing applications. Airelle Hunter Giordano (MPT) continues her SACE appointment and was also appointed to the Program Services Council of the APTA Residency and Fellowship Education Board.

In addition to educating our residents and our DPT students, we also have rotations for UD athletic training students and had a student intern from CES University in Medellin, Columbia. Our orthopedic resident, Jen Flug (DPT) graduated from the Orthopedic Residency

and authored "Using Evidence to treat a Figure Skater Limited by Low Back Pain Prior to a National Competition" in Orthopedic Physical Therapy Practice and just completed the monograph "Figure Skating- Rehabilitation for the Performing Arts PT," also for the Orthopedic section of the APTA along with 2 presentations at national meetings. Eric Greenberg completed his Sports Residency and along with presenting at Annual Conference, he co-authored the figure skating monograph with Jen and contributed to a patellofemoral chapter with Airelle Hunter Giordano (MPT). Doug Adams (DPT) recently completed the Sports Residency program and has authored an ACL rehabilitation update that will be coming soon.

The strength of the clinic lies in the integration of best practice performed in a "real world" environment. As you all remember, students are trained and assessed as they interact and provide high level of physical therapy care to their patients. The challenge in assessing the students lies in the fact that the CI will and must always step in to prevent any difficult or dangerous situation from occurring. As you may have read in the *UD Messenger*, our students are now participating in a joint collaboration with Theater and Nursing in Standardized Patient (SP) Scenarios. This program was the brain child of Amy Cowperthwait from Nursing, and coupled with Tara Manal and Laura Schmitt from Physical Therapy and Allan Carlsen from Theater the program was developed and initiated in Fall 2009. Under-

graduate Theater minors are recruited and trained to portray individuals with various conditions while Nursing and PT students are teamed to enter the "patient's room" and perform an evaluation and treatment scenario. Fall semester was the first experience with SPs and a student actor portraying a young man after a head injury and unilateral ankle fracture fell to the floor in almost 75% of the scenarios. Those students who forgot gait belts or left them too loose to be helpful will never forget the real-life training they received. Actors portraying patients with realistic history and physical findings, supplement the experience with personality, verbal and non-verbal contributions. We have just begun the second semester of this valuable training and hope to see expansion of the program in the future.

UD's 2<sup>nd</sup> Annual Forum & Reunion Weekend is scheduled for June 4-6, 2010. Saturday, June 5<sup>th</sup> from 1-4PM the Clinic and labs in McKinly will be open for alumni to visit. The clinic will have Mimosas and Bloody Marys to lighten the mood of your tour and we will have an electrical stimulation demo set up, an Ultrasound guided imaging demo of lumbar stabilization exercises, a perturbation station and a station to see and learn about the new Osteoarthritis profile screening we are now doing for those with OA. Please come back to UD to enjoy this weekend full of fun and adventure and be sure to stop by the clinic and the department for a peak at what's new!

**Tara Jo Manal, PT, DPT, OCS, SCS,  
Director of Clinical Services**

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



Dr. Ciolek treats a patient in the NOA clinic.

The NOA Clinic continues to train our students and serve the Delaware community for patients with neurologic or geriatric based impairments. We are currently working with a variety of patient types including some of the research studies regarding patients post TKA, low back pain and stroke. We are happy to have Ross Haley, PT,

DPT on board as our 4<sup>th</sup> Geriatric Resident and a 2009 UDPT graduate. Kelly Danks, PT, DPT will be completing her geriatric residency in April 2010 and then joining the UDPT staff as a research PT.

Our Journal Club continues to meet on the third Tuesday of every month at 8:00 am. Articles are posted on the UDPT website under

clinical services/journal clubs. We also offer consultations to patients and local therapists to assist with progressing PT for complicated patients!

**Cathy Ciolek, PT, DPT, GCS  
Associate Director NOA Clinic**

## INTEGRATED CLINICAL EXPERIENCE UPDATES

### Pediatric Clinic Written by Dr. Tracy Stoner

The Pediatric Clinic continues to offer services to children from birth to 13 years old in various natural environment settings. In addition to clinical services Tracy Stoner PT, DPT, PCS (UDPT class of 1990) assists in supervision of DPT students during their pediatric integrated clinical experience. This past year Tracy has also been involved in the Early Infant Power Mobility Research with Dr. Cole Gallo-

way, both participating as a clinician on the research team as well as speaking with Dr. Galloway nationally about the project. DPT students Mackenzie Landers, Katie Thompson, and Jen Boyle are currently completing service learning hours under Tracy's direction by assisting families with home exercise programs and helping with a young boy's treadmill training program. PAWS for People is another new

addition to the therapy program this year. PAWS volunteers (a trainer and a dog) assist Tracy and her patients by distracting the children during difficult activities or motivating a child to move, reach or stand. As you can see in the picture to the right, having a dog with you during therapy brings out lots of smiles!



**Tracy Stoner, PT, DPT, PCS  
Pediatric Physical Therapist**

Callie (left) and Andrew (right)

### Stroke Clinic Written by Dr. John Scholz



Dr. Scholz demonstrates evaluation and treatment techniques for stroke patients on second year DPT students.

The mission of the University of Delaware's Stroke Assessment 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, as needed. 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.

**John Scholz, PT, PhD  
Director of Stroke Clinic**

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

Now in our eleventh year, the University of Delaware MS Assessment Clinic continues to provide free, multidisciplinary 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.

We are pleased to have had representatives from the nursing department join us in the fall of 2009, adding to our dedicated team of local professionals from other health disciplines including Occupational Therapy, Nutrition, Counseling, local optometry, as well as a representative for Durable Medical Equipment, and a staff mem-

ber from the MS Society Delaware Chapter. All of these people generously volunteer their time to the clinic. Nursing has added valuable health screening and consultative services for patients with bowel and bladder issues as well as medication administration and management.

We always welcome referrals from community practitio-

ners who have patients/clients who would benefit from participating in the clinic. If you have a client who has MS and would benefit from participation in the MS Assessment Clinic, please have them contact Cathy Ciolek at 302-831-0138.

**Cathy Ciolek, PT, DPT, GCS  
Associate Director NOA Clinic**

## 2009 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 2009 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.



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## FACULTY: AWARDS & DEGREES CONFERRED AS WELL AS GRANTS & PUBLICATIONS IN 2009



**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

Kesar TM, Perumal R, Reisman DS, Rudolph KS, Higginson JS, Binder-Macleod SA. Functional Electrical Stimulation of Ankle Plantar- and Dorsi-flexor Muscles: Effects on Post-stroke Gait. *Stroke*, 40(12):3821-7, 2009.

Marion MS, Wexler AS, Hull ML, Binder-Macleod SA. Predicting the effect of muscle length on fatigue during electrical stimulation. *Muscle Nerve* 40(4):573-581, 2009.

Kesar T, Santamore WP, Perumal R, Binder-Macleod SA. Functional Electrical Stimulation of Skeletal Muscle – Implications for Cardiovascular Support. *Basic Applied Myology* 19 (1): 31-34, 2009.

Lee SC-K, Ding J, Prosser LA, Wexler AS, Binder-Macleod SA. A Predictive Mathematical Model of Muscle Forces for Children with Cerebral Palsy (CP). *Developmental Medicine & Child Neurology* 51(12):949-58, 2009.

Binder-Macleod SA, Perumal R, Chou LW, Kesar T, Snyder-Mackler L. Twitch Interpolation a Valid Measure With Misinterpreted Meaning. *Journal of Applied Physiology*, 107 (1): 363-363, 2009.

### Grants

NIH 1R01NR010786 (PI: Binder-Macleod) 9/12/07 - 5/31/12 Fast Treadmill Training/Functional Electrical Stimulation to Improve Walking. \$2,800,000

NIH P20 RR1658 (PI: Buchanan) 6/1/07 - 5/31/12. Center for Biomedical Research Excellence (COBRE) for Women in Science and Engineering on Osteoarthritis. Role: Co-investigator. \$2,100,000 direct/year

R01 HD043859 (PI: Lee) 7/1/04 - 3/31/09. Strength Training Using NMES for Children with Cerebral Palsy. Role: Co-investigator. \$225,000 direct/year

NIH R01 PAR-060459 8/15/08 - 7/31/13: ~\$400,000 direct/year Robotic Exoskeletons, FES, and Biomechanics: Treating Movement Disorders. Role: Co-investigator.

NIH R01-NS055383 (PI: Higginson): 4/1/08 - 11/30/12 Muscle Morphology, Strength and Compensatory Strategies Following Stroke. Role: Co-investigator.

NIH K12-HD055935 (PI: Mueller) 9/15/07 - 8/31/12: \$4,800,000 Multi-center Career Development Program for Physical and Occupational Therapists. Role: Program Director.

### Awards

John H. P. Maley Lectureship Award



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



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

### Publications

Barrios, JA, Royer, T, Higginson, J, Davis, IS. Static and dynamic correlates of the knee adduction moment in healthy knees ranging from normal to varus-aligned. *Clinical Biomechanics*, 24:850-854, 2009.

Pohl, MB, Hamill, J, Davis, IS. biomechanical and anatomical factors associated with a history of plantar fasciitis in female runners. *Clinical Journal of Sports Medicine*, 19(5):372-376, 2009.

MacClean, CL, Davis, IS, Hamill, J. Influence of running shoe midsole composition and custom foot orthotic intervention on lower extremity dynamics during running. *Journal of Applied Biomechanics*, 25(1):54-63, 2009.

Barrios, JA, Davis, IS, Higginson, JS, Royer, TD. Lower extremity walking mechanics of young individuals with asymptomatic varus knee alignment. *Journal of Orthopedic Research*, 27(11):1414-1419, 2009.

Butler, RJ, Royer, TD, Barrios, JA, Davis, IS. Effect of laterally wedged foot orthoses on rearfoot and hip mechanics in patients with medial knee osteoarthritis. *Prosthetics and Orthotics, International*, 33(2):107-116, 2009.

Barrios JA, Crenshaw, JR, Royer, TD, Davis, IS. Walking shoes and laterally wedged orthoses in the clinical management of medial tibiofemoral osteoarthritis. A one-year prospective controlled trial. *The Knee*, 16:136-142, 2009.

Willson, JD and Davis, IS. Core strength measurements and lower extremity jumping mechanics in females with and without patellofemoral pain. *Journal of Sport Rehabilitation*, 18:76-90, 2009.

### Grants

X81XWH-07-1-0395 Department of Defense. 06/2007-05/2009. The Effect of Reduced Loading During Running on Tibial Strain: A Modeling Study. \$200,000

1R01HD050679-01A2 National Institutes of Health 06/2007-05/2010, \$879,616 Gait Retraining to Reduce Loading in Runners

### Awards

University of Florida Department of Physical Therapy 2009 Outstanding Alumnus Awardee



**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

Lynch A., Rhu J., Agrawal S., Galloway JC. Power Mobility Training for a 7-month-old Infant with Spina Bifida. *Pediatric Physical Therapy* 21(4):362-8, 2009.

Heathcock J., Galloway JC. Early Object Exploration with the Feet and the Effect of Movement Training in Infants born Preterm. *Physical Therapy*, 89(10):1027-38, 2009.

### Grants

NIH NICHD R01 HD051748-02 (PI: Galloway) 12/01/06-11/31/11. Motor learning and coordination in preterm infants. \$320,427

National Science Foundation: Developmental and Learning Sciences (PI: Galloway) 07/01/08-6/30/10. Robot Enhanced Mobility: The Capacity for Young Infants to Learn Real World Navigation, and Its Effect on Perception, Action and Cognition Development. \$324,910

American Physical Therapy Association, Section on Pediatrics Planning

## Awards, Degrees, Grants & Publications continued

Grant. (PI: Dusing) 1/1/09-06/30/10. Does Early Postural Intervention Effect Sitting Balance or Reaching in Infants Born Preterm. Role: Co-investigator, \$30,000

NIH NICHD R01 HD057151-01 (PI: Galloway) Babies Driving Robots: Robot Assisted Infant Mobility. Funding Decision Spring 2009



**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.

### Publications

Shardell MD, Hicks GE, Miller RR, Kritchevsky S, Andersen D, Bandinelli S, Cherubini A, Ferrucci L. Association of Low Vitamin D Levels with the Frailty Syndrome in Men and Women. *J Gerontol A Biol Sci Med Sci.* Jan 20, 2009. [Epub ahead of print]

Hicks GE and Manal TJ. Psychometric Properties of Commonly Used Low Back Disability Questionnaires: Are They Useful for Older Adults with Low Back Pain? *Pain Medicine.* Jan 10(1):85-94, 2009.

Yu-Yahiro J, Resnick B, Orwig D, Hicks GE, Magaziner J. Design and Implementation of a Home-Based Exercise Program Post-Hip Fracture: The Baltimore Hip Studies Experience. *PM&R* April 1(4):308-18, 2009.  
Hicks GE, Morone N, Weiner DK. Degenerative Lumbar Disc and Facet Disease in Older Adults: Prevalence and Clinical Correlates. *Spine.* May 20 34(12):1301-1306, 2009.

Miller RR, Ballew S, Shardell M, Hicks GE, Resnick B, Hawkes W, Magaziner J. Repeat Falls and the Recovery of Social Participation in the Year Post Hip Fracture. In press: *Age and Ageing.* Jul 8, 2009 [Epub ahead of print]

### Grants

1 R21 HD057274-01(PI: Hicks) 07/01/08 - 06/30/10. Direct Costs Trunk Muscle Training + NMES: Improving Function in Elders with Chronic Back Pain . \$275,000

P20 RR16458 (PI: T. Buchanan) 01/05/09 - 12/31/09. Functional Recovery after Lumbar Spinal Stenosis Surgery: A Preliminary Study . The pilot project is funded by the center of Biomedical Research Excellence at the University of Delaware. Role: Co-investigator. \$50,000

No Number (PI: Hicks) 11/08 - present. Funding to supplement ongoing project Cross College Cluster in Aging Initiative Research on Aging Grant "Mechanisms of Disability in Older Adults with Chronic Low Back Pain." University of Delaware \$20,000

R37 AG009901 (PI: Magaziner/Hochberg) 03/15/05 - 02/28/10 The Sequelae of Hip Fracture in Men: An Epidemiological Study. Role: Co-investigator. \$679,691

R01 AG029315 (PI: Magaziner/Hochberg) 03/01/07 - 05/31/12 The Epidemiology of Bone Strength and Muscle Composition After Hip Fracture in Men . \$531,497



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

### Publications

Hurd W, Hunter-Giordano A, Axe MJ, Snyder-Mackler L. Data-Based Interval Hitting Program for Female College Volleyball Players. *Sports Health* Nov-Dec 2009;Vol 1, No. 6.



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



**SAMUEL LEE, PT, PhD** (Delaware), Research Assistant Professor: Use of electrical stimulation to activate paralyzed or weakened muscles to improve function of individuals with central nervous system injury.

### Publications

Lee SCK, Ding J, Prosser LA, Wexler AS, Binder-Macleod SA. A Predictive Mathematical Model of Muscle Forces for Children with Cerebral Palsy. *Dev Med Child Neurol.* Dec 51(12):949-58, 2009. Epub 2009 Aug 24

McRae CGA, Johnston TE, Lauer RT, Tokay AM, Lee SCK, Hunt KJ. Cycling for Children with Neuromuscular Impairments Using Electrical Stimulation - Development of Tricycle Based Systems. *Med.Eng. Phys.* 31(6), 650-9, 2009.

### Grants

NIH NICHD/NINR: R01HD062588 (PI: Lee) FES-Assisted Cycling to Improve Fitness and Strength In Children with CP. \$2,913,039. Pending Review 10/2009.

Shriners Hospitals for Children Grant #9159 (PI: Lee) 2008-2011. Functional Electrical Stimulation Assisted Cycling to Improve Fitness and Strength in Children with Cerebral Palsy.



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

### Publications

Sturgill LP, Synder-Mackler L, Manal TJ, Axe MJ. Interrater reliability of a clinical scale to assess knee joint effusion. *Journal of Orthopaedics and Sports Physical Therapy* 2009 Dec;39(12):845-9.

Hicks GE, Manal TJ. Psychometric properties of commonly used low back disability questionnaires. Are they useful for older adults with low back pain? *Pain Med* 2009 Jan;10(1):85-94.

Flug J, Manal TJ. Using evidence to treat a figure skater limited by low back pain prior to a national competition. *Orthopedic Physical Therapy Practice*, 2009.

### Grants

R21 HD057274-01 (PI: G. Hicks) 07/08-6/10 Trunk Muscle Training + NMES: Improving Function in Elders with Chronic Back Pain. Role: Co-investigator \$275,000.



**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.

## Awards, Degrees, Grants & Publications continued

### Publications

Kesar TM, Perumal R, Reisman DS, Rudolph KS, Higginson JS, Binder-Macleod SA. Functional electrical stimulation of ankle plantar- and dorsiflexor muscles: effects on post-stroke gait. *Stroke*, 40: 3821-3827, 2009.

Lang CE, MacDonald JR, Reisman DS, Boyd L, Kimberley TJ, Schindler-Ivens SM, Hornby G, Ross SA, Scheets PL. Observation of amounts of movement practice provided during stroke rehabilitation. *Archives of Physical Medicine and Rehabilitation*, 90: 1692-1698, 2009.

Reisman DS, Wityk R, Silver K, Bastian AJ. Split-belt treadmill adaptation transfers to over ground walking in persons post-stroke. *Neurorehabilitation and Neural Repair*, 23: 735-744, 2009.

Reisman DS, Rudolph KS, Farquhar, WB. Influence of speed on walking economy post-stroke. *Neurorehabilitation and Neural Repair*, 23: 529-34, 2009.

Choi JT, Vining EPG, Reisman DS, Bastian AJ. Walking flexibility after hemispherectomy: split-belt treadmill adaptation and feedback control. *Brain*, 132: 722-33, 2009.

### Grants

NIH K01 HD050582-01A1 (PI: Reisman) 4/20/06-3/31/2011. Locomotor Adaptations Following Stroke. \$604,015

AHA 0765314U (PI: Reisman) 7/1/2007-6/30/2009. Relationship Between Speed and Walking Function Post-stroke. \$100,000

NIH 1R01NR010786-01 (PI: Binder-Macleod) 9/12/2007-5/31/2012. Fast Treadmill Training and Functional Electrical Stimulation (FastFES) to Improve Walking Post-stroke. Role: Co-investigator. \$2,231,992

NIH IR01NS055383-01A2 (PI: Higginson) 4/1/08-11/30/12. Muscle Morphology, Strength and Compensatory Strategies Following Stroke. Role: Co-investigator. \$214,461/yr



**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.

### Publications

Kesar TM, Perumal R, Reisman DS, Jancosko A, Rudolph KS, Higginson JS and Binder-Macleod SA. Functional Electrical Stimulation of Ankle Plantarflexor and Dorsiflexor Muscles: Effects on Poststroke Gait. *Stroke*. Dec 40(12);3821-7, 2009.

Reisman DS, Rudolph KS, Farquhar WB. Influence of Speed on Walking Economy Post-Stroke. *Neurorehabilitation and Neural Repair*. Jul-Aug 23(6):529-34, 2009.

### Grants

NIH P20 RR16458 (PI: Rudolph) 6/07 - 5/12. Knee Stiffness, Proprioception and Instability affect Knee Control in OA. COBRE Mentoring Women in Science and Engineering. \$200,000

NIH R01 NR010786 (PI: Binder-Macleod) 9/12/07 - 5/31/12. Fast

Treadmill Training & Functional Electrical Stim to Improve Walking Post-stroke. Role: Co-investigator. \$2,231,992



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



**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

Freitas SMSF, Scholz JP (2009) Does hand dominance affect the use of motor abundance when reaching to uncertain targets? *Human Movement Science*, 28: 169-190.

Tseng YW, Scholz JP, Galloway JC (2009). The organization of intralimb and interlimb synergies in response to different joint dynamics. *Experimental Brain Research*. 193: 239-254.

Banala SK, Kim SH, Agrawal SK, Scholz JP (2009). Robot assisted gait training with active leg exoskeleton (ALEX). *IEEE Transactions On Neural Systems and Rehabilitation Engineering*, 17: 2-8.

### Grants

NIH 5-NS050880-02 (PI: Scholz) 1/1/05-12/31/2010 Coordination of Reaching in Healthy Adults and Stroke.

NIH 2R01HD38582-06A1 (PI: Agrawal) 7/2008-6/2012 Robotic exoskeletons, FES, and Biomechanics: Treating Movement Disorders.

NIH 2286-UD-DHHS-5032 (PT: Latash) 2/2002-1/2010 Organization of a Simple Synergy.

3P20RR016472-09S4 National Center for Research Resources (PI: Scholz, Agrawal, Higginson) 09/09-08/11. A Wearable Exoskeleton for Functional Arm Training of Stroke Survivors.



**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

Hurd WJ, Axe MJ, Snyder-Mackler L. Management of the Athlete With Acute Anterior Cruciate Ligament Deficiency. *Sports Health: A Multidisciplinary Approach* January 2009 1:39-46

Petterson SC, Mizner RL, Stevens JE, Raisis L, Bodenstab A, Newcomb W, Snyder-Mackler L. Improved Function from Progressive Strengthening Interventions After Total Knee Arthroplasty: A Randomized Clinical Trial with an Imbedded Prospective Cohort. *Arthritis Rheum*. 2009 Feb 15;61(2):174-83.

Axe MJ, Hurd WJ, Snyder-Mackler L. Interval Throwing Programs for Youth Baseball Players. *Sports Health: A Multidisciplinary Approach* March 2009

Briem K, Axe MJ, Snyder-Mackler L. Functional and Perceived Response to Intra-articular Hyaluronan Injection in Patients with Knee Osteoarthritis: Persistence of Treatment Effects Over 5 Months. *Knee Surg Sports Traumatol Arthrosc*. 2009 Jul;17(7):763-9.

## Awards, Degrees, Grants & Publications continued

Zeni JA Jr, Snyder-Mackler L. Clinical Outcomes After Simultaneous Bilateral Total Knee Arthroplasty Comparison to Unilateral Total Knee Arthroplasty and Healthy Controls. *J Arthroplasty*. 2009 Apr 7. [Epub ahead of print]

Briem K, Axe MJ, Snyder-Mackler L. Medial Knee Joint Loading Increases in Those Who Respond to Hyaluronan Injection for Medial Knee Osteoarthritis. *J Orthop Res*. 2009 Nov;27(11):1420-5.

Farquhar SJ, Kaufman KR, Snyder-Mackler L. Sit-to-stand 3 Months After Unilateral Total Knee Arthroplasty: Comparison of Self-selected and Constrained Conditions. *Gait Posture*. 2009 Aug;30(2):187-91.

Richmond J, Hunter D, Irrgang J, Jones MH, Levy B, Marx R, Snyder-Mackler L, Watters WC 3rd, Haralson RH 3rd, Turkelson CM, Wies JL, Boyer KM, Anderson S, St Andre J, Sluka P, McGowan R; American Academy of Orthopaedic Surgeons. Treatment of Osteoarthritis of the Knee (Nonarthroplasty). *J Am Acad Orthop Surg*. 2009 Sep;17(9):591-600.

Stevens-Lapsley JE, Petterson SC, Mizner RL, Snyder-Mackler L. Impact of Body Mass Index on Functional Performance After Total Knee Arthroplasty. *J Arthroplasty*. 2009 Oct 29. [Epub ahead of print]

Zeni JA Jr, Snyder-Mackler L. Early Postoperative Measures Predict 1- and 2-year Outcomes After Unilateral Total Knee Arthroplasty: Importance of Contralateral Limb Strength. *Phys Ther*. 2010 Jan;90(1):43-54.

Sturgill LP, Snyder-Mackler L, Manal TJ, Axe MJ. Interrater Reliability of a Clinical Scale to Assess Knee Joint Effusion. *J Orthop Sports Phys Ther*. 2009 Dec;39(12):845-9.

Hurd WJ, Hunter-Giordano A, Axe MJ, Snyder-Mackler L. Data-Based Interval Hitting Program for Female College Volleyball Players. *Sports Health: A Multidisciplinary Approach* November 2009 1:522-530.

Zeni JA Jr, Snyder-Mackler L. Most Patients Gain Weight in the Two Years After Total Knee Arthroplasty: Comparison to a Healthy Control Group. *Osteoarthritis Cartilage*. 2009 Dec 21. [Epub ahead of print].

### Grants

NIH - 5R01AR046386-08 (PI: Buchanan) 6/1999 - 5/2012. ACL Deficient Knee: MRI and Biomechanical Modeling. Role: Co-investigator

NIH R01 HD37985 (PI: Snyder-Mackler) 3/01/01 - 6/30/11 Dynamic Stability in the Anterior Cruciate Ligament Injured Knee.

NIH 1K01HD050582-01A1 (PI: D.Reisman) 4/20/2006 - 3/31/2011 Locomotor Adaptations Following Stroke. Role: Co-Mentor.

NIH-5P20RRO16458 (PI: Snyder-Mackler, Buchanan) 2/1/07 - 1/13/12. COBRE for Women in Science and Engineering on Osteoarthritis. Joint Loading and the Progression of Osteoarthritis following TKA>

### Awards

Steven J. Rose Award for Excellence in Orthopaedic Research  
John H. K. Maley for Contribution to Physical Therapy Research  
Francis Alison Faculty Award



"Look at your father. See what happens when you lift with your back instead of your legs?"

## 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)

**Photos are welcome.**

FULL NAME: \_\_\_\_\_

*first*

*middle*

*(maiden)*

*last*

DEGREE/YEAR: \_\_\_\_\_ CHECK HERE IF THIS IS A NEW ADDRESS

HOME ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ EMAIL: \_\_\_\_\_

HERE'S MY NEWS:

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