

UD PT ALUMNI NEWS

Editors: Raina Domneys, Brian Murray (Class of 2002)



Celebrating Our 25th Anniversary

Message from the Chair

Greetings! As many of you probably know, we recently graduated our 25th class of physical therapists from the University. Seven members from the class of 1976 were present at the graduation to receive special recognition and nearly 400 people attended the graduation and reception that followed. What a great event!

Our First Annual Alumni Lecture delivered by Dr. Steven L. Wolf was such a great success that we are now busy planning our Second Annual Alumni Lecture. This year's lecture will be a special event to celebrate our 25th Anniversary. As we did last year, we will hold the lecture at Clayton Hall on the Friday night before homecoming. Our speaker will be Dr. Marilyn Moffat, a national known lecturer, long time friend of this program, and former President of the APTA. A reception will follow the lecture. Then, on Saturday morning, we will once again host a tent before the football game. Please see the attached flyer for more details or call Cyndi Haley at 831-4576. I certainly hope that you will mark your calendar and join us for these special events.

The last year was once again eventful and positive for our department. Here are some of the highlights:

- On May 2, 2001 our accreditation was renewed by CAPTE for another eight years.
- Dr. Lynn Snyder-Mackler was promoted to Full Professor. Please be sure to congratulate Lynn when you see her.
- We have added staff to our clinic. We now have three full-time therapists and a full-time receptionist. The orthopedic residency and sports residency programs are both doing well.
- Our MPT students were acknowledged at the national APTA meeting in Anaheim, CA for their contribution to the Marquette/Miami Challenge.
- Minor renovations were completed on the third floor of McKinly Lab and each MPT student now has their own locker (albeit a small locker).
- External grant funding to the department has continued to increase. We received new funding from the National Science Foundation (Dr. Scholz), the Department of the Army (Dr. McClay), and the National Institutes of Health (Dr. Snyder-Mackler) over the past year.

I look forward to seeing each of you over the upcoming year. Please keep in touch.

Warmest regards and best wishes,

Stuart Binder-Macleod PhD, PT
Professor and Chair

Important Dates

- ❖ **MS Bike to the Bay**,
September 29, 2001
- ❖ **UD PT Car Wash**,
October 6, 2001
- ❖ **HOME COMING**,
October 12, 2001
- ❖ **Cystic Fibrosis Foundation-Celebrity Golf Tournament**,
October 22, 2001
- ❖ **Student Conclave**,
October 26-28, 2001
- ❖ **Combined Sections Meeting**,
February 20-24, 2002 in
Boston, MA
- ❖ **National Conference**,
June 5-8, 2002 in
Cincinnati, OH



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Graduation



This was a day the class of 2001 had been awaiting for two years. It was the day on which they finally entered the real world. Class president Carl Eaton was the Master of Ceremonies and recalled many of the memories throughout their stay in McKinly Lab, which helped form their second family. A slide show took them through the past two years of their lives. There was the first day of classes when they had to learn each other's names. Then there was the tailgating at the football games where they not only saw great football, but also got a chance to bond with each other and teachers. There was the semi-formal dance where everyone was able to see what their classmates looked like outside of their smelly anatomy clothes. Who could forget the numerous pictures during Mr. Seaman's class when they were eagerly playing with the "toys" of the P.T. profession? They had a Halloween parade with guest appearances by Madonna, Fred Flintstone, a McDonald's Value Meal, and a giant pink bunny carried in the arms of a big ape. There were countless "family" pictures of the class as it showed how close they really had become. They knew they were part of something special, and that message was reiterated by the elected graduation speaker, Dr. Paul Mettler.

Dr. Mettler spoke very highly of the graduating class, stating, "This was the greatest class to ever come through the physical therapy graduate program at the University of Delaware." He spoke of the trials ahead for the class entering the real world, but told them to remember that "first and foremost you are physical therapists. Whether you teach, do

research, or are even a real estate agent, never forget that." He stressed the fact that the graduates need not be the best physical therapists out there, but make sure they are "squared away." In other words, be well rounded and remember what it's all worth to you, for there is more to life than work. He ended his message to the class by welcoming them into the field as his colleagues.

The class of 2001 had three gifts to give to the physical therapy department. The first two were clocks set in an oak mounting to be placed in the two classrooms where they had spent most of the past two years. The other was a decorative sign announcing the physical therapy program of the University of Delaware to be placed in McKinly lab to "spruce the place up." Dr. Stuart Binder-Macleod happily and graciously accepted the gifts and gave the class of 2001 a heart-felt thank you. He then announced the award winners of the class of 2001.

There were a couple of special guests at the ceremony that day: the class of 1976, the first graduating accredited class of the University of Delaware's physical therapy program. They received a special gift commemorating their achievement from none other than Dr. Joe Lucca, the only remaining professor that instructed that class of 1976. The class of 1976 was very excited, especially since some of them have not seen each other in 25 years!

The ceremony commenced with the stars of the day receiving their diplomas from Dr. Binder-Macleod, while getting their picture taken sandwiched between Dr. Binder-Macleod and Dr. Mettler. But the day was not over yet. There was a

very nice reception afterwards for friends and family to congregate and congratulate the new graduates. Cakes stating "Congratulations Class of 2001" were served to everyone before the happy crowd made their way to Klondike Kate's to party their last day together away. This will undoubtedly be a day the class of 2001 will never forget.

Abby Wing
Class of 2002

Congratulations!

Laura Ann Alexander	Gretchen Shahan (Kohl)
Kevin Richard Bailey	Rachel Lambert
Nicole Alexis Canale	Brian Lewis
Jonathan Casler	Beverlyn Manoligma
Brian Regis Catania	Richard Meyer
Rosalia Felicia Conboy	Jennifer Monaghan
Angela Christie deBorja	Jennifer Orem
Alison Thomas DeLeo	William Padamonsky
Carl Owen Eaton	Judith Richardson
Greg Charles Fleming	Katie Rickards
Katharine Canovsky	Laura Schmitt
Christopher Goetz	Jessica Sitrler
Jill Heathcock	Laurie Sweet
Dean Hess, Jr.	Michael Swoboda
Kelly Moskal (Hess)	Jean Wang
Steven Horn	Thomas Windley
Brian Jones	Christopher Zentz
Laura Johnson	

UD PT Clinic



The University of Delaware PT clinic remains busy with activity. This summer marks the close of the first full year of the clinical residency training program in Orthopedic Physical Therapy and the completion of the sixth year (eight graduates) in the Sports Physical Therapy Residency.

Kirk Swigart is our graduating Orthopedic Resident and Wayne Woodzell (MPT '00) is our graduating Sports Resident. Both graduates will take their respective Specialist Certification Examinations in February 2002.



We heard great news from Suzy Dougherty (MPT '98 and Sports Resident '00), Robbin Wickham (Sports Resident '98) and Karen Muller (Sports Resident '99); they are now all Certified Clinical Specialists in Sports Physical Therapy. Congratulations!

This year's residents are Angie Skarsaune, MPT for the Orthopedic Residency and Bill Padamonsky, MPT ('01) for the Sports Residency.

A new full time staff physical therapist will be joining us in mid August. Noel Goodstadt MPT, CSCS is a graduate of MCP-Hahnemann University and completed a Sports Medicine Internship at our clinic in 1996. We are very excited to have Noel joining us. He will be an asset to our clinical training mission and a great resource to the academic department. We welcome Noel, his wife Alice, and his two sons to the Delaware area. The clinic also welcomes Melissa Fulgham to our front desk/receptionist position. Melissa has been a great addition to the clinic; her organizational skills are rubbing off on all of us. She has been very helpful at scheduling our research patients; projects on ACL injury and total knee arthroplasty rehabilitation are running along at top speed. We are looking forward to a fall filled with clinic renovations.

Clinical Education continues to be a primary focus of the clinic. In addition to PHYT 621 (practice clinic), we now have 4 clinical rotations for our students. Each rotation is a unique experience. The clinic staff has been presenting at National meetings and plans to host a continuing education program on Emergency First Responder this fall. We are excited about our growth and

the progress the clinic has made this year. Please check out our web site at www.udel.edu/PT/clinic to stay updated on our goings-on.

Tara Jo Manal, MPT, OCS,
Director of PT Clinic

Student Conclave...

A Worthwhile Experience



Student Conclave 2000 was held in Cherry Hill, NJ from October 27-29.

Students from physical therapy programs throughout the United States gathered to hear about current research, discuss hot topics and have fun. Despite being the same weekend as University of Delaware's Homecoming, four UDPT students were in attendance: Cynthia Barbe, Jessica Eng, Stephanie Sakai and Jocelyn Wright.

Friday night was an opportunity to get settled in and meet new people at a dance in the exhibition hall. Saturday was the beginning of official Conclave activities. Mock State Caucuses and a Mock House of Delegates meeting gave the students a glimpse at how the APTA works. Although Delaware's delegation was small, one student, Jocelyn Wright, participated in the Mock House as the Vice Speaker, direct assistant to Pam Duffy, Speaker of the House. At the Mock House, students were given Mock RC's to discuss, modify and reject or accept just as is done in the APTA House of Delegates meeting at every annual conference.

Saturday finished off with a bang. At the talent show, students were encouraged to show that studying is not all we do. From belly dancers to comedians and jugglers, this talent show had it all. One school's program

performed a musical and dance number that explained a day in the life of physical therapy. Another performer wrote and sang a "twisted lyrics" song about being a student physical therapist. The evening was topped off with a rousing 70s/disco tribute by the APTA Student Board of Directors.

Sunday began the serious issues. The opening session was given by a staff member at the APTA regarding the current state of reimbursement as it applies to physical therapist and physical therapist assistant education. Also discussed was how the APTA feels about this issue and what is planned to ensure the best education for all students. Students were encouraged to ask questions and share experiences with the current reimbursement conditions. After the opening session, there were many smaller informational concurrent sessions students could attend. University of Delaware students attended sessions ranging from sports and aquatic physical therapy to the use of virtual reality in vestibular rehabilitation.

Conclave ended Sunday afternoon with a luncheon for all attendees, at which the Student Board of Directors was recognized for their hard work in putting together the Conclave events. With one final reminder to register for APTA's PT 2001 in Anaheim, CA, Student Conclave 2000 was over. A good time was had by all and some of us even learned something new.

Jocelyn Wright
Class of 2002

CSM

American Physical Therapy Association's Combined Sections Meeting- CSM 2001 was held in San

Antonio, Texas from February 14 to 18, 2001. It was well attended by the University of Delaware's PT faculty, clinical staff and graduate students. The new Clinical Specialists were honored at the Opening Ceremony and in addition to the Clinical Residents honored, Glenn Williams PT, SCS a graduate student in Lynn Snyder-Mackler's lab received his Sports Clinical Specialist Certification. The main objectives of the Annual CSM conference are analyzing current research, discussing current issues relevant to the practice of physical therapy, and networking with colleagues on physical therapy issues. As usual, the conference was a success in all areas for our attendees. Many of the representatives in our department are active members of many sections and were conducting the business while the networking for our graduate students and residents was productive. The University was represented in all areas of physical therapy through presentations at this national event:

- Terese Chmielewski PT, SCS from Lynn Snyder-Mackler's Lab presented in the Sports Section on The effect of perturbation training on lower extremity muscle activation during walking and jogging in patients with acute ACL injury.
- Tara Manal PT, OCS presented in the Orthopedic section on High Intensity Noxious Electrical Stimulation for Pain Control in the Performing Arts Population
- Irene McClay PT, Ph.D. presented in the Orthopedic section on The Injured Runner
- Darcy Reisman PT, of John Scholz's Lab presented in the Neurology section
- Scott Stackhouse PT, of Stuart Binder-Macleod's Lab presented

in the Research Section at the Marilyn Gossman Graduate Student Seminar on Predictability of Maximal Voluntary Quadriceps Force from Submaximal Contraction in the Elderly

- Blaise Williams PT, Ph.D. from Irene McClay's lab presented in the Sports Section on Continuous Relative Phase Patterns in Runners with Different Foot Types

There were many areas of meaningful programming in areas ranging from the transition to the DPT, evidence based practice for strengthening programs and aerobics in Geriatrics, legal and ethical issues forum, women and sports health, case studies in electrotherapy, differential diagnosis of the shoulder in persons with hand complaints, investigations in motor control and motor learning, and much more. Mark your calendar to join us and physical therapists across the country at the American Physical Therapy Association's Combined Sections Meeting - CSM 2002 in Boston on February 20-24, 2002. We will look forward to seeing you there.

Tara Jo Manal, MPT, OCS,
Director of PT Clinic

PT 2001

PT 2001: Annual Conference and Exposition of the APTA



Thousands of physical therapy professionals, including physical therapists, physical therapist assistants, students, researchers and exhibitors, converged upon Anaheim, CA for the APTA National Conference on June 20th-23rd. UD PT students in attendance were: Cynthia Barbe (President), Brian Murray (Vice President),

Jessica Eng (Secretary), Holly Chapin (Social Director), Raina Domneys, Mark Douek, Brian Hershberger, Abby Wing and Jocelyn Wright.

APTA President, Ben Massey Jr., greeted attendees at the Opening Plenary Session with messages of motivation regarding the physical therapy profession. Massey also praised those Association members who fought the Balanced Budget Act, and encouraged members to pursue the DPT degree and continue their efforts to fight for direct access in all 50 states. Two guest speakers, Democratic strategist James Carville and Republican political writer Peggy Noonan, shared their wit, humor, and views on issues such as healthcare reform and the role of the physical therapist in the political process. During the awards and recognition ceremony, Brian Murray graciously accepted an Honorable Mention certificate on behalf of the University of Delaware for our fund-raising contributions to the Miami-Marquette Challenge.

A wide range of educational courses/seminars offered attendees the opportunity to explore areas of interest, new ideas, and unique approaches to physical therapy treatment. The Exhibition Hall provided lots of fun freebies, networking and employment opportunities, and shopping (textbooks!!). On the lighter side, the we had fun at Disney, ate lots of good food, and sang our "ortho blues" away karaoke-style.

Special thanks to the Delaware Physical Therapy Association, the UD PT Club, and Dr. Michael Axe for their donations!

Raina Domneys
Class of 2002



Hippotherapy

This semester several first-year students began volunteering at Freedom Hills Therapeutic Riding Center in Port Deposit, Maryland once a week. The Center holds hour-long horseback riding classes for disabled children. Children with conditions such as Cerebral Palsy, Down Syndrome, and other developmental problems can benefit from the rhythmic movement of the horse. A horse's natural movement mimics human gait, helping to improve the rider's posture and balance by increasing the rider's muscle control. In addition, each child gains self-confidence and improved social skills from the experience.

Each session at Freedom Hills involves the children participating in a series of games and exercises while on horseback. The rider can be positioned seated, prone, or supine on the horse while they perform their exercises. UD students, along with the children's family, help out either by spotting the children, assisting with exercise, or leading the horses.



The experience has been very valuable for the PT students. It has given UDPT students an opportunity to gain pediatric experience, while learning a new aspect of their field.

If you would like to learn more about the Therapeutic Riding Program at Freedom Hill, or learn about how you can become a volunteer, please contact Renee at (410) 378-3817.

Jessica Eng & Christy Target
Class of 2002

Flag Football

It was a cold and windy day on frozen Lambeau Field. No, that's a different story. It was definitely cold and windy, though.

It was November in Delaware, and it felt as if the temperature was ten degrees below zero. We had just had our semi-formal dance into the wee hours of the morning the night before, so, needless to say, our team was not in the best of shape. We were competing in the Hope Bowl, a local co-ed flag football tournament with all proceeds going to research for breast cancer. We figured what better way to get exercise than to kick the butts of some undergraduate students. Plus we were helping a good cause.



Boy did we underestimate the task ahead of us! There were a total of eight teams, seven of them that had been practicing religiously. Guess which one had never practiced together before... Wow, these teams looked good. The odds were stacked against us, it was cold, we were tired, and we had no clue who was going to play what position, but we decided to give the old UDPT college try.

The first game was not pretty. We basically used it as a practice to determine who would be playing offense, who would be playing defense, and what the rules of the game were. We faired pretty well, though, and only lost by two points. It was a moral victory for us, but one more loss and we would be out of the tournament.

The next game was what we in the sports world call "a joke." Evidently we had chemistry, because after losing our first game by two, we blew away our next opponent 40-0!

Numerous touchdown runs, spectacular catches, interceptions, and even a punt returned for a touchdown highlighted the game. We were building confidence and it showed.

One of our most trying games occurred in the middle of the day. We were going up against a team that practiced almost every night. The game went back and forth with our team scoring and then their team scoring. The most definitive play came with less than one minute left in the game. We were up by less than one touchdown and the opposing team was driving towards the winning score. But a persistent defensive rush with blanketing coverage on the opposing teams wide receivers lead to an interception by the UDPT team which was returned all the way for a touchdown to seal the victory. A narrow escape for us, but we were building momentum.

We rolled through our next three games until we met the defending champions in the semi finals. I must admit we were a little intimidated, but at this point we were running on all cylinders. We easily handled them, even experimenting with new people on offense and with a new quarterback, the ultimate slap in the face. Only one game until the trophy was ours. Nothing could stop us.

Except maybe the team that beat us before. That's who we had to face in the final game, but to be honest, we weren't scared. We felt unbeatable, and the other team knew it. Again it was a close game with the lead going back and forth between the two teams, and again with less than a minute left the opposing team was driving for the winning score. The opposing team had just scored and was going for two to win the game.

WELCOME Class of 2003

We were not going to be denied our trophy, though; we were not going to lose, especially like this. To me, this play felt like it took ten minutes, not ten seconds. As the quarterback rolled to his right, I could do nothing but watch the ball sail through the air. I thought for sure we were going to lose, but that was not our destiny that day, fate had a different role for us. The same player who had intercepted the ball and returned it for a touchdown earlier in the day managed to knock the ball down to the ground.

Immediately our team erupted. We had done it! We were Hope Bowl champions! The UDPT class was the greatest of all time. At least that's what our battered and bruised bodies told us that day.

Marc Douek
Class of 2002

VISIT UD PT
ON THE WEB

@

www.udel.edu/PT

Scott Henry Backofen
Patricia D. Castro
Angela M. Crouch
Brooke Massette Darby
Jeffrey Michael Debartolo
Joel Aaron Desautels
Sheri Lynn Dinella
Michael Arrthur Drew
Erin Quinn Eggers
Todd Stradley Everett
Sara J. Farquhar
Adrienne Nicole Green
Claire Green
Airelle Onnolee Hunter
Heather Marie Irish
Christopher Darren Johnson
Kirsten Heather Leounes
Tiffany A. Little
Steve K. O
Kevin Wright O'Neill
Jennifer A. Papandrea
Melissa Catherine Redman
Timothy Brian Rementer
Kevin Gary Schultz
Daniel Ferdinand Speciale, Jr.
Jessica Marie Suarez
Danielle Tuminello
Daniel James Vanhouse
Adam Christian Wachter
Abi Cutler Watras
Ryan David Zarzycki

University of Delaware
University of Maryland
Arcadia University
University of Delaware
Wake Forest University
Castleton State College
Widener University
Arizona State University
Washington and Lee University
University of Delaware
Northeastern University
University of Delaware
Pennsylvania State University
Kent State University
University of Delaware
University of Delaware
University of Delaware
Rutgers University
New York University
Lehigh University
Elizabethtown College
Duke University
Pennsylvania State University
Pennsylvania State University
University of Delaware
University of Delaware
Western Maryland College
U. of Saint Thomas Minnesota
University of Delaware
Saint Olaf College
Catholic University of America

CONGRATULATIONS !!!

Births

Sara Rose Larkin – March 12, 2001, daughter of Roger and Stacie Larkin, MEd, PT, Co-Acedemic Coordinator of Clinclal Education

Sidney Marie Key – August 8, 2000, daughter of Susan and Dave Key ('02)

Tyler Micael Duke – November 1, 2001, son of Kristen and Micheal Duke ('02)

Expecting Parents

Anu Kher ('02) and Hemant Kher

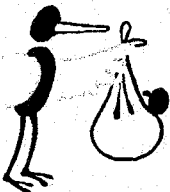
Engagements

Marta Pepe ('02)
Chris Stella ('02)
Dan Speciale ('03)



Just Married

Darrell Davis &
Irene McClay, PhD, PT,
Associate Professor - 9/22/01





What has the faculty been up to this year?

STUART BINDER-MACLEOD, PT, PhD
Professor, Chair

GRANTS

- National Institutes of Health - NICHD/NCMRR - R01 - Force optimization in rat and human skeletal muscle. A four-year grant commencing March 1998 (\$800,000).
- Consultant/Mentor Rehabilitation Research & Development Service - Dept. of Veterans Administration - Advanced Career Development Award to Carolyn Patten. Palo Alto, CA - Motor unit firing patterns in hemiplegia. A three-year grant commencing February, 2001

FACULTY ADVISOR FOR SPONSORED STUDENT RESEARCH

- Foundation for Physical Therapy Doctoral Research Award to David Russ, 2000 (\$7,500).
- Foundation for Physical Therapy Doctoral Research Award to Scott Stackhouse, 2000 (\$15,000).

PUBLICATIONS

- Binder-Macleod SA, Dean JC, and Ding J: Electrical stimulation factors in potentiation of human quadriceps femoris. *Muscle & Nerve* (in press).
- Stackhouse SK, Reisman DS, and Binder-Macleod SA: The role of pH in skeletal muscle fatigue. *Physical Therapy* (in press - to appear December 2001).
- Scott W, Stevens J, and Binder-Macleod SA: Human skeletal muscle fiber type classifications. *Physical Therapy* (in press - to appear November 2001).
- Stevens JE, Binder-Macleod SA, Snyder-Mackler L: Characterization of the human quadriceps muscle in active elders. *Archives of Physical Medicine and Rehabilitation* 82:973-8, 2001.
- Binder-Macleod SA and Scott W: Comparison of fatigue produced by electrical stimulation trains designed to optimize force. *Acta Physiologica Scandinavica*, 172:195-203, 2001.
- Kebaetse MB, Lee SCK, Binder-Macleod SA: A novel stimulation pattern improves performance during repetitive dynamic contractions. *Muscle & Nerve*, 24:744-752, 2001.
- Stackhouse SK, Stevens JE, Lee SCK, Pearce KM, Snyder-Mackler L, Binder-Macleod SA: Maximum voluntary activation of fresh and fatigued muscle of young and elderly individuals. *Physical Therapy*, 81: 1101-1109, 2001.
- Stackhouse SK, Dean JC, Lee SCK, Binder-Macleod SA: Measurement of

central activation failure of the quadriceps femoris in healthy adults. *Muscle & Nerve*, 23:1706-1712, 2000.

- Ding J, Wexler AS, Binder-Macleod SA: A predictive model of fatigue in human skeletal muscles. *Journal of Applied Physiology*, 89:1322-1332, 2000.
- Lee SCK, Becker CN, Binder-Macleod SA: Activation of human quadriceps femoris muscle during dynamic contractions: Effects of load on fatigue. *Journal of Applied Physiology*, 89:926-936, 2000.
- Lee SCK, Binder-Macleod SA: Effects of activation frequency on dynamic performance of human fresh and fatigued muscles. *Journal of Applied Physiology*, 88:2166-2175, 2000.
- Ding J, Wexler AS, Binder-Macleod SA: Development of a mathematical model that predicts optimal muscle activation patterns using brief trains. *Journal of Applied Physiology*, 88:917-925, 2000.

JAMES (COLE) GALLOWAY, PT, PhD
Assistant Professor

GRANTS

- Delaware Research Foundation grant (2001): "A biomechanical analysis of arm vs. leg reaching in infants" \$30,000

CONSULTING

- Snubelgrass Inc. for development of interactive toy company for healthy and special needs infants

PUBLICATIONS

- Koshland, GF., Galloway, JC., Nevoret-Bell, CJ (2000) Control of the wrist in three-joint arm movements to multiple directions in the horizontal plane. *J. Neurophysiology* 83: 3188-3195.
- Galloway, JC., Thelen, E. (2001) Object exploration in human infants: Feet vs. Hands. In *Advances in motor development and learning in infancy: Behavioral, neurological, and modeling issues*. van der Kamp, J., Ledebt, A., Savelsbergh, G. and Thelen, E. (eds).
- Galloway, JC., Koshland, GF., Contrasting dynamics at shoulder and elbow joints during horizontal arm movements. *Experimental Brain Research* (in press).
- Galloway, JC., Thelen, E., Feet first: object exploration in young infants. *Science* (submitted)

ABSTRACTS

- Galloway, JC., Thelen, E., 2000 Joint excursion characteristics in the first year of reaching display a proximal to

distal pattern. *International Conference on Infant Studies*.

- Galloway, JC. 2001 Feet First: Object Exploration in Human Infants. Society for Research in Child Development
- Bate, P., Galloway, JC. 2001 Development of Turning in Sitting. *Society for Research in Child Development*
- Galloway, JC., Bhat, A., Heathcock, J., Manal, K., Lobo, M., 2001 Shoulder and elbow dynamics during vertical arm movements of various directions and speeds: Implications for development. *Soc Neurosci Abstracts* (in press)

PRESENTATIONS

- "Reaching and Object Exploration", Division of Graduate Medical Education, Seton Hall University, May, 2000.
- "The search for general features of coordination", University of Maryland, Baltimore, October, 2000.
- "Development of the infant", Shenandoah University, April 2001.
- "Object exploration in human infants: Feet vs. Hands", World Congress on Infant Development and Learning, Amsterdam, June 2001.

JOE LUCCA, PT, PhD
Associate Professor

ABSTRACTS

- Lucca, JL. Predicting Utilization and Outcomes of Home-Based Physical therapy: A Theoretical Model. *Issues on Aging*, 24(1).

PRESENTATIONS

- "Predicting Utilization and Outcomes of Home-Based Physical Therapy" presented at the Combined Sections Meeting of the American Physical Therapy Association, February, 2001.
- "Exploring the Interfaces Among Family Caregiving, Social Support, Support Groups, and Formal Organizations". With Berke, D., Flexman, R., and Settles, B. Presented at The International Sociological Association's 38th Committee on Research Seminar, University of Delaware, March 30th

TARA MANAL, PT, MPT, OCS
Clinic Director

PUBLICATIONS

- **Manal T, Snyder-Mackler L.** Failure of Voluntary Activation of the Quadriceps Femoris Muscle after Acute Patellar Contusion *JOSPT* 2000;30(11):654-663.
- **Manal T, Dougherty S, Snyder-Mackler L.** "High Intensity Electrical Stimulation for Pain Management" *Physical Therapy Abstract Vol 80:5* May 2000 S62

PRESENTATIONS

- "A Model of Clinical Education provided on-site at an Academic Institution" APTA Combined Sections Meeting Feb 2000
- "Rehabilitation of the Patellofemoral Joint" Adolescent Medicine Conference Wilmington Hospital May 1999, June 2000
- "Screening Patients with Anterior Cruciate Ligament Rupture for Return to High-Level Physical Activity with Nonoperative Rehabilitation" University of the Sciences in Philadelphia September 2000
- "The Use of High Intensity Noxious Electrical Stimulation for Pain Control in the Performing Arts Population" APTA Combined Sections Meeting Feb 2001

IRENE MCCLAY, PT, PHD
Associate Professor

GRANTS

- The Biomechanics behind Successful Orthotic Intervention in Patients with Patellofemoral Pain Syndrome. Submitted to the Pauline Marshall Research and Education Foundation. \$35,000 for 1 year. Preliminary proposal accepted - Invited to submit full application (in review).
- The Effect of Wedged Foot Orthoses on Lower Extremity Mechanics and Function in Patients with Knee Osteoarthritis. Submitted to the National Institutes of Health (COBRE Grant) \$125,000/yr for 5 years (in review).
- The Effect of a Training Program on Lower Extremity Injuries and Functional Performance in Collegiate Female Basketball Players. Submitted to the Orthopedic Research and Education Foundation. \$150,000 for 3 yr. grant period (in review).
- Biomechanical Factors Associated with the Etiology of Stress Fractures in Runners. The Department of the Army. \$1.05 million for 5 yr grant period beginning 9/2000.

- Doctoral Scholarship. \$10,000. Joyner Sportsmedicine Institute, 1998, 1999, 2000, 2001.

PUBLICATIONS

- Wills, J, McClay, IS & Queale, WS (2001). Epidemiology of Extreme Sports (in review) *Medicine and Science in Sports and Exercise*.
- Ott, S, Ireland, ML, Ballantyne, BT and McClay, IS (2001). Functional Outcome Measures following ACL Reconstruction: A Gender Comparison. (in review) *Knee surgery, sports traumatology and arthroscopy*.
- Williams, DS, McClay, IS, Scholz, JP, Hamill, J, Buchanan, TS (2001). Lower extremity stiffness in runners with different foot types (in review) *Journal of Biomechanics*.
- Sahte, V, Ireland, ML, Ballantyne BT and McClay, IS (2001). Acute Effect of the Protonics System on Patellofemoral Alignment. (in review) *Knee surgery, sports traumatology and arthroscopy*.
- Laughton, CA, McClay, IS, Hamill, J and Richards, J (2001). The Effect of Orthotic Intervention and Strike Pattern on Rearfoot Motion in Runners. (in review) *Journal of Applied Biomechanics*.
- Laughton, CA, McClay, IS, Hamill, J and Richards, J (2001). The Effect of Orthotic Intervention and Strike Pattern on Rearfoot Motion in Runners. (in review) *Journal of Applied Biomechanics*.
- Williams, DS, McClay, IS, Hamill, J, Buchanan, TS (2001). Lower Extremity Kinematic and Kinetic Differences in Runners with High and Low Arches. *Journal of Applied Biomechanics*. 17:153-163.
- Williams, DS, McClay, IS, Hamill, J, (2001). Arch Structure and Injury Patterns in Runners *Clinical Biomechanics* (16)5.
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ABSTRACTS

- Laughton, CA, McClay, IS, Hamill, J Effect of Orthotic Intervention and Strike Pattern on Tibial Shock in Runners. Presented at the International Society of Biomechanics, Zurich, Switzerland, July, 2001.
- McClay, IS, Hughes, MA, Laughton, CA, Gupta, R. Effect of Soft Orthotics on Tibial Shock and Rearfoot Motion. Presented at the American College of Sports Medicine Mtg, Baltimore, June, 2001.
- Manal, KT & McClay, IS Errors in Estimating Tibial Translation during Natural Cadence Walking: Bone vs. Skin Mounted Tracking Markers. Presented at the American College of Sports Medicine Mtg, Baltimore, June, 2001.
- Laughton, CA, McClay, IS, & J. Hamill. Effect of Foot Orthoses and Strike Pattern on Rearfoot Motion. Presented at the American College of Sports Medicine Mtg, Baltimore, June, 2001.
- Ballantyne, BT, Leetun, D, Ireland, ML, & McClay, IS: Gender differences in core stability as measured by trunk and hip performance Presented at the American College of Sports Medicine Mtg, Baltimore, June, 2001.
- McCrory, JL, Quick, NE, Ballantyne, BT & McClay, IS. Effect of a Resistive Dynamic Knee Orthosis on Muscle Activations During the Lateral Step Up. Presented at the American College of Sports Medicine Mtg, Baltimore, June, 2001.

PRESENTATIONS

- "Selected Case Studies in Running Injuries" Presented at the Combined Sections Meeting of the APTA, San Antonio, TX, Feb, 2001.

PAUL METTLER, PT, EDD
Associate Professor

HONORS AND AWARDS

- College of Arts and Science, University of Delaware **Outstanding Teacher Award**, Academic Year 1999-2000

KATHERINE RUDOLPH, PT, PHD
Assistant Professor

GRANTS

- National Institutes of Health - R01 - (Co-Investigator) "Dynamic Stability in the ACL injured knee" (\$260,000 per year from 2/8/01 - 1/30/04.)

PUBLICATIONS

- Williams, G.N., Chmielewski, T.L., Rudolph, K.S., Buchanan, T.S., Snyder-Mackler, L. Dynamic knee stability: Current theory and

implications for clinicians and scientists. *J Orthop Sports Phys Ther*, (in review).

- Lewek, M., **Rudolph, K.S.**, Axe, M.J., Snyder-Mackler, L. Strong Quadriceps Are Necessary For Normal Joint Function After Anterior Cruciate Ligament Reconstruction. *Clin Biomech*. (in review)
- Chmielewski T.L., **Rudolph K.S.**, Fitzgerald, G.K., Axe, M.J., Snyder-Mackler, L. Biomechanical Evidence Supporting a Differential Response to Acute ACL Injury. *Clin Biomech*. 2001 Aug;16(7):586-91.
- **Rudolph K.S.**, Axe, M.J., Buchanan, T.S., Scholz, J.P., Snyder-Mackler, L. Dynamic Stability in the ACL deficient knee. *Knee Surg Sports Traumatol Arthrosc*. 2001;9(2):62-71
- **Rudolph K.S.**, Axe, M.J., Snyder-Mackler, L. Dynamic Stability in the ACL deficient knee: Who can hop? *Knee Surg Sports Traumatol Arthrosc*. 8(5):262-9, 2000.
- **Rudolph, K.S.**, Fitzgerald, G.K., Snyder-Mackler, L.: Restoration of Dynamic Stability in the ACL deficient Knee. in Lephart, S., Fu, F., editors: *Role of Proprioception and Neuromuscular Control in Management in Articular Pathology*. Human Kinetics Publisher, Champaign, IL. pp.393-404, 2000

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- Lewek, M, **Rudolph, K.S.**, Axe, M.J., Snyder-Mackler, L. The Effect Of Quadriceps Weakness On Gait After Anterior Cruciate Ligament Reconstruction. Presented at the American College of Sports Medicine, May 30, 2001; Baltimore MD

PRESENTATIONS

- Lewek M, **Rudolph KS**, Axe MJ, and Snyder-Mackler L. *The Effect Of Quadriceps Weakness On Gait After Anterior Cruciate Ligament Reconstruction*. Presented by M. Lewek. American College of Sports Medicine Annual Meeting. Baltimore, MD, May 30 - June 2, 2001
- University of East London, *Dynamic Stability in Stable and Unstable ACL Deficient Knees* London, England, October 27, 2000
- Department of Orthopedics, Ullevål University Hospital of the University of Oslo, "Dynamic Stability in Stable and Unstable ACL Deficient Knees" Oslo, Norway, October 23, 2000

LAURA SCHMITT, PT, MS
Clinic Physical Therapist

PRESENTATIONS

- Faculty member of Team 2006 Novice Champions - USFSA January '01 Boston, MA
- Staff Member, USFSA Junior Nationals, Buffalo, NY '00.
- Poster presentation at CSM: A Model of Clinical Education Provided On-site at an Academic Institution.

JOHN P. SCHOLZ, PT, PHD
Associate Professor

GRANTS

- National Science Foundation, Behavioral Neuroscience Division, Principal Investigator. **Title:** Effect of Task Constraints on Motor Control of Pointing. **Grant Period:** September, 2000 - August 2003; \$298, 611.00

PUBLICATIONS

- Scholz JP, Danion F, Latash ML & Schöner G (2001). Understanding finger coordination through analysis of the structure of force variability. *Biological cybernetics*, in press
- Latash ML, Danion F, Scholz JP & Schöner G (2001). Structure of motor variability in marginally redundant multi-finger force production tasks. *Experimental Brain Research*, in press.
- Reisman, D., Scholz, J. P. & Schöner, G. (2001). Coordination Underlying the Control of Whole Body Momentum During Sit-to-Stand. *Gait and Posture*, in press.
- Scholz, J. P., Reisman, D. & Schöner, G. (2000). Effects of Varying Task Constraints on Solutions to Joint Control in Sit-to-Stand. *Experimental Brain Research*, in press.
- Williams, D. S. III, McClay, I. S., Scholz, J. P., Hamill, J. and Buchanan, T. S. (2000). Lower extremity stiffness in runners with different foot types. In review in *Journal of Biomechanics*.
- Scholz, J. P., Schöner, G. & Latash, M. L. (2000). Motor control of pistol shooting: Identifying control variables with the uncontrolled manifold. *Experimental Brain Research*, 135(3):382-404.
- Rudolph KS, Axe MJ, Buchanan TS, Scholz JP, Snyder-Mackler L (2001). Dynamic Stability in the Anterior Cruciate Ligament Deficient Knee. *Knee Surg Sports Traumatol Arthroscopy*, 9: 62-71.
- Rao, R., Agrawal, S.K., and Scholz, J.P. (2000). A Robot Test-bed for Assistance and Assessment in Physical Therapy. *Advanced Robotics*, 14(7): 565-578.

- McMillan, A. G. & Scholz, J. P. (2000). Early Development of Coordination for the Sit to Stand Task. *Human Movement Science*, 19: 21-57.

PRESENTATIONS

- Scholz, J.P., Latash, M.L., Danion, F. & Schöner, G. Central control strategies revealed through an analysis of the structure of finger force variability under stable and unstable conditions. *Progress in Motor Control III*. Montreal, Canada. August 16-18, 2001
- Danion F., Latash M.L., Sheng L., Scholz J.P., Schöner G., & Zatsiorsky V.M. A model for finger interaction during maximal force production tasks. *Progress in Motor Control III*. Montreal, Canada. August 16-18, 2001.
- Tseng Y., Reisman D., Yang J-F, Schöner G. and Scholz J.P. Joint coordination underlying the control of a pointing task with and without vision. *Progress in Motor Control III*, Montreal, Canada, August 15-18, 2001
- Reisman D., Yang J-F, Tseng Y., Schöner G. and Scholz J.P. Joint coordination underlying the control of a pointing task in healthy and hemiplegic persons. *Progress in Motor Control III*, Montreal, Canada, August 15-18, 2001.
- Reisman, D. & Scholz, J.P. Effects of Varying Perceptual Information on the Control of Body Momentum in a Sit to Stand Task. 2001 Combined Sections Meeting of the American Physical Therapy Association. San Antonio, TX. February 14-18, 2001.
- Tseng Y., Scholz J.P. and Schöner G. Joint coordination for control of pointing movements to different sized targets. 31st Annual Meeting, Society for Neuroscience, San Diego, CA, November 10-15, 2001.
- Latash, M.L., Danion F., Scholz, J.P., Schöner, G. Abstract 3676: Finger coordination in force production tasks and the structure of motor variability. Society for Neuroscience 30th Annual Meeting. November, 2000, New Orleans, LA
- Scholz, J.P. & Reisman, D. Effect of Task Constraints on Coordination of Sit-to-Stand. 2000 Combined Sections Meeting of the American Physical Therapy Association. New Orleans, LA. February 2-6, 2000
- Constraint-induced therapy. Delaware Stroke Initiative. Newark, DE. Sept. 14, 2000.

KEN SEAMAN, PT, MA
Director Clinical Education

HONORS AND AWARDS

- Nominated by MS Society of Delaware for the National Healthcare Volunteer of the Year Award.

LYNN SNYDER-MACKLER, PT, ScD
Professor

HONORS AND AWARDS

- Promotion to Full Professor

GRANTS

- PHS - R-01 (Co-investigator) ACL Deficient Knee: MRI and Biomechanical Modeling. \$650,572 June 1999-May 2004
- NIH R01 HD37985 (PI: L. Snyder-Mackler) \$1,077,000 3/01/01 - 2/28/05

PUBLICATIONS

- Rudolph KS, Axe MJ, Snyder-Mackler L. Dynamic stability after ACL injury: Who can hop? *Knee Surg Sports Traumatol Arthrosc.*;8(5):July 2000.
- Manal TJ, Snyder-Mackler L. Failure of voluntary activation of the quadriceps femoris muscle after patellar contusion. *J Orthop Sports Phys Ther.* 2000 Nov;30(11):655-60; discussion 661-3.
- Stackhouse SK, Stevens JE, Lee SC, Pearce KM, Snyder-Mackler L, Binder-Macleod SA. Maximum voluntary activation in nonfatigued and fatigued muscle of young and elderly individuals. *Phys Ther.* 2001 May;81(5):1102-9.
- Axe MJ, Wickham R, Snyder-Mackler L. Data-based interval throwing programs for little league, high school, college, and professional baseball pitchers. *Sports Medicine and Arthroscopy Review.* 9:24-34, 2001.
- Rudolph KS, Axe MJ, Buchanan TS, Scholz JP, Snyder-Mackler L. Dynamic stability in the anterior cruciate ligament deficient knee. *Knee Surg Sports Traumatol Arthrosc.* 2001;9(2):62-71.
- Stevens JE, Binder-Macleod S, Snyder-Mackler L. Characterization of the human quadriceps muscle in active elders. *Arch Phys Med Rehabil.* 2001 Jul;82(7):973-8.
- Chmielewski TL, Rudolph KS, Fitzgerald GK, Axe MJ, Snyder-Mackler L. Biomechanical evidence supporting a differential response to acute ACL injury. *Clin Biomech (Bristol, Avon).* 2001 Aug;16(7):586-91.
- Snyder-Mackler L, Knarr J. Treatment of the Older Athlete. in Guccione A (ed) *Geriatric Physical Therapy* (2nd edition). St. Louis, CV Mosby, 2000 pp

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- Wickham R, Snyder-Mackler L. Theory and Practice of Muscle Strengthening in Orthopedic Physical Therapy. In Donatelli RA and Wooden MJ (eds) *Orthopedic Physical Therapy* (3rd Edition) Churchill Livingstone, Philadelphia, 2001, pages 33-45.
- Chmielewski TL, Snyder-Mackler L. Therapeutic Exercise and Functional Progression of the Shoulder. In Tovin BJ and Greenfield BH (eds) *Evaluation and Treatment of the Shoulder.* F.A. Davis, Philadelphia, 2001, pages 379-398

PRESENTATIONS

- Principles for Non-surgical Treatment of Shoulder Injuries. Current Concepts in the Treatment and Rehabilitation of Sports Injuries 2000 University of Vermont Sports Medicine Conference, Burlington, VT September 2000
- Rehabilitation of Muscle Injuries. Current Concepts in the Treatment and Rehabilitation of Sports Injuries 2000 University of Vermont Sports Medicine Conference, Burlington, VT September 2000
- Screening Test and Rehab guidelines for Completing a Season after Early Season ACL Rupture. Current Concepts in the Treatment and Rehabilitation of Sports Injuries 2000 University of Vermont Sports Medicine Conference, Burlington, VT September 2000
- Rehabilitation After ACL Surgery. How Aggressive Can We Be? ISAKOS Congress, Montreaux Switzerland, May 2001
- Outcomes Measures in Clinical Research ISAKOS Congress, Montreaux Switzerland, May 2001
- Optimal Loading of the ACL graft During Rehabilitation ACSM Baltimore, MD May 30-June 2, 2001
- Dynamic Stability in the ACL Deficient Knee. Norwegian Sports Physical Therapy Congress, Tonsberg, Norway, June 2001
- Neuromuscular Control and Dynamic Stability of the Shoulder Norwegian Sports Physical Therapy Congress, Tonsberg, Norway, June 2001
- CNS Control of the ACL Deficient Knee. *The Many Faces of Osteoarthritis.* Tahoe City, CA June 2001.