Rehabilitation Science PhD Program

Fall 2018 Newsletter

Welcome to the Fall semester. In this newsletter, we provide an introduction to our incoming PhD students and new faculty. In addition, we highlight some of the news and events of the last six months. Thank you for your support of UF Rehab Science, and we hope you have a wonderful semester.

Contact Program Director Dr. Fuller with any questions or comments. ddf@phhp.ufl.edu

Join us for our Fall Social!

We hope to see you at our annual social at the Blue Gill Restaurant on Friday, Aug. 24 from 4:30 - 7 p.m. Come catch up with your colleagues and welcome our new students.

Meet Our New Students

The program is pleased to welcome seven new PhD students. Two students will be joining the Communication and Swallowing Sciences and Disorders concentration, four will be joining Disability, Occupation, and Participation Sciences and one student will be part of Movement Science. The next 2 pages provide an introduction to our new students - please give them a warm welcome to UF.
Justine J. Allen, M.S., CCC-SLP  
**Mentor: Emily Plowman, PhD, CCC-SLP**  
Justine joined the RSD program to learn about research methods in bulbar/swallowing science. Her long-term career goal is to help bridge the gap between clinicians and researchers through translational science. She hopes to achieve this through evidence-based research that meets the constraints of the "real world" clinical environment and can be effectively utilized within multicultural and linguistically diverse communities.

Carlyn Ellison, MPH, CPH  
**Mentor: Sherrilene ClassenPhD, MPH, OTR/L, FAOTA, FGSA**  
Carlyn’s experiences as she pursued her MPH degree prompted her to continue her academic journey in the Rehabilitation Science program. She aims to increase her knowledge of research methods related to Disability, Occupation, and Participation Sciences and to contribute to our understanding of human health.

Jaewon Kang, MS, KOT  
**Mentor: Sergio Romero, PhD**  
Jaewon is interested in studying how individuals with disabilities can improve community participation and quality of life. Her initial research goal is to develop new clinical outcome measures related to community participation in persons with disability.

Sharon Medina, MOT  
**Mentor: Consuelo Kreider, PhD, OTR/L**  
While enrolled in the RSD Program, Sharon intends to focus on developing the skills needed to identify and quantify developmental, learning, and psychological factors that can produce cognitive impairments and to conduct rehabilitation intervention studies.
Michela Mir, MS, CCC-SLP  
Mentor: Karen Hegland, PhD, CCC-SLP  
As a speech-language pathologist, Michela has worked with patients and rehabilitation professionals in the clinical setting for the past few years. She is looking forward to studying the science of rehabilitation, and aims to help patients affected by neurodegenerative diseases as well as to educate future professionals in the rehabilitation field.

Sarah Skinner, MS  
Mentor: Russ Hepple, PhD  
The collaborative and interdisciplinary nature of the RSD program appealed to Sarah as it allows for research questions to be addressed more thoroughly and from different viewpoints. She will be studying muscle biology and mechanisms associated with disease and aging. Her goals are to become an independent scientist and to work with undergraduate and graduate students to help them achieve their goals.

James Wersal, OTD, OTR/L  
Mentor: Sherrilene Classen, PhD, MPH, OTR/L, FAOTA, FGSA  
James chose the Rehabilitation Science program to expand his knowledge, experience, and skills through a comprehensive mentorship program. He believes it is fundamental to meet the demands of the American Occupational Therapy Association’s Vision 2025 by addressing the value of occupational therapy leadership to enhance collaboration, accessibility, and effectiveness.

New Graduate Faculty Spotlights  
This semester we welcomed three new graduate faculty to our program. A short biography for each is provided on the next page.
Andrew Lotto, PhD
Professor
Dept. of Speech, Language and Hearing Sciences

Dr. Lotto’s research focuses on the cognitive and perceptual processes involved in the perception of complex sounds such as speech and music. His current projects include developing and applying a novel measure of speech rhythm to a variety of disorders (e.g., Parkinson’s Disease, Stuttering, Autism), studying the use of high-frequency energy (above 5000 Hz) in the perception of speech and music, and examining the psychological validity of proposed structures in music.

Tanja Taivassalo, PhD
Research Associate Professor
Dept. of Physiology and Functional Genomics

Dr. Taivassalo’s primary research interest is the evaluation and development of innovative therapeutic strategies for neuromuscular disease. Of particular interest are interventions aimed at inducing adaptive responses within skeletal muscle mitochondria such as exercise training and exposure to intermittent hypoxia. She is affiliated with the Myology Institute, Imaging DMD (Duchenne Muscular Dystrophy), the Center for Respiratory Research and Rehabilitation and the Institute of Aging.

Zheng Wang, PhD
Assistant Professor
Dept. of Occupational Therapy

Dr. Wang’s research is focused on identifying neurobiological and neurophysiological mechanisms underlying sensorimotor problems in children with neurodevelopmental disorders (e.g., Autism Spectrum Disorder, Phelan McDermid Syndrome, and Fragile X) and aging individuals who are at risk in developing atypical neurodegeneration (e.g., Fragile X associated tremor and ataxia syndrome and older adults with Autism Spectrum Disorder).
Congratulations to new RSD Graduates

Dr. Shakeel Ahmed
Mentor: Dr. Danny Martin
Dissertation: “Acute intermittent hypoxia and inspiratory threshold loading as strategies to enhance inspiratory muscle function.”

Dr. Chelsea Ding
Mentor: Dr. Carolynn Patten
Dissertation: “Neural adaptations after non-paretic hand exercise to task failure in chronic stroke.”

Dr. Mi Jung (MJ) Lee
Mentor: Dr. Sergio Romero
Dissertation: “Developing a global PROMIS self-efficacy measure for managing chronic conditions.”

Dr. Pallavi Sood
Mentor: Dr. Sergio Romero
Dissertation: “Developing tailored functional status measures across continuum of care”

Dr. Lauren Tabor
Mentor: Dr. Emily Plowman
Dissertation: “Airway Sensorimotor Function in Individuals with Amyotrophic Lateral Sclerosis”. Lauren was the first PhD graduate from the Swallowing Systems Core laboratory.
Faculty Awards & Recognition

Dr. Mark Bishop was selected as a Catherine Worthingham Fellow of the APTA. This is the highest award given by the American Physical Therapy Association and recognizes sustained excellence in the profession.

Physical Therapy Department Chair and internationally recognized researcher in muscular dystrophy Dr. Krista Vandenborne was recognized with the title of Distinguished Professor for Physical Therapy.

The research success of Drs. Karen Hegland, Iannessa Humbert and Emily Plowman was highlighted in Dr. Guzick’s UF Health news blog. https://ufhealth.org/news/2018/impact-preeminence-initiative-progress-research-swallowing

Dr. Meryl Alappattu was selected as a Lucy Blair awardee by the American Physical Therapy Association. The award recognizes contributions and service of exceptional value to the Association.

Dr. David Fuller received a UF Preeminence Term Professorship Award.
News and Events

Sandra Edwards Colloquium

The Dept. of Occupational Therapy hosted the annual Sandra Edwards Colloquium in February. This annual event brings together occupational therapy researchers to address contemporary issues in the field. This year the theme of the colloquium was Supporting Life Transition: From Childhood Through Adulthood with a specific emphasis on autism spectrum disorder. The keynote speaker was Dr. Roseann Schaaf, Professor and Chair in the Department of Occupational Therapy at Thomas Jefferson University. Dr. Schaaf's keynote address was entitled Creating Evidence through Practice.

Therapeutic Intermittent Hypoxia Symposium

Dr. Gordon Mitchell lead this international conference in April which brought together over 120 scientists from the United States, Mexico, Australia, Ukraine, Scotland, England, France and Canada. The conference focused on an exciting new concept in rehabilitation science: exposure to mild, brief and safe periods of reduced inspired oxygen (hypoxia) can stimulate the nervous system and improve rehabilitation outcomes in neurological conditions such as spinal cord injury.

Brooks-PHHP Research Collaboration

The RSD program has close ties to the Brooks Rehabilitation Hospital in Jacksonville (www.brooksrehab.org). In July, over 100 guests were in attendance at the annual Brooks-PHHP Research Collaboration day. The event included presentations from RSD Faculty Drs. Jason Beneciuk, Joel Bialosky, Emily Fox and Dorian Rose.
In March, the Physical Therapy Dept. hosted the annual Neuromuscular Plasticity Symposium sponsored by the NIH T32 Neuromuscular Plasticity Training Grant (PI Dr. Fuller) and T32 BREATHE Training Grant (PI Dr. Mitchell). The symposium featured presentations from T32 Trainees (at left), poster presentations from more than 50 UF pre- and postdoctoral Trainees and keynote talks from three internationally recognized experts in neuromuscular plasticity.

Fox and Clark Receive Funding to Improve Walking Function

RSD Faculty Drs. Emily Fox and David Clark had three grants accepted for funding to investigate the use of non-invasive transcutaneous electrical stimulation of the lumbosacral spinal cord. Two of the grants focus on enhancing walking for frail older adults and are funded by the US Department of Veterans Affairs and the NIH National Center of Neuromodulation for Rehabilitation (NM4R). The third grant focuses on enhancing walking for people with spinal cord injury and is funded by the NIH National Rehabilitation Research Resource to Enhance Clinical Trials (REACT). These research projects are a collaboration between the UF Dept. of Physical Therapy, UF Dept. of Aging and Geriatric Research, US Dept. of Veterans Affairs Brain Rehabilitation Research Center, and Brooks Rehabilitation.

Fox and Mitchell Receive Grant to Improve Breathing Function after Spinal Cord Injury

The Department of Defense awarded Dr. Emily Fox (primary investigator) and collaborator Dr. Gordon Mitchell a $2.4 million Clinical Trial award to study the effects of Acute Intermittent Hypoxia and respiratory strength training on breathing function in people with chronic spinal cord injury. Fox and Mitchell are co-principal investigators on this four-year project. Collaborators include Drs. Danny Martin, David Fuller, and Babette Brumback, and several members of the Brooks Clinical Research Center. Dr. Geneva Tonuzi, Brooks Spinal Cord Injury Program Medical Director, is a co-investigator.
RSD Alumna named Director of Comprehensive Outcomes in Orthopaedics and Rehabilitation at Duke

Dr. Maggie Horn graduated from the RSD program in 2013 and is now an Assistant Professor in the Department of Orthopaedics and Doctor of Physical Therapy Division at Duke University. As Director, she will oversee systematic data collection, aggregation, and dissemination in the Department of Orthopaedic Surgery.

Student Milestones

Brendan Doyle was admitted to PhD candidacy in January.

Alicia Vose passed her Qualifying Examination and successfully proposed her doctoral dissertation in May.

Michael Sunshine successfully passed his Qualifying Exam this month and also has a patent application under consideration based on his PhD thesis work.

Student Awards and Recognition

Dr. Shakeel Ahmed received the Frederick Family Scholarship award through the Dept. of Physical Therapy. The award recognizes 1) treatment of others with positive regard, dignity, and respect, 2) dedication and service to the profession of physical therapy, 3) exceptional dependability and 4) self-reliance and dedication to the pursuit of a doctoral degree.
Alison Barnard received the Top Poster Award for her presentation, "An Imaging Study of the Diaphragm and Accessory Respiratory Muscles in Duchenne Muscular Dystrophy" at the New Directions in Biology and Disease of Skeletal Muscle Conference in New Orleans.

The Rehabilitation Science Outstanding Publication Award was given to Shabnam Medhizadah (Constructing the 32-item Fitness-to-Drive Screening Measure) and Caitlin Banks (Methodological Choices in Muscle Synergy Analysis Impact Differentiation of Physiological Characteristics Following Stroke). These publications appeared in top rehabilitation science journals. Congrats to Shabnam and Caitlin!

Katie Butera received a PODS II Award from the Foundation for Physical Therapy. This award provides support for her ongoing research efforts on factors contributing low back pain. In addition, Katie also received a Scholar Award from the International Chapter of the P.E.O. Sisterhood.

Kavya Kamalamma won an Outstanding Poster Presentation award at our 13th Annual Neuromuscular Plasticity Symposium. Kavya also won an award as one of the top presentations at the annual College of Public Health and Health Professions Research Day.
Shabnam Medhizadah participated in the annual Robert A. Levitt Awards for Student Research on Aging exposition and won second place for her presentation on the “Construction and Validation of the 32-item Fitness-to-Drive Screening Measure.”

Raele Robison, a third-year RSD student, was awarded Best Poster for her research presentation, “An Examination of Lingual Physiologic Reserve in Individuals with ALS,” at the Dysphagia Research Society (DRS) Meeting in Baltimore. She also received the NIH National Institute of Neurological Disorders and Stroke Diversity Supplement Research Award NS100859.

New RSD graduate Dr. Lauren Tabor received the College of Public Health and Health Professions Dean’s Scholar Award. Lauren was nominated for this award due to her excellence in the classroom, clinic, and laboratory. She graduated with nine peer-reviewed publications including three as first author. She also wrote three book chapters and presented at more than a dozen local, national, and international conferences.

Abby Wilson was awarded a PODS I scholarship for her project titled, “A Mechanistic Approach to Management of Patients with Musculoskeletal Pain.” This prestigious and highly competitive award provides funding for Abby’s doctoral research.

Tommy Sutor was invited to speak at the Working 2 Walk Science & Advocacy Symposium in Vancouver, British Columbia. The organizers asked him to share the story of how his experiences as a strength and conditioning coach with spinal injury patients motivated him to be part of the movement to cure spinal injury. In addition, he will have the opportunity to present the initial results from his PhD dissertation studies focused on rehabilitation in persons with spinal cord injury.
Student Publications & Presentations


Butera KA, George SZ, Borsa PA, Dover GC. Prolonged reduction in shoulder strength after transcutaneous electrical nerve stimulation treatment of exercise-induced acute muscle pain. Pain Practice. 2018. [In Press]


Alayna Ernster also presented her work at the 2018 Dysphagia Research Society Annual Meeting in Baltimore, MD, on "Cross pathway transfer between the ankle and tongue."

Aly Rivet presented her poster on "Swallowing lingual pressure replication in healthy young and older adults" the Dysphagia Research Society Annual Meeting.


Michele Singer gave a poster presentation at the Dysphagia Research Society Annual Meeting entitled "Changes in swallowing mechanics before and after lung transplantation."


**Vose, AK., Marcus, A., Humbert, I. Kinematic Visual Biofeedback Improves Accuracy of Swallowing Maneuver Training and Accuracy of Clinician Cues During Training in Post-Stroke Patients with Dysphagia. Physical Medicine and Rehab, [Accepted]**


**Joseph Wasser** will be speaking alongside Dr. Heather Vincent at the America Academy of Physical Medicine and Rehabilitation Annual Meeting in Orlando, FL in October.

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**Fun Facts about RSD Students and Faculty**

**Justine Allen** was born and raised in NY and grew up in an Israeli-Iraqi household as a first-generation American. She worked as a waitress, make-up artist, sold her art and freshly squeezed juice, and even filled in as a bat/bar mitzvah dancer to put herself through school. She says the last one was the most fun!

**Katie Butera** started training jiu-jitsu this summer.

**Carlyn Ellison** is a caseworker for the American Red Cross.

**Dr. Fuller** competed in the 2018 Pan American Masters Swimming Championships in July. He swam the 50, 100, and 200-meter freestyle, 50-meter butterfly, and two relays. He won the silver medal in the 200 free!

New student **Jaewon Kang's** has never lived in the US -- she is looking forward to experiencing a new culture and especially delicious foods!

**Sharon Medina** enjoys tap and salsa dancing.

**Michela Mir**, originally from WI, is a cheesehead through and through! She has resided in Fort Lauderdale for almost 12 years and is looking forward to her family's new adventures in Gainesville.

**Raele Robinson** was asked by the Pulmonary Hypertension Association to write a blog post detailing her journey as a student living with PH [https://phassociation.org/unknown-led-certainty-phd-student-ph-patient-raele-robison/](https://phassociation.org/unknown-led-certainty-phd-student-ph-patient-raele-robison/)

**Sarah Skinner** is a competitive powerlifter and professional natural bodybuilder!

**Alicia Vose** and her husband welcomed their baby boy, Hudson Scott Simpson, into the world on Tuesday, July 24!

**Joseph Wasser** is training for his third half-marathon in December.

**James Wersal** is an avid hiker, traveler, and adrenaline enthusiast. He has been to 48/50 states and several international locations and is still consumed by wanderlust.