



SPRING/SUMMER 2023



# facets



**Transforming the  
future of education.**

**Kim Nixon-Cave**  
Program Director and Professor  
Doctor of Physical Therapy  
Hybrid Program



University of  
Pittsburgh

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SPRING/SUMMER 2023

## WELCOME TO FACETS.

The University of Pittsburgh School of Health and Rehabilitation Sciences (SHRS) is a leader in the field of health care education, with several of our programs ranked among the best in the country and with alumni representing SHRS around the world. Inside every issue of our alumni magazine, FACETS, you'll discover many sides of the SHRS legacy. You'll hear how our students and faculty continue to step out boldly and confidently in the classroom, in the lab and in the community. You'll learn how our bold moves lead to innovations and collaborations, groundbreaking research and meaningful connections. You'll get a sense of our past. And the vision that drives us to shape the future of health care.

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**Pitt SHRS**  
School of Health and  
Rehabilitation Sciences



Even as I approach almost a decade as dean, it's still a pleasure to introduce another edition of FACETS magazine. We hope you are enjoying its new format as we work to ensure each publication reflects and demonstrates the wonderful people and vast initiatives supporting our school's mission.

**In regard to the proverbial “three-legged stool” of academia—research, service and teaching—you’ll see from this issue that SHRS continues to excel.**

When it comes to cutting-edge research, such as Artificial Intelligence (AI) in the rehabilitation space or innovations in autonomous vehicles, SHRS continues to have an extremely robust and diverse portfolio. Recently, we moved up five spots into eighth place among “Schools of Allied Health” in the Blue Ridge Rankings which compares schools around the country on their NIH funding. SHRS has once again crossed the \$30-million level in research expenditures, a level achieved through the reputation, collaboration and expertise of our researchers who are dedicated to team science.

From a service perspective, our faculty, staff and students continue to actively engage in our communities. We are offering aphasia support through the Wellness Pavilion at Pitt's Community Engagement Center in Homewood. We are helping to create pathways to success for individuals with disabilities through the Center for Assistive and Rehabilitation Technology, or CART program, at the state's Hiram G. Andrews Center in Johnstown. Perhaps there is no better indication of our impact than the recognition of our faculty and staff at the highest level by their peers at leading national and international organizations.

Our academic programs continue to innovate and push the envelope in delivering the highest quality education to our students. The Doctor of Physical Therapy and Physician Assistant hybrid programs are well underway, successfully demonstrating our leadership in teaching new health care professionals near and far. Read about

the influence of our online post-professional Doctor of Clinical Science (CScD) in Occupational Therapy program through the eyes of its graduates as they apply their newfound knowledge and skills into their daily practice. Our Emergency Medicine and Athletic Training programs are ahead of the curve in providing the very best in training when it comes to emergency responder care. Finally, join me in learning how Prosthetics and Orthotics students get an inside look at the newest technologies to better prepare them for the future of their profession.

I cannot tell you how pleased I am with the progress that our school has made over these past eight years. It's a tribute to our excellent faculty, dedicated and skilled staff, motivated students and talented alumni that exemplify the category of “best and brightest.” We look forward to a future with even more accomplishments.

On a personal note, I want to thank Vice Dean and Professor Debbie Miller for her service and leadership at SHRS and our Physical Therapy Department over the past two decades. It has been an honor and privilege to work beside Deb for more than 25 years at both UPMC and Pitt. There is no better role model for leadership. Her influence on SHRS has been nothing short of transformative. We all wish Deb well as she settles into retirement and enjoys the next phase of her life. (Read more about Miller's retirement on page 40.)

Anthony Delitto  
Professor and Dean





# perspective

We often express that we've taken specific actions for great causes. We walk. We run. We volunteer. We give. There are plenty of causes and plenty of ways to give. We donate items. We share skills. We give our time. We even dedicate our careers. Most people give because there's a personal story behind their cause. Here at the School of Health and Rehabilitation Sciences, there is no shortage of stories. (Look at how many pages are in this magazine!) Behind each story is a cause, and a passionate person or team working to improve what is or to achieve what isn't. This is what unites us. This is what moves us forward. This is what compels us to share our story, so you can join us. So you can help us.

Almost every one of us has a personal story that connects us back to the many causes here at SHRS. As you read through these stories, how many times can you relate? Do you have a child playing sports under the watchful eye, care and expertise of an athletic trainer? Do you have loved ones experiencing cognitive deficits, mental health challenges or mobility issues? Do you live in an area in need of more health care resources or services?

I guarantee that someone here at SHRS is dedicated to your cause. If you are looking for a personal and meaningful way to give, let me introduce you to Kevin Platz, our new director of Development. Platz brings a wealth of nonprofit fundraising experience to this role, including individual and corporate giving, sponsorships and special events. Previously, he worked at Focus on Renewal and the Orrville Ohio Boys and Girls Club where he oversaw a successful \$2.8 million capital campaign which was completed in a record four months.

"Development work provides me with the challenges I need daily and the excitement to help people achieve their goals," expresses Platz. "I believe education is the passport for the future! What excites me most about SHRS are its vast areas of study and the research being done to help people."

Discover contributions in action by reading about SHRS' "Transformative Gifts" on page 32.

**Contact Kevin Platz today  
at [k.platz@pitt.edu](mailto:k.platz@pitt.edu) to learn  
ways to give to, or support,  
SHRS' many causes.**



*"Perspective" is written by Natalie Baney, FACETS executive editor and SHRS executive director of Marketing and Communications. This column serves to address topics related to our students, faculty, staff, the school, and local and global communities.*





# Nancy Gauvin:

## New Associate Dean of Equity, Diversity, Inclusion and Community Engagement for SHRS

The title may be new to Nancy Gauvin, but her role as SHRS associate dean of Equity, Diversity, Inclusion (EDI) and Community Engagement has grown out of years of dedication and work in this arena.

Gauvin, assistant professor in the Department of Communication Science and Disorders (CSD), is passionate about inclusion, infusion and belonging in the health sciences. At her former post, she developed a successful and thriving gender-affirming voice community program and created an interdepartmental and diverse travel program that benefited students and faculty.

Since coming to the University of Pittsburgh in 2021, Gauvin has developed the first national intercollegiate affiliate chapter of the National Black Association for Speech-Language and Hearing (NBASLH) in conjunction with other higher education institutions in the area, including Duquesne, Carlow and PennWest Universities.



“My vision for EDI touches on all aspects of SHRS, from admissions and recruitment to EDI training and mediation, curriculum review and research success. Throughout it all will be a heightened involvement with our community partners,” says Gauvin.

Although her appointment just began on April 1, Gauvin has already compiled lists of initiatives to plan, do and study over the next few years and is currently assembling a formal team who will be dedicated to implementing those initiatives.



Read the official announcement of Associate Dean Gauvin’s appointment.



Nancy Gauvin, assistant professor, Department of Communication Science and Disorders, is the new SHRS associate dean of Equity, Diversity, Inclusion and Community Engagement.

# Introducing the future: >>>

## The new HexAI Research Lab



The HexAI podcast series offers a professional discussion forum for health care data scientists, students and AI practitioners to present, share and discuss the latest research findings, innovations, challenges and opportunities in digital health sciences and AI-powered health care.

Tune in to the Health and Explainable AI podcast.



In 1950, Alan Turing intrigued scientists and science fiction fans alike by posing the question, “Can machines think?” In the 1968 film, “2001: A Space Odyssey,” HAL 9000 took viewers on a spectacular adventure through space, and today the world routinely engages in conversations with ChatGPT.

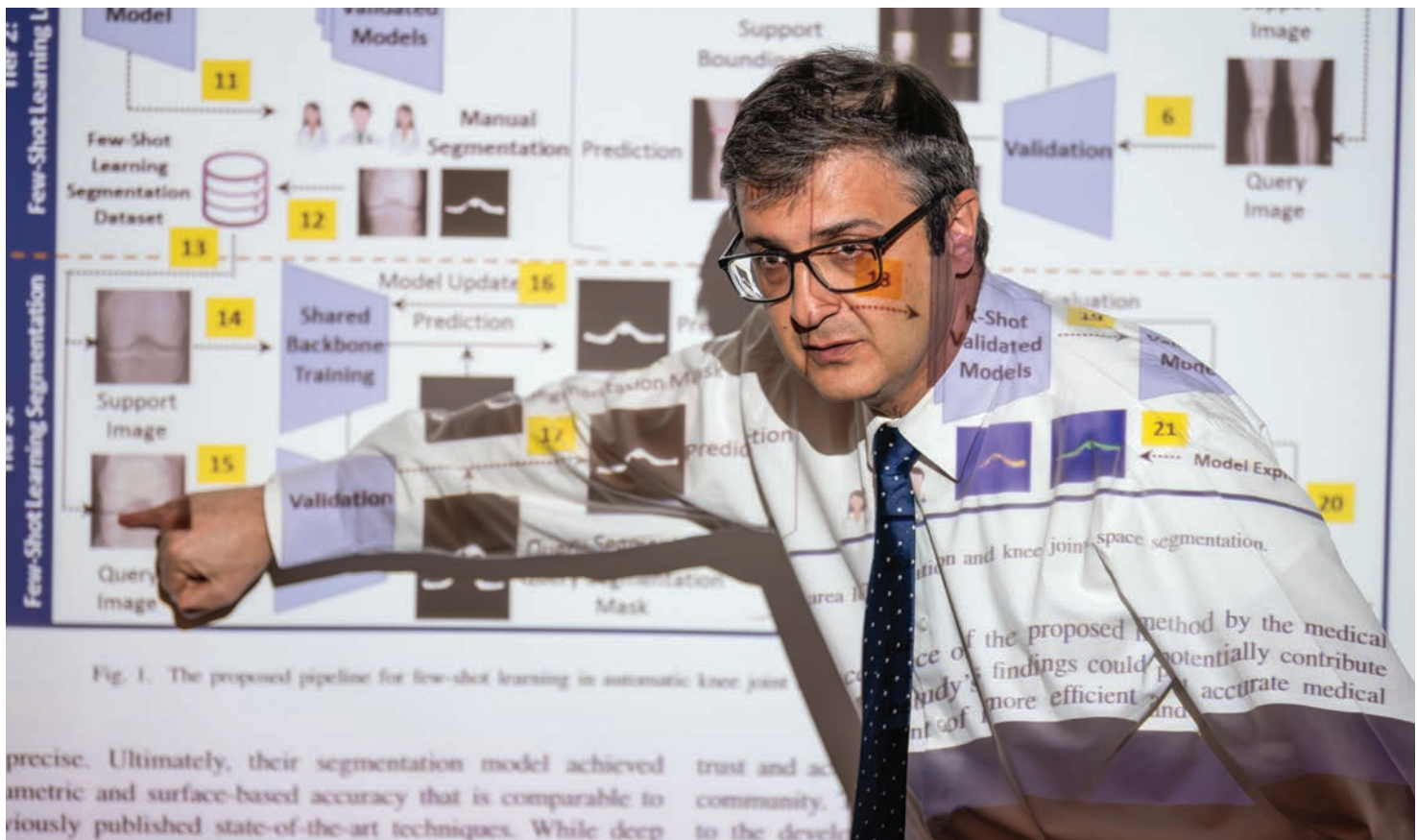
Although Artificial Intelligence (AI) has evolved over the past 70 years and has been embraced by some members of the health care community, the HexAI Research Laboratory in the Department of Health Information Management (HIM) stands alone.

According to Health Informatics (HI) Assistant Professor Ahmad P. Tafti, director of the Pitt HexAI Research Laboratory, “The HexAI Lab not only combines AI strategies with clinical data, it also improves AI-powered clinical applications by promoting AI explainability and interpretability.”

### HEXAI STANDS FOR HEALTH + EXPLAINABLE AI.

Tafti and his team focus on engineering, implementing, validating and deploying cutting-edge fundamental and applied AI and machine learning algorithms to solve real health care problems, mainly in musculoskeletal diseases and disorders.

The lab focuses on harnessing and analyzing medical images from the local medical community as well as publicly available imaging datasets, such as those provided by the National Institutes of Health.



Ahmad P. Tafti, director, HexAI Research Lab

➤ **Explainable AI uses scientific data along with machine learning to solve problems.**

With AI explainability, the lab develops scientific visualization methods to clearly find patterns and differences among various models and to help make decisions.

“Health care providers are accountable for the care they provide,” says Tafti. “Explainable AI can help ensure that AI systems are also held accountable.”

“The HexAI Lab aims to advance research in musculoskeletal disorders and total joint arthroplasty with the power of explainable AI,” he continues.

“In the current health care environment, image analysis is prone to variations in individual interpretations of the same image,” notes Dr. F. Johannes Plate, HexAI clinical associate director and director of Adult Reconstruction Research, Department of Orthopaedic Surgery, University of Pittsburgh.

“The development of AI algorithms that identify musculoskeletal conditions can improve diagnostic accuracy,” he continues.

“In the field of total joint replacement, explainable AI has the ability to diagnose stages of degenerative cartilage loss to allow clinicians to recommend an appropriate patient-specific treatment plan,” says Plate.

Health Informatics graduate student Ismaeel Siddiqui helps to curate fully annotated medical image datasets that help provide a precise and accurate reference point for AI models to learn from.

“With more accurate annotations, the AI models are better able to identify the specific regions of interest and make more accurate predictions,” says Siddiqui.

A multi-disciplinary team of experts, including data scientists, health informaticians, surgeons and other clinicians meet to review and discuss data. “We believe we are developing the gold standard in explainable AI,” says Tafti.





Ahmad P. Tafti leading a discussion on how to build, train and validate explainable AI (XAI) algorithms to analyze radiology imagery.

## ENHANCING PERSONALIZED CARE.

Yanshan Wang, HI assistant professor and vice chair of Research, serves as an advisory board member of the HexAI Lab. Among other things, he helps to shape research activities with meaningful deliverables and oversees the dissemination of research findings.

“When we integrate a patient’s electronic health record with other health care data sources, we can provide a more comprehensive view of that patient’s health status,” says Wang. “This integrated data can then be used to develop more sophisticated AI models that can predict health outcomes with greater accuracy and provide personalized care recommendations based on individual patient characteristics.”

Physicians can spend less time acquiring all the necessary clinical information and more time discussing specific treatment options with the patient.

“It is rewarding to know we are developing AI algorithms for personalized treatment in musculoskeletal settings that patients and providers can clearly understand so that we can optimize health outcomes,” adds HI graduate student Deanelle Thompson.

When it comes to patient care, accountability and explainability are vital. As lab assistant and HI student Christina Letter points out, “Our work can help ensure that AI systems are accountable for their decisions and that potential decision-making issues can be traced back to their source.”

“Building accountable and explainable models also builds trust with the providers who use them by allowing them to clearly understand how AI systems arrive at their decisions,” says Letter.

In its first year of operation, the HexAI Lab received an award from the University of Pittsburgh Clinical and Translational Science Institute (CTSI), part of the National Institutes of Health (NIH) nationwide network that provides the support necessary to bridge the gap between research and effective clinical and public health practice and policy. It was also tapped for the prestigious Oracle for Research Award.

“We believe explainable AI is the model for the future,” Tafti continues. “We are driven to deliver clear reliable data, a proven model of research, and a way to explore and solve problems that are meaningful and make the most positive impact on people’s lives.” ■





# Rory Cooper.

**The man. The legend. The selfless servant.**

On Oct. 26, 2023, Rory Cooper, distinguished professor, will join the likes of Thomas Edison and Steve Jobs when he is inducted into the National Inventors Hall of Fame at a gala in Washington, D.C., as part of their 50th anniversary celebration.

While the rest of the country—and the world—will know him for his innovations in manual and electronic wheelchair technology, his colleagues at SHRS already know him as the founder of the prestigious Human Engineering Research Laboratories (HERL), and as a person deeply committed to the veteran community and improving the quality of life for anyone with disabilities.

**“Rory is an innovator. He’s taught me how to tackle challenging problems and how to manage a research team. He lends a unique personalized perspective to each research project.”**

—Alicia M. Koontz  
Professor and Senior Associate Director  
for Research, HERL

**“Rory is collaborative. I worked closely with him for many years and the most enjoyable times were when we were working together to find a technical or engineering solution to a hard problem. Those experiences taught me how important it is to support and promote collaboration—it is often the new student, faculty or intern that surprises you with an insight that the rest of the team missed.”**

—Jon Pearlman  
Associate Professor and Chair  
Department of Rehabilitation Science and Technology

**“Rory is witty. He taught me that the word ‘can’t’ is not acceptable. He gave me a greater awareness of the world of disabilities and helped me learn ways to break down negative stereotypical perspectives towards people with disabilities.”**

—Hervens Jeannis (PhD '18)  
Human Systems Engineer, The Boeing Company

**“Rory is tenacious. He has a long history of conceptualizing and supporting training grants for students at all levels. This can be very impactful for students to see themselves in this profession and understand what it takes to get there.”**

—Mary Goldberg  
Associate Professor  
Department of Rehabilitation Science and Technology

**“Rory is a force of nature. What people may not know about him is that after long hours at HERL, or working with a veteran’s group, he still takes time to play with his tabby cat, Siska!”**

—Rosemarie Cooper  
Associate Professor and Associate Director  
for Stakeholder Engagement, HERL

**“Rory is relentless. Rory and HERL have an esteemed place in the rehabilitation sciences. For a school like SHRS, where we have a focus on rehabilitation, there is no better advocate for people with disabilities than Rory Cooper.”**

—Anthony Delitto  
Professor and Dean  
School of Health and Rehabilitation Sciences

Watch the video on the  
story of Rory Cooper.





# feature story



DPT Hybrid students practice hands-on skills under the guidance of alumna and Program Director Kim Nixon-Cave during one of two spring immersions in Pittsburgh.



# Transforming the future of education.

## A 360-degree view of the DPT Hybrid program.

Twice every semester, Kim Nixon-Cave leaves her home in Voorhees, New Jersey, and heads to Philadelphia International Airport for the hour-long flight to Pittsburgh. Her mind is racing faster than the plane itself. She's anticipating the six to 10 days ahead of her.

There are rooms to set up, faculty to consult with, activities to coordinate, and most importantly, approximately 90 students from all over the country to meet, greet and teach.

As professor and program director for the hybrid option of the Doctor of Physical Therapy (DPT) program, Nixon-Cave is both commander-in-chief and artistic director of a unique component of the hybrid students' experience—the immersion.

Her energy is palpable.

"Every time we have an immersion, I say it's like a Broadway show," explains Nixon-Cave. "You bring in all the equipment, you stage it and then the play runs for maybe a 10-day stretch. When it's over, you take out all the equipment, pack it up and move on to the next city—or in our case—the next immersion."

During immersion, hybrid students come to Pittsburgh to get intensive, hands-on training that supports the rigorous didactic content that they have already learned remotely in both asynchronous and synchronous formats.

"The opportunity to offer this excellent program is exciting," notes Nixon-Cave. "It allows students who might not have otherwise been able to come to Pitt to receive an excellent physical therapy (PT) education."

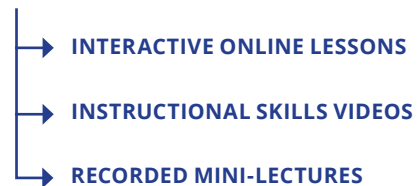
Hybrid students are held to the same high standards as residential students and follow the same curriculum. Only the delivery method is different.

### DPT HYBRID STRUCTURE:

#### COURSES

##### ➤ ASYNCHRONOUS CONTENT

(same didactic content as residential program)



##### ➤ WEEKLY SYNCHRONOUS GROUP DISCUSSIONS

#### LABS

##### ➤ REMOTE LAB ACTIVITIES

##### ➤ ON-CAMPUS IMMERSIONS, TWICE PER TERM FOR THE FIRST FIVE TERMS

##### ➤ CLINICAL OPPORTUNITIES IN THEIR LOCAL COMMUNITIES



## > Ready.

Early in March, 92 students from around the country came together for the second immersion of the spring semester. They are members of the second cohort of DPT Hybrid students.

## > Set.

Forty-nine treatment tables were set up at the David L. Lawrence Convention Center to give students the chance to practice hands-on skills.



## > Immerse!

The number of hours hybrid students spend in immersion labs equals the same number of hours residential students spend in labs over the course of each semester.





“The diversity of our students is amazing!” Nixon-Cave continues. “Not only do we have students who are racially and geographically diverse, we have students who come from the military and others who are starting a second career. Some students have families, and some come straight out of undergraduate programs.”

“Our goal for the hybrid option was to make the DPT program more affordable and accessible without adversely affecting the educational outcomes for which our program has long been known,” states Chair and Department of Physical Therapy Professor James Irrgang.

“The hybrid program is good from a financial aspect. It allows people to stay within their hometowns. It’s especially good for people who live in communities that don’t have a lot of resources or access to physical therapy clinics.”

—Shakari Cunningham (DPT '23)  
Kankakee, Illinois

“We wanted to expand the footprint of our current program to better include students from underrepresented populations and those who could not easily relocate to Pittsburgh for training,” adds SHRS Dean and Physical Therapy Professor Anthony Delitto. “We also wanted it to support students who may want to stay where they are and practice physical therapy after graduation.”

While developing the hybrid program, the Physical Therapy Department embarked on a process to reduce tuition for both hybrid and residential students by shortening the DPT program from nine terms over three years to seven terms over a little more than two years.

“I studied PT in Mexico many years ago. When I came to the U.S., I didn’t speak English so I needed to learn English before I could apply to PT school again. I chose Pitt because I have my schedule as a wife and mother of four. This hybrid program gives me that flexibility to work on everything.”

—Elena Luna Espinoza (DPT '24)  
Fort Worth, Texas

According to Irrgang, this change resulted in a savings of approximately \$25,000 for in-state students and approximately \$40,000 for out-of-state students.

## WITH CHALLENGES COME OPPORTUNITIES.

To ensure hybrid students meet the required number of clinical education hours, the DPT team forged new partnerships and contracts with sites all over the country. “A challenge to this process is that each year a new cohort of students enters the program,” says David Wert, Department of Physical Therapy vice chair and associate professor.

“I already know some of the clinical sites that I’ve been assigned to. As an athletic trainer, I’ve worked with them before and know some of the physical therapists. And so being able to help out the community in a different aspect is great. I enjoy the fact that Pitt is preparing us well and wants us to stay in here and help our own community.”

—Robert Prince (DPT '24)  
Tucson, Arizona

“Many hybrid students reside in regions of the country where we may not have existing clinical partners, so we must identify and vet new clinical sites with each new cohort. In spite of this, our team has had no problems placing students in every required clinical education experience,” continues Wert.

“To date, we have amassed a total of more than 600 possible clinical sites in which to place our residential and hybrid students, and the number is growing each year,” says Wert.”





“Maintaining the hybrid program is demanding because it is constantly evolving,” continues Nixon-Cave. “While it allows for increased diversity, we must support these students in every way we can.”

She says the first way is through exceptional teaching. “This is not pandemic teaching. It is purposefully designed for student engagement, both online and in-person.”

Faculty who are highly experienced in online teaching were recruited from all over the United States to join existing program faculty, creating an impressive team of educators.

“I discovered that the hybrid model really improves my teaching,” Nixon-Cave continues. “It forces me to think hard about what, how and why I’m delivering the content of that day’s lesson.”

Nixon-Cave explains that in the hybrid world, you need to chunk your lectures into 10- or 15-minute segments.

“There are no interruptions or distractions in the asynchronous recordings like you typically find in a face-to-face classroom lecture,” says Nixon-Cave. “You deliver succinct and meaningful information that prepares the students for participation in the synchronous sessions where they discuss and apply the information they have learned during their asynchronous work.”

Physical Therapy Professor Michael Lebec says he spends approximately three times longer to prepare his synchronous and asynchronous lessons than those he teaches in-person. He keeps students engaged by creating coursework that includes a variety of types of learning activities. “By changing up the format frequently in each lesson or class session, students are less likely to tune out,” notes Lebec.

He uses a polling application that allows students to respond anonymously to questions during synchronous learning sessions. “It’s one way they can test their knowledge or use learned information to solve a patient problem that we are discussing as a group,” he continues.



Nixon-Cave and DPT Hybrid students at the David L. Lawrence Convention Center during the spring immersion.

Associate Professor Kara Kobal notes there are differences in teaching remotely. “The biggest challenge was re-thinking traditional PT education to provide flexibility for our hybrid students to learn effectively. It required me to learn more about best teaching and learning practices to create engaging, interactive lessons.”

To ensure continuous improvement, all faculty continually seek input from students to further refine and improve teaching efforts and improve the overall student experience.

## BEHIND THE SCENES.

How can students master the hands-on skills of physical therapy at home? It takes unconventional thinking coupled with meticulous planning and untiring collaboration.

“None of this would be possible without the extensive support of SHRS’ Office of Online Learning (OOL),” points out Nixon-Cave. “We in the PT Department bring the content, but they bring the expertise.”

“The Office of Online Learning knows best practices for successful online teaching and learning.”



Watch our video on how DPT students do Hybrid at Home.

“As the No. 1 ranked residential program in the country, it was critical to undergird the course development with research-based instructional design principles and benchmarks of quality drawn from leading organizations such as Quality Matters and the Online Learning Consortium,” explains Rae Mancilla, assistant director of Online Learning.

Utilizing a one-to-one design model, the OOL pairs a faculty member with an instructional designer throughout the entire course development process. This model fosters the three main types of interaction necessary for student success: student-faculty, student-student and student-content.

“I have two kids, so they’re usually in the background when I make a video for class. Their dad is really hands-on and doesn’t mind me demonstrating my skills on him and recording since that’s a main requirement for various classes. It’s easy doing it at home. We mimic what we see from the videos that are online, so it’s pretty good.”

—Sandra Inmon (DPT ’24)  
Little Rock, Arkansas

Among other things, instructional designers help faculty create a variety of interactive activities.

“In Anatomy class, there’s a really cool app that shows everything in detail,” notes DPT Hybrid student Georgiana Voiebuna (DPT ’23) from Ashburn, Virginia. “You can move the mouse and see every side of the body. When we came into the immersion, we got to go to the cadaver lab. I could actually feel the muscles and I was able to put two and two together. We were very well prepared virtually.”

“This infrastructure—this support—is really unique to Pitt and is what makes the DPT Hybrid program so successful,” adds Nixon-Cave.

According to Reilly Reed (DPT ’23) from Chapel Hill, North Carolina, the rapport between students and faculty is outstanding. “It’s pretty unique that we have not only the best professors in Pittsburgh and in Pennsylvania, but throughout the entire country. They’ve been so helpful and encouraging and just are always there for you. They want you to do well.”

Fellow student Gabrielle Hofilena (DPT ’23) of Livingston, New Jersey, agrees. “I like that our advisors reach out and touch base with us. They ask, ‘How are you doing?’ and ‘How can I help?’ and ‘What can I do to facilitate your learning in this environment?’ It’s been really helpful to have that constant lifeline.”





As technology issues arise throughout the semester, students maintain access to a 24/7 technical support desk, where they can interact with a representative via live chat, telephone or email ticketing.



Residential and hybrid students came together on campus to take the Professional Pledge.

### BUILDING A COMMUNITY OF LEARNERS.

“The online activities and interactive learning tools not only give students the opportunity to engage with curriculum content—it encourages them to get to know each other and build a strong community of learners,” says Nixon-Cave.

“We work hard to develop camaraderie with our hybrid students prior to immersion, but there is nothing like seeing them in person,” adds Kobal. “There is excitement from both faculty and students.”

DPT Hybrid student Tere Lyn Jones (DPT '24) from Atlanta, Georgia, says, “The immersion helps you just puzzle everything together, not just the academics, but the skills, too. At home we had the videos and we would practice with our family or friends. But once you come here, you notice that a lot of your colleagues are going through the same thing. As we began to practice our skills, we’re able to say to each other, ‘Oh well, don’t forget, you might want to stabilize the arm here.’ Or, ‘What about...’ We’re able to converse more about things that we’ve learned.”

“What surprised me most was the commitment from students to support and encourage each other during each immersion session. As an instructor, I like seeing students cheering for each other and encouraging each other as their names are called for their individual hands-on exams,” continues Kobal.

There are many opportunities for students to learn from each other.

“I really look forward to the networking,” comments hybrid student Tatum O’Brien (DPT '23) of Pittsburgh. “It’s great to make connections with people from all over the country. It opens up opportunities for learning new things, for research, for seeing what clinical practice is like in different states—even jobs for the future.”

There are also opportunities for hybrid and residential students to interact with each other, especially during immersions.

Second-year residential student Mae Cody (DPT '23) from Glencoe, Illinois, says her class worked with the leadership of the first-year hybrid class to put together a memorial service for the donors in the cadaver lab in the fall semester. “It was a really meaningful event for us to thank the people who gave their bodies for us to learn,” explains Cody. “It was also a chance for us to get to know our hybrid classmates early on in their program.”

Cody says she has a few close friends from Pittsburgh in the hybrid program and constantly compares notes with them about classes and exams. “My hybrid classmates are absolutely brilliant,” she continues. “Only time will tell how the legacy of Pitt PT will continue to be shaped as we move forward!”

“We really are forging the way,” says Nixon-Cave. “There’s been a real interest in our program from other universities across the country. They ask how we developed our curriculum and what challenges we faced as they look to develop their own hybrid programs.”

**“At Pitt, we have the reputation and the resources and the support to do an exceptional job,” Nixon-Cave continues. “And that is exactly what we are doing.”**



## ➤ PAS GOES HYBRID. ANOTHER BOLD MOVE.

The U.S. Bureau of Labor Statistics predicts job opportunities for physician assistants will grow 31% between now and 2030. This intense demand for qualified health care professionals is just one of the reasons the Department of PA Studies (PAS) initiated a hybrid program in the spring semester of 2023.

“Although our residential program is highly successful, we wanted to create a hybrid PAS degree in order to attract students who might not be able to come to campus,” states Assistant Professor and PAS-Hybrid Program Director Christine Rodgers. “Our first cohort represents students from 22 states and every time zone in the mainland U.S.”

The program follows the same curriculum as the residential program, but with a “flipped classroom” pedagogy. Students take 12 months of synchronous and asynchronous online learning followed by 12 months of in-person clinical experiences.

The SHRS Office of Online Learning worked hand-in-hand with PAS faculty to design a program that not only meets the needs of a diverse group of learners but allows faculty to utilize best practices for online pedagogy, media development, assessment and evaluation, deployment of instructional technology and technical troubleshooting.



PAS-Hybrid students and instructors participate in hands-on activities during their immersion week.

“We want to ensure that our online courses foster the three major types of evidence-based interactions that are critical for student success: student-faculty, student-student and student-content,” explains Rae Mancilla, assistant director of Online Learning.



PAS-Hybrid student Jasmine Wong of Arcadia, California, says her experience with the program has been great so far. “I have been able to establish relationships with faculty mentors and collaborate with other students on in-class discussions and larger projects.”

Wong, a former project manager at a biotech software development firm, says this program will expand her knowledge of the health care field. “My ultimate goal is to move into health care policy,” says Wong. “Having the perspective of a PA will strengthen my ability to advocate for both patients and providers.”

“We’re excited that the new hybrid program gives more students access to quality PA training and allows them to advance their careers in a way that was not previously possible,” says Rodgers. ■

# Newly minted >>



Michaella Hayden (CScD '22) with her mentor Pamela Toto, professor and CScD in OT program director.





# agents of change.



Erica Van Eck-Lam (CScD '22) celebrating her achievement.

“Our first cohort of students came from different areas of the country and different professional experiences but they shared one thing—a passion for making our profession better!”

—Juleen Rodakowski  
Chair and Associate Professor

There’s something in the DNA of occupational therapists that propels them to seek out ways to implement positive change.

According to Juleen Rodakowski, associate professor and chair, Department of Occupational Therapy (OT), occupational therapists often seek ways to improve the lives of their clients. This desire spurs practitioners to wonder how to best deliver interventions and support their clients—or even how the use of evidence can influence the OT profession as a whole.

“We saw a need to create a post-professional program that empowers our practitioners to take the next step, to become clinical leaders in the field of OT,” says Rodakowski.

“Although we’ve had a highly successful in-person Doctor of Occupational Therapy (OTD) program since 2015, we understood that practicing clinicians would not be able to pause their careers in order to advance their education,” continues OT Professor and Program Director Pamela E. Toto.

That’s how the 100% online Clinical Science Doctorate (CScD) in Occupational Therapy was born.

The CScD is designed for practitioners who are ready to pursue a clinical doctorate. Using a combination of asynchronous and synchronous learning, students view short lectures and videos and complete readings on their own time, then meet virtually with faculty and members of their cohort one evening per week.

Toto says the faculty worked with instructional designers to ensure the students have the best possible experience. All online modules are designed in the same manner, so there’s a very short learning curve for students. They can quickly get into the content of the coursework without stressing over how to manage the technical aspect of online learning.



## IMPLEMENTING EVIDENCE.

Because students in the CScD program are already experienced clinicians, the curriculum focuses on developing advanced leadership and skill in implementing best evidence into everyday practice. It is highly personalized, based on the students' professional interests and goals.

Over the course of the program, students learn how to identify a need, interpret evidence, engage with stakeholders, influence change and implement their strategies.

After completing 34 online credits, students undertake an eight-credit independent capstone project that demonstrates their advanced knowledge for implementing evidence into practice. They present their results at a semi-annual colloquium which is attended virtually by as many as 300 practicing occupational therapists.

“Most research and evidence in the field of OT doesn’t get translated into practice,” notes Toto. “This has nothing to do with the quality of the research, but more so with barriers related to not knowing how to adapt it for a

specific context and the resistance of some individuals or the structure of some organizations—to accept change. It can be frustrating for clinicians.”

“In the CScD program, we arm our students with the skills and tools they need to break down barriers and become agents of change,” continues Toto.

Built into the clinical doctorate degree is a 12-credit Advanced Practice Certificate in Implementation of Evidence in Clinical Practice.

**“Ours is the only post-professional doctorate that’s anchored in implementation and knowledge translation—taking evidence and translating it into practice.”**

—Pamela E. Toto  
Program Director and Professor

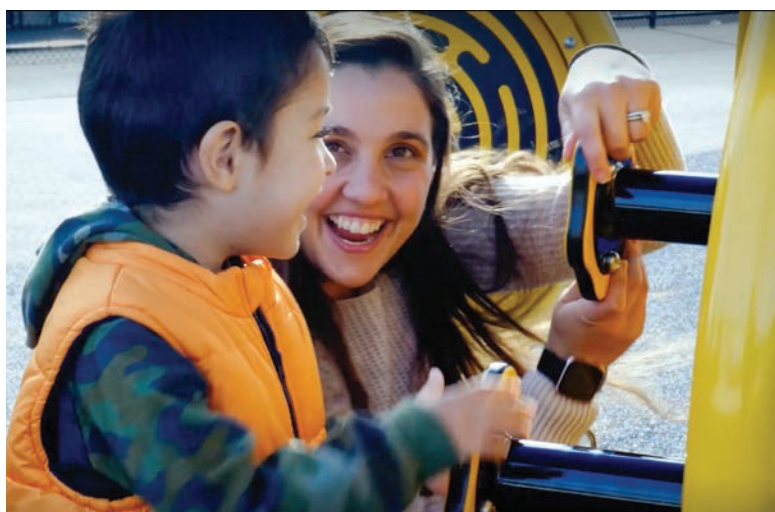


Top row, left to right: Associate Professor Angela Caldwell, Kelsey Watters (CScD '22), Program Director Pamela E. Toto.  
Bottom row, left to right: Associate Professor Ketki Raina, Donna Anderson (CScD '22), Erica Van Eck-Lam (CScD '22),  
Michaela Hayden (CScD '22), Associate Professor and Department Chair Julieen Rodakowski.



## Graduate reflections.

Members of the first graduating cohort have high praises for how the CScD program impacted their lives, both personally and professionally. ■



“This program gave me the confidence that I could take on a major playground improvement project and improve the lives of the children in our school.”

—Erica Van Eck-Lam (CScD '22)  
Occupational Therapist  
Saddle Brook Public Schools  
Saddle Brook, New Jersey



Watch the video about Erica's capstone project.

“For my capstone project, I was able to implement a collaborative, evidence-based practice group at our workplace and suggest some changes. I explained what I learned in my Theory of Change course and got my supervisor's buy-in to establish dedicated time to share research with our team.”

—Donna Anderson (CScD '22)  
Occupational Therapist  
Northwest Tri-County Intermediate Unit 5  
Erie, Pennsylvania

“I am in a leadership position in my organization, but found I was struggling with moving my work forward. The program showed me the path I needed to take in order to get from Point A to Point B. I was excited to use new tools to provide better evidence-based care to our patients.”

—Kelsey Watters (CScD '22)  
Clinical Practice Leader for Occupational Therapy  
Shirley Ryan AbilityLab  
Chicago, Illinois

“This program made me passionate about OT all over again. For my capstone, I focused on supporting individuals with physical disabilities who want to engage in commercial air travel. We noticed there was a huge gap when it came to accessibility, so I began looking at ways that we can address the need, even though there was not a lot of evidence right now.

By creating groups of stakeholders, we can slowly but surely discover the evidence we need to create huge changes.”

—Michaella Hayden (CScD '22)  
Adjunct Instructor, State University of New York at Buffalo  
Buffalo, New York







MSPO student Caitlin Bowman, left, and RST Assistant Professor Clive D'Souza, right, discuss mobility issues with patient.



# Assistive technology.

## ➤ Empowering diversity and inclusivity.

Everyone, regardless of ability or disability, deserves the right to an education, gainful employment and basic services, such as access to transportation to get where they need to go. Read how two different SHRS programs are using assistive technology to reduce barriers and improve the quality of life for people with disabilities, both today—and in the future.



D'Souza with patient in his new Inclusive Mobility Research Lab.

### Human factors engineering: Rethinking the transportation of the future.

In his new Inclusive Mobility Research Lab, Assistant Professor Clive D'Souza, Department of Rehabilitation Science and Technology, is re-imagining how technology works for people, especially in the field of transportation.

“We know that transportation is important to everyone,” notes D'Souza. “Whether they use buses or cars or curb-to-curb services such as the ACCESS vans seen around Pittsburgh, people rely on transportation to get to work or pick up groceries—or to take them places where they can have important social interactions.”

“Transportation as we know it can be a big barrier to people achieving their goals and needs,” he continues. “By collecting evidenced-based data and employing human factors engineering methods, we can influence how the transportation industry moves forward to ensure that everyone, including those with disabilities, can access safe and reliable transportation.”

D'Souza is currently focusing on automated driverless shuttles—a specific category of shared-use automated vehicles (AV). “The concept driverless shuttles we've evaluated to date are not ADA compliant. They don't consider if and how individuals with disabilities will use them,” says D'Souza. “Furthermore, we have shown that for the automated vehicle industry to retrofit AVs would not be cost-effective and might result in unsatisfactory tradeoffs in vehicle performance.”

“We are convinced accessibility must be considered from the onset,” says D'Souza. “The end goal is inclusive design.”



Through his current research, D'Souza wants to work with end users and transform the data he is collecting into design information that AV manufacturers, standards developers and policy makers can use.

A full-scale mockup of an automated driverless shuttle stands in his lab. "We are taking a person-centered approach," he continues.

The shuttle is completely reconfigurable, so engineers and scientists can study how users across a range of disabilities might interact with driverless vehicles in order to shape the design of these vehicles. Technologies to accommodate passengers with different needs consider wheelchair clearances and different ramp slopes for entry/exit, even in-vehicle information displays—all in an effort to make transportation of the future accessible for everyone.

D'Souza's work bridges the gap between what people use and need, and the information engineers and designers can use toward addressing those needs. For example, he says while some people might initially not feel safe using a driverless vehicle, they might feel safer if there were an onboard attendant, either an actual person or technology that could provide help if needed.

"A person serving as an onboard attendant might have completely different skills than today's bus or shuttle driver, skills that are more focused on assisting the passenger," notes D'Souza.

**"These new technologies provide us an opportunity to think differently about travel and mobility for all," adds D'Souza.**

He is already working with the U.S. Access Board, a federal agency that helps inform new ADA standards for accessible design.

Caitlin Bowman, a student in the Master of Science in Prosthetics and Orthotics program, shares D'Souza's excitement. She helped to develop a survey about the current use of transportation in Pittsburgh and barriers to accessibility.

"There is such an unmet need for affordable, reliable, accessible and safe transportation for individuals with disabilities," says Bowman. "I have seen this firsthand from my prosthetic and orthotic patients, and from my own experience and that of my family.

"Once you see this need, it's hard to ignore. Creating technology that is accessible from the start, rather than being made accessible as an afterthought, will ease access to care and increase justice and access to medical and rehabilitation care for everyone, not just persons living with disabilities," concludes Bowman.

**You can learn more about D'Souza's research at [www.includable.org](http://www.includable.org).**

## Reducing barriers to post-secondary education and employment.

Victoria Huston, graduate student in the Clinical Mental Health Counseling program, says she recently felt a fire spark deep inside her to work in the rehabilitative side of counseling.

"I have fallen in love with puzzle-piecing together solutions to find assistive technologies that are the best fit for people with disabilities," explains Huston.

At the Center for Assistive and Rehabilitation Technology (CART), Huston helps to evaluate the needs of students at the Hiram G. Andrews Center (HGAC) in Johnstown, Pennsylvania, where students have a variety of physical and cognitive disabilities.



Victoria Huston, right, graduate student in the Clinical Mental Health Counseling program, helps a client at the Hiram G. Andrews Center.



## WAY TO GO, VICTORIA!

We are proud to announce that Victoria Huston received the Pennsylvania Rehabilitation Association (PRA) Student of the Year award.



HGAC is the first and largest vocational rehabilitation facility in the state. It provides quality individualized post-secondary education through the Commonwealth Technical Institute. Pennsylvania's Office of Vocational Rehabilitation (OVR) refers individuals with disabilities to HGAC for pre-employment transition and support services as they pursue their goals of employment and independence.

**“Operating in a world that is inequitable is often discouraging for these individuals,” Huston observes.**

“However, once they are introduced to assistive technologies that can provide them with equal opportunities for success, many students report gaining confidence in their strengths and are more willing to advocate for themselves in the future,” she continues.

Jamie Kulzer, associate professor, Counseling, says CART provides the expertise needed to keep ahead of the changing face of rehabilitation.

“CART provides access to assistive technology that HGAC students might not have had before,” explains Kulzer. “If a student has difficulty typing, for example, CART can provide a modified keyboard or special software that converts text to speech. That can make all the difference in the world as to whether or not that individual can succeed in an academic class or in a particular job.”

She continues, “We just need to eliminate the barriers to their success.”

CART Coordinators Roger Little and Tamra L. Pelleschi with Assistive Technology Specialist Chad Schaffranek provide evaluations to determine an individual's

strengths, weaknesses, environment and goals in order to help them perform activities of daily living. This includes helping them improve their computer access and assists with executive functions such as memory and organization.

“Everything we do is personalized to the needs of our clients,” notes Little, who also serves as an instructor in Pitt's Counseling program. “Although we offer a wide range of accommodations, we want to make sure our clients choose the ones that work best for them. We stock a ‘loaner closet’ full of devices that students can borrow, based on our recommendations. They try them out before they request a purchase through OVR.”

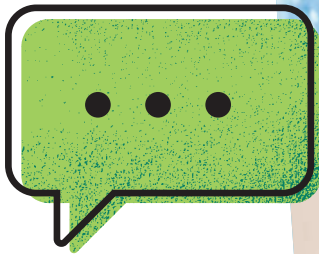
**“Connecting people with technologies has a profound impact on their lives,” notes Kulzer.**

In addition to cognitive and learning technologies, CART offers evaluation and training in wheelchair seating, home and worksite evaluations and modifications, including ergonomics, low-vision, pre-driving and accessibility assessments. ■





Support Group Coordinator  
Chrisa Kravetz (BA '09, MA '11)  
leading an Aphasia Support  
Group activity.



Participant Tina Harris and Kravetz  
engaging in a support group session.



Learn more about the  
Aphasia Support Group.

Aphasia Support Group participants  
during a group activity.





# Finding language. And friendship.

There's one date that's always circled on Michael Yerega's calendar. It's the second Wednesday of every month. Yerega knows on that day from 11 a.m. to 1 p.m., he will be attending the Aphasia Support Group at the SHRS Wellness Pavilion in Pitt's Community Engagement Center in Homewood.

"I really look forward to going," says Yerega. "I've met so many nice people there—people I probably never would have met otherwise. It's fun and a chance to talk to others about the things we have in common."

What the group has in common is aphasia, a language disorder that causes difficulty in reading, writing, speaking and understanding. Yerega developed aphasia after a stroke about six years ago. Others may develop the condition after a traumatic brain injury or tumor, and there is a progressive form of aphasia associated with dementia.

➤ **Approximately 2 million people in the U.S. currently have aphasia, and nearly 180,000 more acquire it each year, according to the National Aphasia Association.**

"Aphasia affects everyone differently," notes Professor Sarah Wallace, Department of Communication Science and Disorders (CSD). "Some have mild difficulties while others have very severe communication problems."

"The important thing to remember is these are multi-dimensional people who still have thoughts, opinions and emotions. They know what they want to say but have difficulty finding the language to get their message across," she continues.

Wallace and CSD Assistant Professor Will Evans, both principal investigators for the Pittsburgh Translational Aphasia Research Initiative (PTARI), founded the Aphasia Support Group in early 2022 along with CSD Professor Michael Dickey and William D. Hula, speech pathologist at the VA Pittsburgh Healthcare System. They hoped it would be a way to build community and provide social interaction for this population.

Although Pittsburgh, with its many universities and research centers, is renowned for its aphasia research, there has never been a support group like this—one that is embedded in the community and has a psycho-social focus.



Professor Sarah Wallace with Kravetz at the SHRS Wellness Center.

“It's important to have a safe place where people with aphasia and their support givers can meet and interact without fear of judgment or ridicule,” says Wallace.



PTARI Lab members hosting a meeting with external participant and stakeholder via Zoom.

One member, a former baker, came to the meeting and baked cupcakes for the group in the kitchen of the Wellness Pavilion. It was the first time he had baked since his stroke.

“Although his communication skills are limited by his condition, he allowed others to get to know him through his baking skills,” continues Kravetz. “Everyone enjoyed his delicious cupcakes—and getting to know him better!”

“There are many ways to help people with aphasia,” adds Evans. “But one of the most powerful is to set things up so they can help each other. When you bring together people who share similar experiences, it is empowering.”

According to Evans, “The peer support is quite wonderful. Instead of having a speech-language pathologist always leading the discussions, members of the group are welcome to step up and talk about their experiences or offer suggestions to deal with specific issues.”

Speech-language pathologist and alumna Chrisa Kravetz (BA '09, MA '11) serves as the support group coordinator. She says members of the group definitely feel a connection to each other.

“They share ideas about their experiences, concerns and achievements,” explains Kravetz. “For example, one member was looking forward to meeting an old friend who did not know about his aphasia. He was struggling with how to explain his new way of communicating. Members of the group were very supportive and encouraged him to be himself, as that is what has worked for them in similar circumstances.”

Meetings typically include a time to meet and greet, ask questions and share anything that’s on their minds. Sometimes there is a guest speaker who provides new information or insight into the condition.

The highlight of the monthly meetings is the member spotlight, a chance for members to share something special with others.

She says other members shared vacation photos with the group, which prompted a lot of conversations about travel, scenery and a variety of related topics.

“The member spotlights add a different dimension to the group dynamic,” declares Kravetz. “Now we not only have a good educational meeting, it’s something much more personal, more meaningful.”

Sara Worsham, an undergraduate Communication Science major, helps with various tasks during the group meetings. As she gets to know members of the group, she’s gaining a better understanding of aphasia.

“This group is so important because it gives people with aphasia and their caregivers access to resources and strategies to help them work through their journeys with aphasia,” says Worsham. “The members seem to appreciate having a community of people who understand what they are going through and are there to help.”

“For me, I like the group because we all have the same problem,” adds Yerega. “Someone might have an idea about something and we can discuss it and try it out and see if it works for us.”

**“This group reminds me that most people want to improve themselves and help others do the same,” Yerega continues. “It’s a really nice thing.”**



## ➤ A FOND FAREWELL

Cheryl Messick, professor emeritus, arrived at SHRS in 1997—the same time the University of Pittsburgh Speech and Hearing Clinic in the Cathedral of Learning was about to close its doors. But other doors soon opened for the new assistant professor.

Under the direction of Mick McNeil, faculty emeritus and former Communication Science and Disorders (CSD) chair, Messick became part of a team charged with building a new model for educating future speech–language pathologists (SLPs) and audiologists.

Messick took up the task of building a clinical network, one in which students could learn in the real world, in clinics staffed by master clinicians.

“It was a revolutionary model,” notes Messick. “Students would get a great clinical experience, while they saw firsthand the importance of making patients their No. 1 priority.”

Today, the SLP program boasts more than 100 clinical partners, which includes a collection of UPMC and community sites, as well as other types of practices across the Pittsburgh region.

“Cheryl brought an evidence-based, systematic approach to clinical instruction and assessment,

which became a model for similar graduate programs across the country,” notes Catherine Palmer, CSD interim chair and professor.



“She always put student outcomes first,” adds Elaine Mormer, CSD professor and vice chair for clinical education. “Cheryl modeled an outstanding level of professionalism as a clinician and an educator. She pushed her students to consider all aspects of clinical cases, particularly those focused on family-centered treatment.”

Messick’s involvement with the LEND (Leadership Education in Neurodevelopmental Disabilities) program emphasized her interest in family-centered care and promoting interdisciplinary health care.

“It’s brought a lot of joy to me, professionally,” says Messick.

“My time at Pitt has been wonderful,” she continues. “I’ve been lucky to have a job I love and colleagues, students and community partners who are so supportive and committed to patient care.” ■

## ➤ HIGHEST HONORS



Professor and CSD Interim Chair Catherine Palmer receives award at American Academy of Audiology conference.

The American Academy of Audiology recently bestowed one of its highest honors—the 2023 Honors of the Academy Award—on Catherine Palmer, professor and interim chair, Department of Communication Science and Disorders. Palmer’s contributions to clinical practice, research, education and advocacy for and service to the profession have spanned nearly four decades.

Palmer, who received the academy’s Presidential Award last year, is humbled by the continued recognition. “This award is a result of my incredible good fortune in having a career at the University of Pittsburgh and UPMC with colleagues who are always focused on what is best for the people we serve, whether that be our patients or our students.” ■









# Every day is Game Day!

**Practice and collaboration  
make a winning combination.**

On Jan. 2, 2023, sports fans around the world held their collective breath as they watched Buffalo Bills defensive back Damar Hamlin suffer sudden cardiac arrest on the field during a Monday night football game against the Cincinnati Bengals.

What they may not realize is they were watching a highly orchestrated medical rescue—one that is rehearsed day in, day out in every sports facility in the country, from schools and community parks to colleges, universities and professional athletic venues.

Kevin Conley, associate professor and chair, Department of Sports Medicine and Nutrition, notes that every team, every facility has an emergency action plan (EAP).

Students in the Athletic Training (AT) program learn how to create EAPs as part of their coursework. “Each EAP is venue-specific,” explains Assistant Professor Amy Aggelou, AT program director. “Each venue has different equipment and resources, so AT students must understand what is available to them in each facility.”

“The ultimate goal is an effective assessment and treatment of the athlete,” says Conley. “And the key to that is prompt medical attention.”

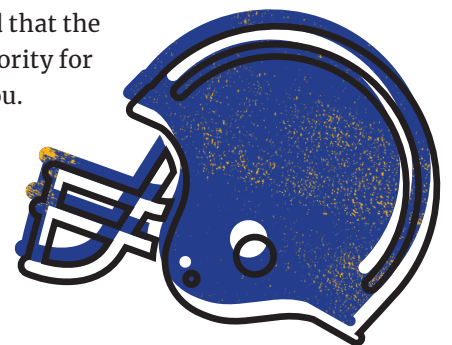
Dr. Ronald Roth, professor of Emergency Medicine at the University of Pittsburgh School of Medicine; associate program director, Emergency Medical Services (EMS) Fellowship at SHRS; and emergency

physician for the Pittsburgh Steelers, explains that prior to every NFL game, medical personnel from both teams get together an hour before kickoff for what the league calls a “60-minute meeting.”

Aggelou says it’s equivalent to a pre-competition “medical time out,” and it’s becoming a standard of care before all athletic contests, even those in middle and high schools.

Roth often leads these meetings when the Steelers play at Acrisure Stadium. “We have the entire medical staff from both teams get together and review the EAP,” he continues. “There are emergency medicine physicians, orthopedic surgeons, neurosurgeons, paramedics, X-ray technicians, airway specialists and spotters coming together to ensure they each know what they will be expected to do, what equipment will be available to them and what signals will be used to call out a medical crisis.”

“This ensures that all medical personnel understand that the patient is the No. 1 priority for all of us,” adds Aggelou.



AT students routinely practice spine board extrication from the pool, the gymnastics pit and on the ice.

➤ In the NFL, the airway management physician wears a red hat and typically stands on the 30- or 40-yard line. He may be one of the first medical personnel on the field when a player goes down.

“In any medical emergency that involves athletes, it’s critical that emergency medical personnel are there to support the athletic training and sports medicine staff, and vice versa,” adds Thomas E. Platt, professor and chair, Department of Community Health Services and Rehabilitation Science. “That’s one of the reasons we are committed to interprofessional education.”

AT and Emergency Medicine (EM) students have a lot to learn from each other.



“Cross-training helps us acknowledge that we have a shared skill set and allows us to be collaborative and professional when we are both on the scene of an injury,” says Platt.

He notes that in the past, AT students were required to take a first-aid course as part of their training. “Now, AT students actually become certified Emergency Medical Technicians (EMT) before their first clinical experience. Having this EMT credential benefits our students because they gain a working knowledge of how to appropriately respond to a medical crisis.”

One example is spine-boarding: the technique of transporting an individual with a suspected head, neck or spine injury. While EM students learn to become experts in spine-boarding a patient who may have been injured on the ground or in a car crash, they may not have experience extricating an injured athlete from a gymnastics pit, swimming pool or hockey rink. Athletic trainers, on the other hand, routinely practice these skills.

“ATs are also experts in removing equipment such as facemasks, helmets, jerseys and shoulder pads in an efficient and safe manner during a medical emergency,” adds Jon Andino (BS '08, DPT '11), assistant athletic trainer and physical therapist for the Pittsburgh Steelers. “Due to this expertise, we prefer to have the ATs remove equipment, if appropriate, prior to transporting an athlete to the hospital.”

➤ Legislation was recently introduced in the Pennsylvania State Senate that would mandate automated external defibrillators (AEDs) be present at any sporting event hosted by a school district. The proposal also calls for all coaches to complete training on the proper use of AEDs.

By routinely practicing skills, students are prepared for quick action when emergencies arise.





SHRS Emergency Medicine students lead a simulation exercise to practice responding to a patient.



“On the other hand, EM personnel are accustomed to working with medical emergencies every day. In case of sudden cardiac arrest and other traumatic injuries, they become the experts on the field, taking direction from the physicians on hand,” Andino continues.

Students in both the AT and EM programs are constantly practicing their skills. “We don’t want them to wait until someone is injured to try a technique for the first time,” explains Aggelou.

“Many of these skills are required by our accrediting body,” she continues. “But it’s important to note, we don’t just meet these expectations, we exceed them. That’s what makes our program unique, and in my opinion, the best.”

Andino also serves as a clinical instructor for students in the AT program. He makes a point to have students attend EAP practice sessions so they can witness both ATs and EM personnel working together.

“Our students are able to witness how we all care for our athletes and how we work together as a medical staff with our team physicians, certified ATs, physical therapists, independent neurologists, paramedics and EMS services,” notes Andino.

“We all have the same common goal: to provide the best health care possible to our athletes.” ■

## ▶▶▶ SPOTLIGHT ON THE SPOTTER.

AT alumnus Tim Dunlavey (BS '04) sits in the spotter’s booth at Pittsburgh Steelers’ home games. As part of his job, he reviews every play on the field multiple times looking for potential head injuries. As one of a team of spotters hired independently by the NFL, Dunlavey has the ability to communicate directly with the referees on the field and stop the game if a head injury is suspected. ■

## SHRS WINS AT THE SUPER BOWL!

It was a big win for SHRS programs at the Super Bowl. AT alumni Rick Burkholder (BS '87) worked the sidelines as head athletic trainer for the Kansas City Chiefs, while Joe O’Pella (BS '07) was on duty as assistant athletic trainer for the Philadelphia Eagles. Physical Therapy alumnus Monte Wong (DPT '05) was also on the Eagles sideline. Go Pitt! ■



Photo credit: Steve Sanders, Kansas City Chiefs

# Transformative

What motivates a donor to create a scholarship? Maybe it's a practical decision, driven by the prospect of a tax write-off. Or maybe it's an emotional one, defined by the warm and fuzzy feeling associated with true altruism. Or perhaps the donor feels a connection to the institution and the work that it accomplishes.

Allen and Nell McMurtry established the SHRS Undergraduate Student Summer Research Award in 2019 as a token of pure gratitude for the faculty who made a difference in the lives of students, specifically their daughter, Shea McMurtry (BS '17).



Shea McMurtry (BS '17)

Shea knew she wanted to work in the medical field and enrolled at Pitt, thinking that an undergraduate degree in athletic training would prepare her for physical therapy school. During her sophomore year, she took an introductory class in prosthetics and orthotics at the same time she was taking a course in research writing, focusing on the topic of intelligent prosthetics.

"I didn't have the best GPA during my first year," admits Shea. "But research fascinated me. An opportunity presented itself during the summer before my junior year, conducting research with Dr. Goeran Fiedler."

Under the supervision of Fiedler, associate professor in the Master of Science in Prosthetics and Orthotics program, and with the support of a National Science Foundation (NSF) Research Experience for Undergraduates (REU), Shea spent 10 weeks in the ASPIRE program at SHRS' Human Engineering Research Laboratories (HERL).

## It was life changing.

During the summer between her sophomore and junior years, Shea investigated internal limb forces and movements during soccer play on both natural and artificial playing surfaces using sensors implanted into prostheses. She made an oral presentation at the International Science and Football Association Conference in Doha, Qatar, in the spring of 2016 and subsequently published the study in the *Journal of Rehabilitation and Assistive Technologies Engineering* in 2019.

"Dr. Fiedler was the most amazing mentor and teacher," says Shea. "Although I had no prior experience in research, he had confidence in me and allowed me to take the lead in this project."



# gifts.



“When we started developing her project together, it quickly became clear that Shea is an exceptionally fast learner and confident and comfortable at making decisions,” recalls Fiedler. “She would not be shy to ask for advice but would be generally independent and self-motivated. Those are all very helpful characteristics for any project work and especially for our quite ambitious human subject intervention study at the time. It was very easy mentoring her.”

Although Shea graduated with a degree in exercise science from the School of Education and attended graduate school elsewhere, her parents were so impressed with the SHRS faculty who guided her, they established their scholarship for students at SHRS.

“There are limited opportunities for undergraduates to be involved in research,” notes Allen McMurtry. “When Shea was given this chance, it changed the trajectory of her education—and her career.”

“We wanted to credit the professors who helped her find her passion, and to make the same opportunity available to other students in the future,” continues Nell. “That’s why we established the scholarship.”

Shea, who recently completed her PhD in neurophysiology at Georgia Tech, now serves as associate director, communications and engagement, Gateway Labs by Lilly in San Francisco. Her love of research continues to grow.

“I have to admit that Shea’s current research well exceeds my level of understanding,” notes Fiedler. “It is amazing how far she has come in such a short time, and I use her story frequently as an inspiration to my students.”

“Being able to work with bright young people like Shea and seeing them move on to successful careers really

makes me happy,” he continues. “I am happy for them individually, and in a broader sense, it makes me feel optimistic about the future because I know they will do great things to make the world a better place.”

“The best thing about the scholarship my parents started is that it’s not necessarily given to the brightest student or the one with the most financial need. It’s designed for students who somehow stand out—to those who are willing to explore research, but might not otherwise find their passion,” concludes Shea.



[View the full list of 2022-2023 SHRS scholarship and award recipients.](#)

## A welcome leg up for PAS students.


It’s not always easy for graduate students to manage the rigors of their coursework and still be able to pay for food, housing and other necessities.

“For students in the Physician Assistant Studies (PAS) program, in particular, there are very few scholarships,” explains Kathryn Reed, assistant professor, PAS. “Many students rely on Grad PLUS Loans, but these are not available to everyone, especially some international students.”

When Reed realized that some of her students were struggling, she and Department Chair and Associate Professor David Beck came up with a plan.

They created the DEI Financial Offset Scholarship. The response was overwhelming.

“We originally thought only one or two students would apply,” recalls Reed. “We had 12 applicants!”

 **Beginning with the spring 2023 semester, the DEI Financial Offset Scholarship awarded between \$500 and \$5,000 to all the students who expressed a need.**

Recipient Alexandra Antenoracruz, PAS class of 2023, explains her situation.

“I do not have parents who can financially support me, so I must rely on loans to pay for tuition, rent, utilities, supplies, car expenses, groceries and more. When I needed additional money, I routinely donated my plasma.”

In addition to her PAS coursework, Antenoracruz actively volunteers for several organizations, including Street Medicine at Pitt, which helps individuals facing homelessness with resources, supplies and basic medical needs.

“The scholarship allows me to have more time with my studies and volunteering efforts and eliminates the need for me to donate at the plasma center,” she explains.

Classmate and fellow recipient Joanna George says the scholarship has inspired her to pay it forward for others. “In the future, I would love to work with victims of human trafficking and other medically underserved populations, and this scholarship will help me achieve that goal by giving me the financial cushion I need as I finish my studies.”

“We realize that PA school is expensive,” says Reed. “If we can offset their financial worries in any way, we are truly serving our students.”

“I am very thankful for this scholarship, so in the future, I would be willing to help the students who are in similar situations,” continues Antenoracruz. “PA school is already hard, so worrying less about finances really helps with mental health.” ■



PAS student Alexandra Antenoracruz with clinical preceptor Joseph Sanfilippo, MD, director of the Division of Reproductive Endocrinology and Infertility at UPMC Magee-Womens Hospital.



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## ➤ LAURA WATERSTRAM: OT'S SECRET WEAPON.

The last few decades have seen the most significant growth in volume, recognition and impact of federally funded occupational therapy scientists in 100-plus years. In any discipline, clinical scientists who design and conduct meaningful research are effective because they partner with experts in clinical research operations and administration—experts like Laura Waterstram, director of Research Operations, Department of Occupational Therapy (OT).



It is not surprising that Waterstram received the prestigious Recognition of Achievement Award from the American Occupational Therapy Association at their annual conference in April.

“Laura has been OT’s secret weapon ever since she first became my research laboratory manager in 2013,” states Elizabeth R. Skidmore, associate dean for Research, SHRS, and professor, Department of Occupational Therapy.

Skidmore says Waterstram uses her skills as an occupational therapy practitioner, manager and contributor to train, support and ensure the success of scientists, trainees and staff in effective, principled and impactful research operations. In her current role, she oversees all OT Department research operations, from space and personnel to integrity and compliance, and consults with the school’s associate dean for Research to advise best practices for more than 80 scientists in 13 disciplines.

“Her expertise has had a widespread impact on occupational therapy, as well as other researchers, on both a national and international level,” continues Skidmore. “She is a most deserving recipient of this year’s prestigious Recognition of Achievement Award from the American Occupational Therapy Association.”

Associate Professor and OT Chair Juleen Rodakowski concurs. “The influence that Laura has had on the success of the research that is disseminated from the Department of Occupational Therapy isn’t easily quantified, but it’s deeply felt by all.” ■

## ➤ EXPANDED DEPARTMENT. EXPANSIVE VISION.

When the Department of Community Health Services and Rehabilitation Science was formed in 2022, the goal was to bring together the Emergency Medicine and Rehabilitation Science undergraduate programs under one educational roof. Since then, Department Chair and Professor Thomas E. Platt has been on a mission.



“These two undergraduate programs are both preparing students for future careers in health care,” notes Platt. “Whether our students choose to work in the community or go on to earn professional degrees, there is synergy among the courses and curricula that can benefit everyone.” ■

## ➤ A HEALTHIER FUTURE FOR ALL

In early 2023, the School of Health and Rehabilitation Sciences announced the addition of its ninth department! The Department of Counseling and Behavioral Health includes the existing Clinical Mental Health Counseling program which moves from its current home under the Department of Rehabilitation Science and Technology. Professor and Current Program Director Eric Meyer has been leading the transition and was recently named chair.



“I’m honored to be appointed as the inaugural chair of the Department of Counseling and Behavioral Health at Pitt. The needs that our department addresses have never been greater. We are well positioned to advance the profession through our award-winning educational programs, research and community engagement,” says Meyer.

Specific areas of growth will include an increased emphasis on clinical research and interprofessional education, the provision of more opportunities for specialized training experiences, and the expansion of training programs into additional subfields of the counseling profession. Meyer states, “Our goal is to create a healthier, more compassionate and inclusive future.” ■



P&O student gets firsthand experience with wearable technology in the Humotech lab.







# Futuristic technology in P&O?

## Challenge accepted!

How new technologies will improve patient outcomes.

Prosthetics is a time-honored field—a rare combination of art and science, meticulously practiced by skilled artisans. It has roots in ancient Egyptian civilization, yet is increasingly more in demand today, as people live longer with chronic and sometimes debilitating conditions.

“In the past, in spite of the desire to constantly improve patient outcomes, our field has faced challenges when it comes to innovation,” admits Goeran Fiedler, associate professor in the Master of Prosthetics and Orthotics (P&O) program. He says the relatively small size of the field results in limited research funding. In addition, there’s a hesitancy by some to change the way things have always been done.

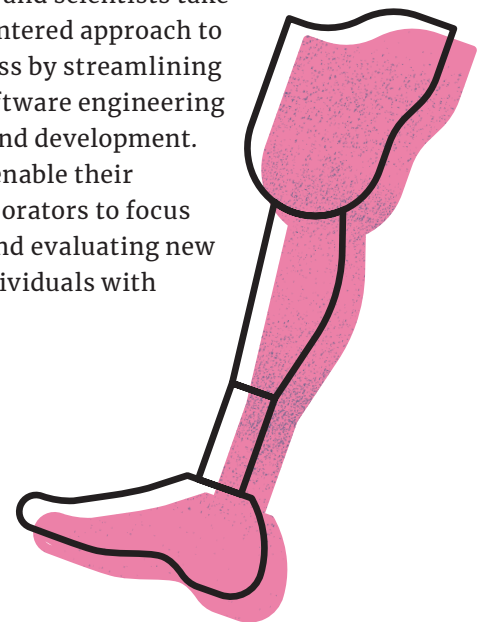
“We realize that philosophy is not valid in clinical decision making,” Fiedler continues.

Today, Fiedler and his P&O colleagues are committed to educating the clinicians of the future by introducing them to the technologies of the future—technologies that have the potential to help clinicians make better decisions regarding prosthetic devices and can lead to better-fitting, more affordable options for patients.

Evidence-based practice principles are now permeating the curriculum. In addition, students have the opportunity to get a front row seat to

research being conducted to create the next generation of prosthetic devices at Humotech, a Pittsburgh-based research and development company dedicated to transforming the way the world develops and uses wearable devices. Their work encompasses prosthetics and orthotics, as well as exoskeletons and other wearable technologies intended to enhance human mobility.

Humotech engineers and scientists take a holistic, human-centered approach to technological progress by streamlining the hardware and software engineering aspects of research and development. In the process, they enable their customers and collaborators to focus on rapidly ideating and evaluating new ways of assisting individuals with mobility challenges.





Josh Caputo, founder, president and CEO of Humotech

Humotech Founder, President and CEO Josh Caputo is determined to realize the promise of rehabilitation technology.

**“I’m an engineer who naturally loves to dream about high-tech solutions, but I’m on a mission to help the field better leverage the most practical of technologies to elevate quality of life,” says Caputo.**

Caputo loves to bring P&O students into the lab to learn more about Caplex™, Humotech’s unique system of hardware, software and robotics that emulates the mechanics of both novel as well as clinically available devices so that patients, students and researchers can experience and measure mobility across the variety of options.

Humotech’s first product, the Caplex Ankle-Foot Prosthesis, enables the students to actually experience the physical sensations of wearing different prosthetic foot models. As they explore this and other new technologies, they can envision a future where they could design, test and build a device using data from real users.

“It’s a way for clinicians to see what type of prosthetic foot would work best for a certain individual, without the cost and time of building an actual prototype,” explains Fiedler.

“The students can use Caplex to explore ideas they may have about improving gait performance, for example,” adds Caputo. “They can trial different ‘products,’ see how a certain device may fit, what adjustments need to be made, and so on.”

Joshua LaDuca (MSPO ’23) worked as a prosthetic engineering intern at Humotech the summer before his last year in the P&O program. Among other things, he designed and built an exciting new add-on to the Caplex platform: an ISO standard testing rig that enables Humotech to evaluate the structural integrity of prosthetic feet either in development or on the market.



“Seeing the integration of new technology into the world of P&O is exciting because it brings new light to the field,” comments LaDuca, who holds undergraduate degrees in mechanical and biomedical engineering.

“Technological introductions such as scanners, the use of CAD software, or Humotech’s PRO-002 Modular Ankle-Foot Prosthesis eliminate some of the strain of the prosthetic and orthotic fabrication process and provides the patient with a better overall outcome,” he continues.

“It’s been very enlightening to work with students and see their perspective,” notes Caputo. “They’re excited about technology development, academic science and clinical practice.”

Although Humotech’s technologies are not yet available in clinics or in university labs, Caputo hopes one day soon they will be. By allowing students to see firsthand what is possible, he believes he is expanding possibilities of clinics of the future.

Fiedler agrees. “By getting exposure to Humotech’s emulator, our students are presented with a practical application of the idea of using objective metrics—scientific evidence—to determine the best solution for their patients. They will be more inclined to embrace similar technology in their professional careers, challenging old-school approaches and advancing the field for the benefit of our patients.”

“This is not to say we should completely abandon the standard, tried-and-true techniques and practices that are used today, but I can envision how using them in conjunction with emerging technology can greatly benefit both the practitioner and the patient,” concludes LaDuca. ■



Top photo: Joshua LaDuca.  
Middle and bottoms photos: Humotech staff members demonstrate their equipment.

# Debbie Miller.



When Debbie Miller arrived at the University of Pittsburgh as an undergraduate in 1974, she was already a legacy. Both of her parents were Pitt alumni. Her twin sister graduated from Pitt, and later, her son. When she retired as SHRS vice dean and professor, Department of Physical Therapy, in the spring of 2023, she left a legacy of her own. A legacy of dedication and leadership.

There were many clues that Miller would become a leader, both in her chosen field of physical therapy and in the overarching fields of health care education and administration, ethics and compliance. In 1977, as a college junior, she was awarded the prestigious Omicron Delta Kappa National Leadership Award for her superior leadership and exemplary character.

Four decades later, she received the LAMPlighter Leadership Award 2017 from the Academy of Leadership and Innovation (formerly known as the Health Policy and Administration Section) of the American Physical Therapy Association (APTA) where she served as director of the LAMP Institute for Leadership (2013-17) and as faculty (2010-22). Miller was also awarded the APTA Pennsylvania Carlin-Michels (lifetime) Achievement Award in 2017.

**Throughout all of those years, and in the ones that followed, Miller charted a path that few others could follow.**

In the Department of Physical Therapy, where she taught for more than 20 years, Miller was a constant force.



Debbie Miller,  
former SHRS vice dean  
and professor

“I was fortunate enough to have Debbie Miller as a professor both in my undergraduate Rehabilitation Science classes and throughout PT school,” recalls Beau J. Troutman (BS '09, DPT '13), clinic director, Phoenix Physical Therapy, Gratz, Pennsylvania. “She had a unique way of instilling confidence in me. Back in 2009, I had a conversation with her after finally submitting my PT school application. Although I can’t remember her exact words, I know that our conversation left me thinking that she had high hopes for me and my future. As I continued through the PT program, I watched as she took on various leadership roles in our school, the local health care system and the APTA/PPTA.

“Debbie was a tremendous inspiration to me as the type of therapist and community leader that I wanted to become,” continues Troutman.

As a member of the upper-level management team at UPMC Centers for Rehab Services (CRS), Miller put her expertise into practice. Paul Rockar worked with Miller during her tenure at CRS. “She was always thorough, diligent and demonstrated the highest degree of professionalism in all of her work. The quality of her work set the bar for others,” notes Rockar.

When she assumed the role of SHRS vice dean, Miller worked to develop a new infrastructure for the school, realigning the staff in the Dean’s Office, and seeking new physical spaces to house SHRS’ growing programs.

“My goal was always to re-think what comes next and how to achieve new goals,” explains Miller. To that point, she began exploring online education as a strategic initiative as early as 2016. She subsequently facilitated the initiation of the SHRS online education initiative and instituted its Office of Online Learning.



# The Consummate Leader.

Perhaps it was during the time of greatest crisis that Miller's leadership skills became most critical. When the University was forced to shut down during the COVID-19 pandemic, Miller took charge, coordinating the efforts of SHRS programs across six different buildings, successfully preparing each for a smooth transition to online learning and seamlessly ensuring student success.

David C. Beck, chair and associate professor, Physician Assistant Studies, is following in Miller's footsteps as the new vice dean. "Vice Dean Miller has served with amazing aptitude as essentially the chief operating officer of SHRS," says Beck. "She founded a role that is vital to our school's success, supporting the dean and school administration, leading the development of our strategic plan and vision and positioning SHRS for the future."

"She has been an incredible mentor and guide for me and many others in learning how to best serve our students, alumni, staff and faculty and the University itself. I am honored and excited to succeed her," he continues.

SHRS Dean Anthony Delitto acknowledges Miller's many accomplishments. "If I were to put my finger on her greatest contribution, it would be her serving as a role model for leadership, something that she exhibited in all aspects of the position," says Delitto. "She was the consummate leader, particularly for women seeking greater leadership roles."

"I'm grateful for the opportunities that I've had to pursue my passion, the relationships I've made along the way and the impact of my work," recalls Miller. "Any successes I've had are not mine—they're a result of the team around me."

Dean Delitto shared parting remarks for Miller on her retirement: "Enjoy yourself and, with the recent birth of your grandchild, relish your growing family. But every once in a while, remember us here at SHRS. You can always look back on your time here with great pride." ■

## REMEMBERING GEORGE CARVELL

The SHRS family remembers Professor Emeritus George Carvell, who passed away on March 5, 2023, at the age of 77. His retirement was brief, but his legacy, extensive. George transformed the lives of hundreds of his students and peers across multiple SHRS departments.

After retiring in 2022, he set up a scholarship to assist his "beloved students" in their academic studies. The first George Edward Carvell Excellence in Neuroscience Award was awarded in March to one student in honor of their "superior scholarship,

evidence of devoted service to the University community, to the community at large, and a commitment to advancing knowledge and clinical application of neuroscience through past, present and planned future endeavors."

He will always be remembered for his storytelling, sense of humor and keen dedication to the fields of physical therapy, rehabilitation science and the School of Health and Rehabilitation Sciences. ■

To donate to this scholarship fund, email Kevin Platz at [k.platz@pitt.edu](mailto:k.platz@pitt.edu).





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# Congratulations to this year's SHRS Scholarship recipients!



View the full list of  
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and award recipients.



Amanda Trayers, fourth-year student in the Accelerated Athletic Training program, receiving the ninth annual Jill Conley Memorial Award.

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