It is my pleasure to introduce the 2019 issue of Wavelength. As highlighted in this issue, our students and faculty are nothing short of awesome. Their work clearly advances our mission to prepare future generations of speech-language pathologists to deliver compassionate, personalized care to individuals over the life span, and across diverse communities.

The outstanding efforts of our three student organizations impact our communities in real and enduring ways. The newly formed Health Sciences Educational Outreach is committed to engaging future generations of health care professionals to address the needs of underserved populations. The Multicultural Club joins students on campus to celebrate all peoples and cultures and spread cultural awareness through education, mentoring, and outreach programs. This year, the National Student Speech, Language, and Hearing Association focused their fundraising efforts in support of World Relief Spokane, an organization that helps refugees and immigrants rebuild their lives. All three clubs make WSU Spokane and the greater Spokane community places of respect and value for all.

We also take great pride in and inspiration from the achievements of our alumni. Mary Stone reminds us of the lasting impact of education in achieving dreams. Similarly, Sami O’Neill Cave shares her unexpected journey, reminding us that it is all right to “step out of the traditional career path and stretch your comfort zone.”

In an ongoing testament to the talent and dedication of our students and faculty, several received awards and accolades this year for their outstanding contributions to academia, research, clinical care and the community. Of course, we do not succeed in our educational or patient care missions alone. We work closely with our dedicated off-site practicum and internship supervisors to prepare our students to provide the best possible health care in the settings and communities they will serve. We invite you to browse through our website at https://medicine.wsu.edu/speech-and-hearing-sciences-2/ to learn more about our ongoing work.

I extend my heartfelt appreciation to our donors who have given so generously to the department during the 2019 fiscal year. Your steadfast support has a profound impact on our students, bringing them closer to achieving their goals and empowering them to contribute to their communities. With your support we provide scholarships, equip teaching and research labs, and engage students in exceptional educational experiences. As we grow in the years ahead, our fundamental commitment will continue to be to our students—to provide them a transformational educational experience and to enable their transformation from students to professionals. If you would like to help us continue our forward motion, visit medicine.wsu.edu/give and select the Speech & Hearing Sciences Development Fund.

Please continue to let us know about your life after WSU. With your permission, we will include news of your professional and personal journeys in the News of Our Friends feature in our next issue of Wavelength. E-mail me at chermak@wsu.edu.

I wish you an enjoyable summer season with family and friends. Thank you for your confidence in us and thank you for being a part of our culture of excellence. Our alumni and donors remain our best friends, strongest advocates, and our ultimate legacy.

All the very best-

Gail D. Chermak, PhD
Professor and Chair, Speech and Hearing Sciences
I was recently on Capitol Hill in Washington, DC, about to present to members of both the House and Senate Committees on Veterans Affairs and I thought to myself, “how in the world did an audiologist from Palouse, Wash. get here?”

Looking back, I have taken a rather unexpected career path since graduation in 1991. It began with completing my clinical fellowship year at Oregon Health Sciences University in Portland. The following year I moved to Seattle where I took a temporary position as a staff audiologist at the Veterans Administration (VA) Puget Sound Health Care System, and 25+ years later I still work for the VA, but in a most unique role.

My early career days focused on direct patient care and research serving veterans. I was blessed to work with a group of truly outstanding individuals, including several WSU alumni. We all knew it was a golden time, one that doesn’t always happen in a career. During this time, I was doubly blessed with the birth of my two children, Alexandra and Anthony.

I was promoted and spent some time as the chief of audiology, then in 2006 chose to leave clinical audiology and pursue an administrative/leadership career path as the business manager for the Primary and Specialty Medicine service line at the VA. It was a bittersweet moment as it meant leaving the roots of my audiology career, my treasured colleagues, and was a major step outside my comfort zone. It was also during this time that I unmarried my then-husband.

As the business manager, I partnered with the chief of medicine. While he oversaw all things medically related, I directed the administrative functions such as human resource issues, payroll, budget, credentialing and privileging. Our service line had more than 550 employees and 15 medicine subspecialties, including the emergency room, intensive care unit, gastroenterology, and radiation oncology.

I didn’t realize at the time, but the many roles I occupied throughout my career had prepared me for my next career step. In 2010, the VA Office of Inspector General (VA-OIG) opened a new healthcare division in Seattle. I didn’t really know what the VA-OIG did, but it sounded intriguing. The VA-OIG is the oversight body for the VA, responsible for reviewing programs and operations throughout the system and responding to allegations of fraud, waste, and/or abuse. While each government agency has an OIG, VA is the only agency with a dedicated healthcare division.

I was grateful to be chosen as one of four new healthcare inspectors for the newly-formed Seattle Healthcare Inspections Office and learned that I was the first audiologist ever hired into the VA-OIG. My new role as a healthcare inspector allowed me to use the clinical, research and administrative experience I had developed over the years to effect change in veteran’s health care on a national level. I assumed the position of Director for the Seattle healthcare office in 2013, and through this role found myself testifying before Senator Sullivan at a Senate Committee on Veterans Affairs field hearing in Alaska. They sure don’t prepare audiologists for that in graduate school!

In 2016, I moved into my current role as the director for our National Reviews division. Rather than reviewing the VA at a local or facility level, our division evaluates VA healthcare issues at the national system-wide level. This same year, I was selected as a delegate to Leadership VA, a nationwide leadership program. It was an unexpected surprise to meet my present husband in this program. Of course, he didn’t live nearby and was working at a VA in New York at the time, thus beginning our two-year, cross-country relationship. Last year we married, Anthony graduated high school, Alexandra graduated from the University of Mississippi and I moved to the east coast to be with my husband. However, I would never miss the opportunity to be back in Washington, especially to help Anthony move into his dorm at WSU!

My audiology career has led me to roles, experiences and places I could never have imagined. Don’t be afraid to step out of the traditional career path and stretch your comfort zone. You might be amazed where you can go!
A few years ago, I was in a lab meeting discussing various research projects with students and collaborators. I made a passing reference to the speech phenomenon of motherese, the change in speech style—often louder and higher frequency—mothers often use when talking to infants and children. A grinning student suggested that the specific term I used, widely used in the literature for decades, had a certain flavor of exclusivity to it that might short-change anyone who is not specifically a mother. She goaded, “What about fatherese?” I had never heard anyone use that term before. And apparently neither had internet search engines or the scientific literature. That got us to thinking whether there might be a fatherese, and whether it might differ from the well-documented speech styles of mothers.

The modern term for motherese is child- or infant-directed speech (CDS, IDS), to be contrasted with adult-directed speech (ADS). CDS is a sub-type of speech known as Lombard speech, named after an early 20th century French physician who noticed that talkers affect their speech when they presume the listener may have some difficulty perceiving the signal. To qualify as Lombard speech, the genesis of the difficulty does not matter. It could be a disability or disorder, a non-native listener, hearing loss, a playful put-on, or a child with limited language abilities. We even do it with our dogs (pet-directed speech) and in romantic situations (lover-directed speech) in the literature and pillowtalk in spy movies).

One of the especially intriguing aspects of Lombard speech is that it is a deeply psychological phenomenon, one in which a talker assumes abilities of the listener and changes behavior based on those typically untested assumptions. So, child-directed speech, as a form of Lombard speech, is observed when speech directed to children is altered or modified.

The modifications we became interested in are the details of acoustic-phonetic speech production, and in particular how people modify their speech characteristics under different social conditions. We collected audio recordings of families talking with each other, amassing more than 2,500 daylong recordings from about 120 families. In these recordings, parents sometimes talk with each other, other adults, or themselves (i.e., ADS), and sometimes they talk with their children (i.e., CDS). Using automatic speech recognition technology and many hours of analyzing recordings manually, we started to document how mothers and fathers were different in how they used CDS.

We performed and published a series of studies using thousands of hours of family audio analyzed with automatic methods. To begin, we looked at the production of fundamental frequency, which is perceived as pitch by the listener, in both mothers and fathers when they talked with their children compared to when they talked with other adults. It has been well-known for decades that mothers used increased fundamental frequency when talking to their children, and indeed we were not surprised to replicate this effect in every single one of the mothers we tested. We showed that fathers also tended to use increased fundamental frequency with their children, but the modification of their speech was substantially smaller, and some fathers failed to produce any modification at all.

Following these first studies, we looked at whether mothers and fathers modify their speech to sons versus daughters or whether parents are sensitive to the fact their children have hearing loss. We looked at whether factors other than fundamental frequency, such as mean length of utterance, type- and token frequency, and the frequency and type of conversational turns among various interlocutors affected speech production patterns. We found often subtle differences we have not yet fully understood everywhere we looked. In one study, we found fathers talk to their sons and daughters about the same amount, but mothers talk to their daughters more than their sons. In another study, we found families with a hard-of-hearing toddler talk to each other more than families with typically-developing children. One study showed how children talk to each other, finding that girls initiate more conversations than boys, and mothers initiate more than fathers or children.

In addition to the results of our empirical work and the new methodology we discovered, we created a resource for others to contribute similar work and for this work to go on in the future. With
support from the National Science Foundation and several collaborators and researchers at WSU, we created HomeBank (https://homebank.talkbank.org/). HomeBank is an online repository of daylong audio files that can be used in the ways described above and in many other ways. The repository offers access to thousands of recordings, metadata concerning parameters of interest such as demographics, and computer code to process the raw data stored there.

This work is only possible with modern technology. We make extensive use of modern tools that allow us to answer never-before-asked questions, but also to look at old questions in new ways. The questions about the nature of fatherese are new, but we are also able to tackle questions that refine basic notions of speech, language, and how families and children talk and converse. For example, we are able to compute metrics such as mean length of utterance and lexical type- and token frequencies. Those metrics and many more like them have been used for decades, but we are now looking at them from a naturalistic, ecologically-valid perspective with much more data than previously considered. These findings may be used to implement better clinical interventions, refine theoretical concepts, contribute to our understanding of human development, and improve human-computer interactions.

Mark VanDam, PhD
Associate Professor

The UPCD Health Sciences Educational Outreach (HSEO) was newly formed this year to address the health needs of underserved populations. This registered student group approaches these needs by empowering students enrolled in WSU and EWU health sciences programs on the Spokane campus, educating pre-college students about health sciences careers, and increasing awareness of health education in underserved and diverse populations.

Our students share their stories with hundreds of other students around the state regarding their career passion to improve the quality of life in areas with shortages of healthcare professionals. In summer 2018, we educated more than 100 middle-school students from Richland, Wash. about the speech-language pathology profession as part of a zombie-themed health sciences camp. Dressed in costume and using zombie speech, we encouraged students to use alternative communication devices in order to speak, providing them a window into an important technology used in speech-language pathology.

Throughout the 2018–2019 academic year, we forged relationships with rural and underserved Washington communities and educated students in high-need areas including Brewster, Tri-Cities, Yakima, Cheney and Spokane. HSEO promoted literacy and health sciences knowledge through a book donation to Grant Elementary School. These books described healthy lifestyles, diversity, understanding of disability, and parent/child interactions. Recently, we also reached a diverse group of 1,600 high school students through our presentations and table at the HOSA Future Health Professionals event.

Shannon Beebe, Chair
Allison Saur, Vice Chair

Health Sciences Educational Outreach Officers:
Shannon Beebe, Chair (WSU)
Allison Saur, Vice Chair (WSU)
Reagan Gregory, EWU Representative
Aubrey Pfugrad, WSU Treasurer
Nikita Foster, EWU Treasurer
Megan Bickford, Public Relations/Marketing (WSU)
Sarah Sanvictores, Secretary (WSU)

Faculty Advisors:
Professor Amy Meredith (WSU)
Academic Coordinator Anna Brown (WSU)
Student Services Director Nikki Measor (EWU)
The Multicultural Club joins students from the health sciences programs to celebrate all peoples and cultures, and spread cultural awareness through education, mentoring and outreach programs.

This year the club held cultural lunches, educational forums, and the annual talent show and Parade of Nations. Cultural lunch attendees enjoyed a delicious meal and learned about languages, customs and perspectives. EWU Professor Hedieh Hashemi Hosseinabad led a lunch focused on Iranian traditions and highlighted the Farsi language, while WSU instructor Melissa Ratsch led one about Deaf Culture and American Sign Language. In the spring, we held our 7th Annual Parade of Nations, an evening filled with delicious food, fashion and performances. This year we were honored to have local and student groups perform including the Grant Elementary drummers and dancers, the Spectrum Singers, Baile Folklórico de Aztlan, Serious About Science, and guest speaker Sreedharan Nandagopal from the South Asia Cultural Association.

In addition to sponsoring events, the club fundraised for non-profits within the community. This year we donated to World Relief Spokane and co-sponsored with Health Sciences Educational Outreach a dinner for Spokane’s Hope House, a women’s shelter that offers safe beds at night and other resources.

Thank you to our members, faculty advisors, and student leaders for their commitment to advocating for cultural inclusion and celebrating diversity!

Sarah Lackey
Multicultural Club President
Each year, the Speech and Hearing Sciences faculty strives to lead the field with impactful research, clinical innovation, service, and outreach. In the 2018–19 academic year, faculty published 16 articles, secured two external grants, and delivered 30 oral presentations, posters, seminars, and workshops. In addition, they engaged in extensive outreach to local, state, national, and international communities.

Clinical Assistant Professor Dana Algeo engaged our graduate students in a new community partnership with a Spokane elementary school, providing language and literacy intervention for kindergarten students.

Professor Gail Chermak was interviewed by the American Academy of Audiology (AAA) in advance of the Third Global Conference on Central Auditory Processing Disorder, which Chermak co-chaired, held in conjunction with the annual AAA conference in Columbus, Ohio, March 30, 2019. The interview titled “The bench-to-bedside approach for central auditory processing disorder” was published online.

Clinical Associate Professor Christiane Dechert developed a new social skills clinic in the Hearing and Speech Clinic for middle school children with social skills deficits secondary to a diagnosis of high-functioning autism.

Assistant Professor David Jenson opened his new lab focused on speech neurophysiology.

Instructor Keri Jones published a unique app offering moving x-rays to teach how speech sounds are formed.

Assistant Professor Georgina Lynch presented a featured session on pupillometry as a method for examining phenotype in autism at the 4th Neurological Disorders Summit.

Clinical Professor Amy Meredith developed a new after school program for children with apraxia in kindergarten and first grade in our Hearing and Speech Clinic. She also developed a new graduate seminar in counseling and co-developed an undergraduate seminar in leadership and outreach with Undergraduate Academic Coordinator Anna Brown.

Professor Nancy Potter published a landmark study in Pediatrics reporting the long-term developmental outcomes in Duarte galactosemia (DG) that provides a long-needed foundation of knowledge enabling evidence-based decisions about DG. She also secured an NIH grant (with co-PI Mark Vandam) to investigate whether early, proactive intervention improves speech and language outcomes in infants with classic galactosemia.

Instructor Melissa Ratsch expanded online access to American Sign Language (ASL) and Deaf culture.

Clinical Associate Professor Karen Simpson, in collaboration with Spokane Public Schools, coordinated a preschool for children with speech sound disorders in our Hearing and Speech Clinic.

Assistant Professor Lauren Swineford’s co-authored multi-site longitudinal study was cited in the Autism Science Foundation’s 2018 year-end review of scientific research. She also secured an NIH/NIDCD grant to support her research on preclinical risk factors for autism spectrum disorder.

Assistant Professor Mark Vandam secured an NIH grant (with co-PI Nancy Potter) to investigate whether early, proactive intervention improves speech and language outcomes in infants with classic galactosemia. He is a member of the Editorial Board for the ASHA American Journal of Speech-Language Pathology and serves as a WSU Entrepreneurial Faculty Ambassador.
A JOURNEY THAT STARTED WITH WSU

Mary L. Stone
(MA’00)

Working in the field of speech-language pathology for 18 years has brought me much joy. Currently, I work with the birth-to-three (B-3) population serving Native American children in a preschool setting at the Muckleshoot Early Learning Academy in Auburn, Wash. Marty Laronal, also a Washington State University Speech and Hearing Sciences graduate (MA’01), is the program manager. Before moving back to Washington for work, I was employed as a public-school speech-language pathologist (SLP) in Browning, Mont., close to my home on the Blackfeet Indian Reservation. During my 13 years there, two of my children graduated from high school and both enrolled in the Montana National Guard. My youngest son, Christian, is an eighth-grader in Auburn.

As I reflect on my years in graduate school, I realize that graduating from WSU with my master’s degree was one of my biggest accomplishments in life. I remember and feel inspired, knowing what it means to persevere, to achieve something really significant—an accomplishment that has altered the course of my life. It motivates me to share with others the rewards of the profession. All the possibilities that can occur in this field are never ending. I cherish the years that I worked toward my degree at WSU. It was only the beginning of my wonderful journey in this exceptionally fulfilling career.

Still, I tell myself this doesn’t happen to people like me. I was an average student, Native American woman, single parent, but, oh, so determined. I recognized the pressure, stress, and the self-doubt that I felt as I continued through my graduate program. Yet, I was determined to give my
family a better life. Returning to graduate school, I was going to do what I could to accomplish my goal. Of course, I could not have completed all the requirements without the support and encouragement of the Speech and Hearing Sciences faculty and administrative staff in the American Indian Center on campus.

I credit Associate Professor Ella Inglebret, now retired, for fostering an environment of support and guidance during my time as a student and later as a clinician. One of the goals of the program was to attract Native American students to WSU’s speech and hearing sciences program and, in turn, better serve diverse populations. It’s an amazing feeling knowing I’m part of a strong network of professionals.

The Muckleshoot Early Childhood Program is the only reservation-based education program I know of that has its own Early Childhood Support Services team. Our team consists of licensed marriage and family services therapists, an occupational therapist, physical therapists, psychologists, special educators, and SLPs for B-3 and 3-5-year-old children. We provide therapy services to the tribe’s daycare, expanding B-3 program, and a Head Start Program. We incorporate the Muckleshoot language into the classroom setting to ensure our children know their heritage. I am part of a great team and we are making a difference in the lives of the children and tribal community.

NEWS OF OUR FRIENDS

Danielle (McGlone) Dorrian
(MA’81) began her career as a speech-language pathologist (SLP) for the Soquel School District in Santa Cruz County, Calif. After 17 years, she returned to school, earned her general education credential, and taught kindergarten and first grade for 17 years. For the past three years, she has worked as an SLP for the Pajaro School District in Santa Cruz County. Danielle expects this will be her last year working full time.

Cora Ann (Macy) Kelly (BA’16) earned her master’s degree in teaching from Whitworth University and is now employed as a middle school science teacher for Central Valley School District in Spokane Valley, Wash.

Stella Ong (BA’12) is completing her clinical fellowship in an elementary school in Hawaii. Stella works with children in pre-K to fifth grade.

Sierra Wu (BA’18) earned her SLPA license in Washington and Florida. Sierra and her husband moved to Miami where he is enrolled in a graduate occupational therapy program. Sierra plans to enroll in an online master’s program in speech-language pathology.

Ming-Yeh Hsieh (MS’14) published (with mentors Dr. Georgina Lynch and Dr. Charles Madison) her study comparing autism intervention techniques used by speech-language pathologists in the U.S. and Taiwan in the American Journal of Speech-Language Pathology in August 2018.
Academic and Clinical Excellence

Shannon Beebe received the WSU Spokane Chancellor’s Legacy Award.

Grace Christensen and Theresa Willard were each awarded a John D. Blankenship Scottish Rite Fellowship, and Alyssa Hansen and Rachel Lopez were each awarded a Miller Early Life Internship. These scholarships are supported by the Scottish Rite Foundation of Washington.

Charlotte Hata was named the Outstanding Senior in Speech and Hearing Sciences and received the WSU Spokane Chancellor’s Excellence Award.

Natalie Hoogner was honored with the Lynn Larrigan Clinical Excellence Award.

Amira Jessie received the 2019 Meritorious Academic and Community Project Award.

Randi Pedersen was awarded the Maynard Lee Daggy Scholarship in Speech and Hearing Sciences.

Breanne Ragle was named the J. Richard Franks Scholar in Speech and Hearing Sciences.

Gracie Sauramba received the Outstanding Speech and Hearing Sciences Graduate Student Commencement Award.

Taite Winter was named the Edward Gwin Scholar in Speech and Hearing Sciences.

The Health Sciences Education Organization (HSEO) received the WSU Spokane Chancellor’s Excellence Award for a registered student organization (Shannon Beebe, Allison Saur, Sarah Sanvictores, Aubrey Pflugrad).

Graduating With Honors


Service and Outreach

Kayla Monson organized the annual speech-language pathology career fair on the WSU Spokane campus.

Corinne Barnett represented her peers in the ASWSUS student senate.

Amira Jessie, Maritsa Rodriguez, Erin Todoki promoted the speech and hearing sciences undergraduate program at the annual Spring Celebration held in Pullman.

Taylor Collins, Aubrey Pflugrad, and Randi Petersen discussed brain health and swallowing therapies at the WSU Health Sciences Spokane fall and spring previews.

Charlotte Hata, Amira Jessie, Sarah Lackey, Maritsa Rodriguez, and Erin Todoki traveled to Pullman in April for the department’s annual spring celebration, welcoming our incoming cohort to the undergraduate program.

Shannon Beebe and Maritsa Rodriguez attended the Native Project in Medical Lake, providing high school students an introduction to speech-language pathology and audiology.

Lita Elbertson, Charlotte Hata, and Allison Saur exhibited at the health career fair at North Central High School.

Alyssa Bathurst, Savannah Murdock, and Madison Walsh introduced 5th–8th graders and their parents to assistive communication technologies at the STEMForward: Solving a Medical Mystery event.
Refugees come to the United States for shelter, yet many don’t have community or resources to situate themselves in a new country. This year NSSLHA focused its fundraising efforts in support of World Relief Spokane, a local organization that relocates and resettles refugees and immigrants to rebuild their lives.

**Fundraising**

In the fall, we held a bake sale and used clothing drive, and sold University Programs in Communication Disorders (UPCD) branded apparel to students and faculty. In the winter, local restaurant Caruso’s donated a percentage of every purchase to us.

**Philanthropy**

All 54 of our members were active in the community, engaging in philanthropic events throughout the year. Our members participated in the Walk for Apraxia to raise awareness about childhood apraxia of speech. Continuing our NSSLHA tradition, members participated in “Hoe Down for HOPE” dinner and auction for the Hearing Oral Program of Excellence School. In addition, one of our members served as the lead in the Walk to Defeat Alzheimer’s and was joined by other NSSLHA members to raise awareness and funds for research.

**Education**

In the fall, NSSLHA held a welcome event with the Multicultural Club and Health Science Education Outreach, and an Education Night to provide students and faculty at WSU Spokane with information on stroke. EWU Professor Jane Pimentel and Karyn Manor, nurse practitioner at MultiCare Deaconess Hospital, shared their knowledge and experiences on this topic. We also hosted a Graduate Record Examination (GRE) information meeting.

This year our NSSLHA public relations officer, Erin Todoki, created an Instagram account for our UPCD NSSLHA Chapter (@upcd_nsslha) to allow members, community, and other NSSLHA chapters to stay informed of our priorities and events.

We are proud of this year’s accomplishments and although those of us graduating are sad to say goodbye, we thank all our members for making this year such a success.

Special thanks to our advisors, Clinical Educator Lindsay Williams (EWU) and Clinical Assistant Professor Dana Algeo-Nichols (WSU) for their untiring support throughout the year.

And thank you to our 2018–2019 chapter officers for their hard work and dedication: Emely Lopez, president (EWU), Maritsa Rodriguez, vice president (WSU), Mary Kelleher, secretary (EWU), Amira Jessie, WSU treasurer, Lauren Ausuere, EWU treasurer, and Erin Todoki, public relations officer (WSU).

Emely Lopez

*NSSLHA President*

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**NSSSLHA Officers:**

- Emely Lopez, President (EWU)
- Maritsa Rodriguez, Vice President (WSU)
- Mary Kelleher, Secretary (EWU)
- Amira Jessie, WSU Treasurer
- Lauren Ausuere, EWU Treasurer
- Erin Todoki, Public Relations Officer (WSU)

**Faculty Advisors:**

- Professor Amy Meredith (WSU)
- Senior Lecturer Roberta Jackson (EWU)

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**TRANSITIONS**

**David Jenson**

*Assistant Professor*

David Jenson joined the department in fall 2018 after completing his PhD in speech neurophysiology at the University of Tennessee in spring 2018.

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**Laura DiFilippo**

*Administrative Assistant*

Laura DiFilippo joined the department in January 2019.
SPEECH AND HEARING SCIENCES

Preparing speech-language pathologists to provide compassionate, patient-centered care