Expo 2018 to Focus on Research Across Disciplines; workshops offered to enhance presentation skills

GALLAUDET UNIVERSITY
CONNECT. DISCOVER. INFLUENCE.

Research *Expo*

Gallaudet Research Expo 2018 (RExpo 2018) will unite researchers and scholars, raise awareness of the many research studies underway at Gallaudet, and foster interdisciplinary research projects. Students, faculty, and staff from a variety of disciplines will have the opportunity to share ideas and showcase their scholarly pursuits and achievements.

RExpo 2018, which is hosted by the Provost and Academic Affairs, will take place during the fall 2018 semester. It will follow a different format from the two previous Expos. Even though RExpo 2018 will continue to be a showcase for research and scholarly achievements, it will primarily focus on the promotion and expansion of research across the disciplines at Gallaudet. RExpo 2018 will capitalize on the strengths of Gallaudet's research areas, including education, linguistics, STM, interpretation and translation, neuroscience, computer science, audiology, psychology, and deaf documentary studies, that reflect Gallaudet's research priorities.

In planning for RExpo 2018, the Office of Research Support and International Affairs (RSIA) is developing a series of free, one-hour workshops during Common Time to better prepare researchers (students, faculty, and staff) in advance of the event. Five workshops focusing on various forms of research presentation -- videography, infographics, research poster design, research presentation skills, and four-minute practice presentations -- led by campus experts will be held between February and October 2018 to help researchers prepare for and refine their

Gallaudet Adopts New Research Priorities

The five research priorities recently adopted by Gallaudet after three years of assessment and review reflect the University's unique and ongoing commitment to research that benefits the diversity of the deaf and hard of hearing population on campus, across the United States, and around the world. The new priorities represent a framework for the research efforts of the University and the Clerc Center.

Strategy E.1.1 of Gallaudet University's preceding five-year Strategic Plan called for no more than five integrated research priorities, formulated by assessing compelling needs as well as current and potential strengths in fields such as visual language and learning, linguistic and communication access, genetics, and ASL/English bilingualism.

The research priorities are:

Priority #1: Education
The status and impact of current practices and policies related to the education, professional and technical training, and career preparation of d/Deaf, hard of hearing, and Deafblind people through the lifespan, from birth through postgraduate education and beyond aimed at the development of evidence-based best practices and policies.

Priority #2: Diversity
Diversity within and between d/Deaf, hard of hearing, and Deafblind communities, including underserved populations, as represented through the arts, humanities, and allied fields, demographic studies, and genetics, along with ethical and policy

Apply Soon for Small Research Grant Funding

The deadline for Small Research Grant (SRG) applications is May 15, 2018. SRGs foster research activity by Gallaudet and Clerc Center faculty and staff, as well as University students, by supporting research projects with small funding requirements and a duration of one year or less.

SRG funds tend to run out by the end of the spring semester each year. RSIA recommends that applications be submitted as early in the academic year as possible. To ensure that sufficient funding is available for SRG applicants who intend to use their funding during the summer (especially Ph.D candidates), RSIA recommends they apply by mid-March at the latest.

SRG proposals can be made for studies on any topic of academic significance using any accepted research method. For student applications, the faculty advisor is considered to have primary responsibility for ensuring the quality of the research.

Grant amounts:
•Up to $750 for undergraduate and graduate students proposing research that is undertaken as a course requirement (one grant per study).

•Up to $2,500 for graduate students doing research as a degree requirement and/or for publication.

•Up to $2,500 for faculty and staff members doing research for an advanced degree.

•Up to $5,000 for faculty and staff members.

•Only one grant is provided per study or for closely related studies.

NOTE: Dissertations and pre-dissertations are considered separate projects and each one is eligible for up to $2,500.

For more information on applying for an SRG, please go to the Research Support section of the Office of Research Support and International Affairs website, www.gallaudet.edu/rsia, and click on the Research Funding link. ◆

Interactive Learning Environment for Optimizing Technology Use

By Dragana Barac-Cikoja and Kevin Cole

To individuals who are deaf or hear differently, increasingly sophisticated and diverse hearing assistive technology (HAT, e.g., cochlear implants, hearing aids) may not provide sufficient hearing, and user satisfaction varies greatly. The reasons may lie partly in unrealistic expectations about the possible outcomes fostered by the availability of such technology, but also in an increasing need for guidance and support in order to use it effectively. Research has shown that the perceptual training and counseling on communication strategies lead to increased

Dr. Dragana Barac-Cikoja and Kevin Cole developed the Interactive Learning Environement for Optimizing Technology Use.

benefits from HAT, improved communication, and better overall quality of life. However, such supplemental, post-fitting services are provided minimally, if at all, because the audiologists generally consider them uneconomical (time-consuming and not reimbursable), and of uncertain effectiveness.

Over the last decade, significant effort has been directed towards increasing the availability and accessibility of post-fitting aural rehabilitation options. Particularly noteworthy is emergence of home-based auditory training programs, some of which recognize the importance of time-on-task and employ a game-like format to preserve interest and encourage adherence to the program. There is also a growing realization that more realistic conditions during training may lead to greater transfer of acquired skills. Finally, the importance of realistic expectations about the outcomes both on the part of the HAT user and the audiologist is universally acknowledged. To develop such expectations and ensure that the aural rehabilitation goals are challenging yet attainable for the user, an individualized and interactive process is needed.

At the Department of Hearing, Speech, and Language Sciences, principal investigator Dr. Dragana Barac-Cikoja, together with Kevin Cole*, a programmer from NOVA Web Development, LLC, have developed the Interactive Learning Environment for Optimizing Technology Use, a computer-based auditory

2017 Nanotechnology Internships and Research at Gallaudet University
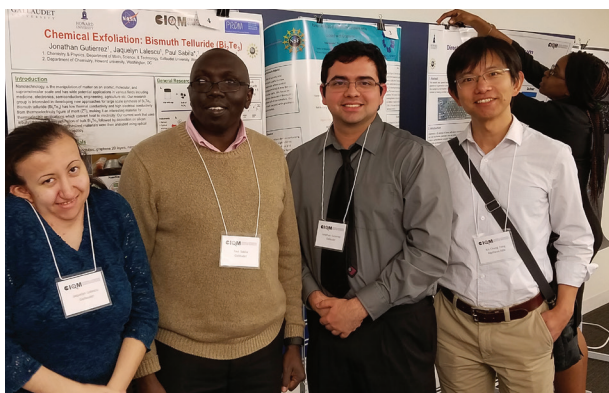
From left: Jaquelyn Lalescu, Dr. Paul Sabila, Jonathan Gutierrez, and Kim Chun Zong from Raytheon are pictured at Harvard University, where the Gallaudet students presented their research.

Gallaudet students Jonathan Gutierrez and Jaquelyn Lalescu had summer internships in nanotechnology research at Gallaudet and Howard universities, then presented their work at Gallaudet and at Harvard University. Nanotechnology deals with materials of very small sizes, about one billion times smaller than a meter. Nanotechnology is a new area with promising applications in design of new drugs like those for cancer treatments, new computers and electronic devices that are faster, flexible and more energy efficient.

The students participated in a 10-week internship. Both were

supported by National Science Foundation (NSF) grants through the Center for Integrated Quantum Materials (CIQM) and Partnerships for Reduced Dimensional materials (PRDM) programs, as well as funds from the NASA/DC Space Grant Consortium

These opportunities have created collaboration and networking opportunities for students, faculty, and staff at Gallaudet, Harvard, Massachusetts Institute of Technology (MIT), Howard, Prince George's Community College, Mt. Holyoke Community College, Wellesley College, Olin College, Bunker Hill Community College, and the Boston Museum of Science.

Gutierrez and Lalescu, summer interns in nanotechnology research, work in the Gallaudet laboratory.

Deaf NYC: Signs of Change

By Brian H. Greenwald

New York's remarkably diverse communities have been the subject of many historical and cultural studies, but the urban Deaf community of New York is typically not included. Historians of Deaf life have also not intensively explored the New York Deaf communities aside from its educational schools. The Deaf NYC: Signs of Change project has an ambitious goal of not only documenting deaf lives and contributions but also adding a layer to our understanding of New York life. Ultimately, the Drs. John S. & Betty J. Schuchman Deaf Documentary Center plans to create a documentary film incorporating interview and location footage.

Janet Weinstock interviews Walter Zupka as he shows his basketball jersey. Ezra Moore, of ZVRS, is the cinematographer.
Photo credit: Brian H. Greenwald

A research team from the Schuchman Deaf Documentary Center traveled to Florida for several days in June 2017 with the goal of interviewing senior Deaf New York residents who have since retired to Florida. Documenting their lived experiences is part of the overall Deaf NYC project. Jean Bergey, Brian Greenwald, and project consultant Janet Weinstock met with people from the Boynton Beach and Margate areas in southeast Florida. Working in collaboration with filmmaking and technical support from ZVRS, the Center collected several hours of footage. Interviews covered a range of educational, work, family live and social experiences. The impact of

communications technology on individual's lives became evident in interviews, as did changes in access and attitudes.

The Schuchman Deaf Documentary Center has been developing this project for a year and half. Challenge grant funds from the National Endowment for the Humanities (NEH) (ZH-252962-17) and major donors ZVRS and Purple, Kantor Foundation, and the Gary S. and Margaret D. Anderson Family Foundation will enable the project to engage with New York communities from 2018 – 2021. NEH Challenge grant funds, paired with donor match dollars, will make it possible to provide student internships, collaborate with schools and organizations to do primary source research, conduct dozens of filmed interviews, interpret and transcribe the footage, and make the materials accessible to diverse audiences.

If you have ideas, film or photo resources, or stories that might enhance the research, now is the time to be in touch. The Schuchman Deaf Documentary Center welcomes your feedback. ◆

Professor Laura-Ann Petitto Hosts NSF INSPIRE & Keck Meeting to Pilot Scientifc Achievements of the Robot-Avatar "RAVE" Learning Tool Prototype

On October 21-24, 2017, Professor Laura-Ann Petitto (Principal Investigator) hosted a National Science Foundation (NSF) INSPIRE and W.M. Keck Foundation meeting to pilot scientific achievements previously made to the RAVE ("Robot Avatar Thermal-Enhanced") learning tool prototype, and to make further improvements to the system.
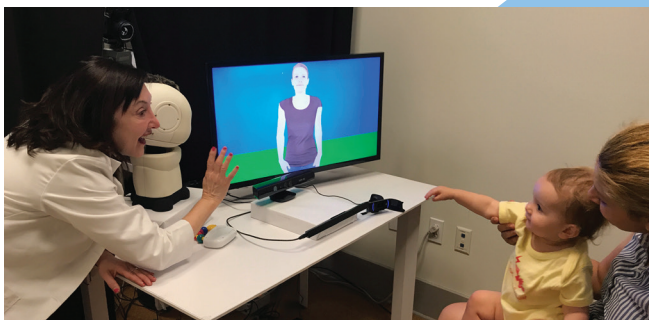
Professor Laura-Ann Petitto (Principal Investigator, Keck and NSF-INSPIRE grants) and baby interacting with RAVE learning tool prototype.

Created and led by Dr. Petitto as part of her W.M. Keck and NSF INSPIRE grant projects (IIS-1547178), the RAVE learning tool functions as an integrated system. RAVE involves a robot, virtual

human, eye-tracking, and revolutionary thermal imaging technology that detects when a baby is emotionally and cognitively engaged and interested in learning.

Placed near an infant's crib, RAVE senses when a baby is in a heightened emotional and attentional state and, thus, most "ready to learn." When detecting that the baby is in an optimal readiness for learning, the system starts a variety of social interactions with the baby; the virtual human begins producing ASL nursery rhymes using a rhythmic structure that has been shown through research to be optimal for helping babies discover words and the fundamental patterns of language. Such early discoveries during this sensitive period for language acquisition are absolutely

PEN Program/Psychology Department Faculty Awarded Grant from Gallaudet's Priority Research Fund
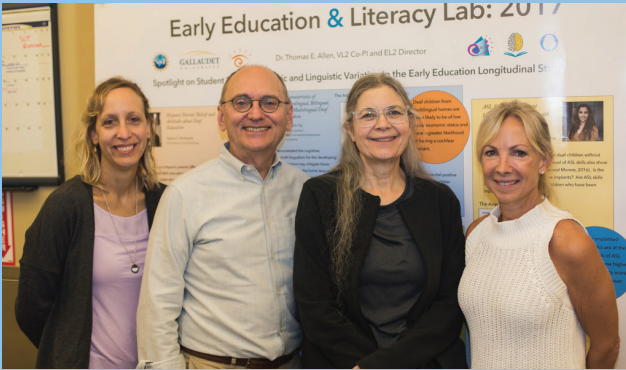

From left: Dr. Melissa Herzig (Director, VL2 Translation in the Science of Learning Lab); Dr. Thomas Allen (Director, VL2 Early Education and Literacy Lab); Dr. Donna Morere (Professor, Gallaudet Psychology Department); and Dr. Sherry Eyer (Associate Professor, Psychology Department).

Although powerful evidence has emerged demonstrating the importance of early language access for later academic success, little research tracks achievement for deaf children with a view towards identifying the role that early language experience plays in later cognitive and academic development.

To meet this need, a research team led by Dr. Thomas Allen, Program Director of the Ph.D. in Educational Neuroscience Program (PEN) and Director of the Early Education and Literacy Lab (EL2) at the National Science Foundation-Gallaudet University Science of Learning Center on Visual Language and Visual Learning (VL2) has been awarded a Gallaudet Priority Research Fund grant to conduct the Extended Education Longitudinal Study (EELS-II). The research team includes Dr. Donna Morere and Dr. Sherry Eyer from the Psychology Department and Dr. Ilaria Berteletti from VL2's PEN Ph.D. program.

The Priority Research Fund grant, administered by the Office of Research Support and International Affairs, supports campus researchers conducting research on important issues using a wide range of methods.

The team will conduct a basic research study that is the first ever to track deaf students' academic progress from Preschool through Middle School. Building on Allen's foundational NSF Science of Learning Center research, in which he collected classroom data on
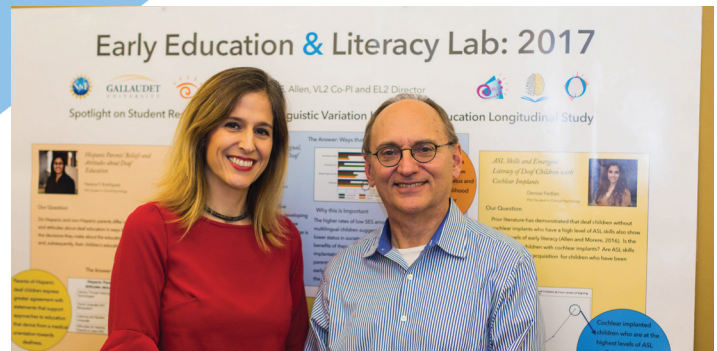
From left: Dr. Ilaria Berteletti (Assistant Professor, Ph.D. in Educational Neuroscience Program) and Dr. Thomas Allen.

young deaf children's cognitive, social, and literacy developments (ages 3 through 7), called "Early Education Longitudinal Study (EELS-I)," now emerges EELS-II.

EELS-II will follow approximately 200 middle school deaf children (most recently tested in 2013 as a part of EELS-I) and investigate whether previously observed relationships between early language

Gallaudet to Begin Creative Collaboration Project in 2018 Through a Grant From U.S. Department of State and World Learning

Gallaudet University is collaborating with the Centre for Fine Arts (BOZAR), in Brussels, Belgium, for a project titled, "Connecting Capitals." The work will be led by Gallaudet's Melissa Malzkuhn, creative director of the Motion Light Lab at the National Science Foundation-Gallaudet University Science of Learning Center on Visual Language and Visual Learning (VL2), and Lauren Benedict, digital media specialist in the Office of University Communications.

Gallaudet has been selected by the U.S. Department of State and World Learning to be part of

Lauren Benedict, digital media specialist, University Communications.

the Communities Connecting Heritage Program. This program engages underrepresented communities, empowers youth, and builds partnerships between communities in the U.S. and in key strategic world regions through exchange projects that explore cultural heritage topics. These projects advance cultural heritage appreciation and preservation through community outreach and public education and by reinforcing positive narratives.

The collaboration will use art-making, education, and technology to connect and empower up to 20 deaf youth ages 18 to 27 from the U.S. and Belgium to be thoughtful and engaged citizens through a deeper understanding of their respective deaf heritages explored through the lens of civic engagement.

Through two exhibitions, public events, artistic co-creation, and a dedicated app, the project will strengthen awareness and understanding of deaf and hearing Belgian and American cultures and values, build sustainable networks for collaboration, and

The Department of Interpretation and Translation Creates Initiatives to Beat the "Research Blues"
by Brenda Nicodemus

"One is the loneliest number that you'll ever do." - Three Dog Night

This lyric, made famous by the rock group Three Dog Night, describes the feeling of isolation and alienation that many people feel in the world. Unfortunately, students and scholars often report similar experiences of loneliness and disconnection as well. As they advance their individual research projects, they may wonder if their study has value, if they are on track, or if anyone even cares about their findings. Working alone for long periods of time can lead to doubts, uncertainty, and procrastination.

The sense of isolation is widespread in academia. In particular, graduate students describe struggling with feelings of loneliness when working on their theses or doctoral dissertations. In the dissertation phase, doctoral students no longer have classes to schedule their day and provide social connections. The "freedom" of independent writing may lead to guilt about productivity and avoidance of other students who they imagine are more productive. These worries are revealed by a high number of online blogs with headings such as "Five Ways to Beat Loneliness While Doing a Dissertation," "The Loneliness of the Long Distance Dissertation Writer," and "You are Not Alone! There Is Dissertation Help!"

It's not only students who feel the strain. In their new book, *The Slow Professor: Challenging the Culture of Speed in the Academy*, Maggie Berg and Barbara Seeber apply the principles of the "slow" movement to faculty life. The authors describe an era in which professors feel "beleaguered, managed, frantic, stressed, and demoralized" as they juggle the increasingly complex expectations of research, teaching, and service. Berg and Seeber advise faculty members to acknowledge their stress level and to recognize that it is frequently accompanied by feelings of guilt and loneliness.

The Department of Interpretation and Translation (DoIT) recognizes that "research blues" can happen to anyone who is facing a long and challenging research journey. As a result, the department has taken several measures to try to alleviate the isolation of students and faculty who are engaged in the challenging work of research.

Faculty and students (including distance students) in the IT3 (Interpretation and Translation Think Tank) meeting read research articles and discuss as a group. (Photo: Tony Ellis)

Interpretation and Translation Think Tank (IT3)

In one initiative, the department established the Interpretation and Translation Think Tank (IT3), a research reading group in which doctoral students and faculty read a designated article and gather (in person and via video) to discuss it. The reading group provides a way for faculty and students to connect as well as to keep current about seminal research studies. These gatherings are especially important for the doctoral students, many who live at a distance from campus.

From Left: Drs. Keith Cagle, Brenda Nicodemus, Emily Shaw, Pamela Collins, Danielle Hunt, and Patrick Boudreault engage in discussion during the DoIT Faculty Research Brown Bag Gathering. (Photo: Tony Ellis)

Research Numbers from the Department of Interpretation and Translation

| 29	7	1.5	100	250	1
Current number of doctoral students in the Department of Interpretation and Translation Ph.D. program.	Number of individuals who have earned a Ph.D. from the Department of Interpretation and Translation.	Number of years M.A. students in the Department of Interpretation and Translation work on their research projects before presenting at the Annual Research Forum.	Average number of people who attend the annual B.A. Research Poster Session in which B.A. students display and explain their research projects.	Average number of students and scholars who have attended each of the past two International Symposiums on Signed Language Interpretation and Translation Research.	Number of ASL-English interpreter educations programs in the world that educate students at the B.A., M.A., and Ph.D. levels **(Only Gallaudet!)**

OSP launches first bilingual survey

The Office of Sponsored Programs (OSP) has launched its first bilingual survey, delivered in American Sign Language and English. The purpose of the survey is to determine campus knowledge about the functions and responsibilities of OSP, to collect questions for the Frequently Asked Questions section of the OSP website, and to discover what types of training about grant funding, proposal development, compliance, and other sponsored programs-related topics the Gallaudet community is interested in.

OSP is reaching out to the campus community in the hope that they will take time from their busy schedules to complete this important survey. Together, the community can help Gallaudet reach the goal of becoming "the epicenter of research, development, and outreach leading to advancements in knowledge and practice for deaf and hard of hearing people and all humanity."

Please go to the OSP website, http://www.gallaudet.edu/office-of-sponsored-programs, to find the OSP Bilingual Survey in the left column. If there are questions, concerns, or to address something not found in the survey, email osp@gallaudet.edu. ◆

STM Interns Research Health of Minnesota Lake
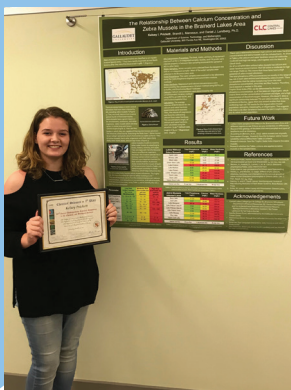
Prickett won first place for her research poster at the University of Maryland-Baltimore County undergraduate symposium for the chemical and biological sciences.

Kelsey Prickett (biology major) and Brandt Marceaux (chemistry major, mathematics and information technology minor) worked on limnology projects led by Dr. Daniel J. Lundberg, professor of chemistry, at the Brainerd Lakes Water Resources Laboratory at Central Lakes College, Brainerd, Minn. The aim of the first project was to find the relationship between calcium, water hardness, and total phosphorus concentrations to the zebra mussel population in 20 lakes, and to identify the risk a lake has to an infestation. The second project focused on the development of a three-dimensional (3-D) watershed model, using ArcGIS (geographic information system) and a 3-D printer. Results were presented to lake shore property and business owners at lake associations; academic audiences at the St. Cloud State University Aquatic Toxicology laboratory, Gallaudet, and the University of Maryland-Baltimore County; and to youth during Science Night at Camp Sertoma. ◆

From Left: Kelsey Prickett, Brandt Marceaux, and Dr. Daniel J. Lundberg

Dr. Caroline Solomon receives 2017 Ramón Margalef Award for Excellence in Education

Dr. Caroline Solomon, professor of biology and Faculty Governance chair, received the Ramón Margalef Award for Excellence in Education by the Association for the Sciences of Limnology and Oceanography (ASLO) at the Aquatic Sciences Meeting in Honolulu, Hawaii, February 26-March 3, 2017. The award, honoring excellence in teaching and mentoring in the fields of limnology and oceanography, recognizes Solomon for her extraordinary accomplishments in bringing the deaf and hearing worlds in science together, coupled with her exceptional skill as a mentor, educator, and leader to inspire all. Each year, ASLO honors scientists for their achievements in the aquatic sciences. ◆

History UNFOLDED

Colleagues from the United States Holocaust Memorial Museum (USHMM) visited campus on May 19, 2017 to share news about the History UNFOLDED: U.S. Newspapers and the Holocaust project and to discuss potential collaborations.

From left: Dr. Brian Greenwald, history professor and director of the Drs. John S. & Betty J. Schuchman Deaf Documentary Center; Eric Schmalz, Citizen History Community Manager in the William Levine Family Institute for Holocaust Education, USHMM; Elissa Frankle, Museum Experience and Education Specialist in the Levine Institute for Holocaust Education, USHMM; and Dr. William Ennis, history professor. ◆

Photo: Jean Bergey

Schuchman Center Naming Ceremony

The official naming ceremony of the Drs. John S. & Betty J. Schuchman Deaf Documentary Center, located in the Sorenson Language and Learning Center, took place May 3, 2017. Dr. Brian Greenwald, director of the center, opened the ceremony honoring Drs. John S. (Stan) and Betty J. Schuchman. To learn more about the center, visit http://www.gallaudet.edu/drs-john-s-and-betty-j- schuchman-deaf-documentary-center. ◆

Schuman Center Director Brian Greenwald opens the naming caremony.
Photo: Zhee Chatmon

From left: Dr. Betty J. Schuchman, Dr. John S. Schuchman (who passed away in December 2017), President Roberta J. Cordano, and Provost Carol J. Erting are shown at the ceremony.
Photo: Zhee Chatmon

Youth from On and Off Campus Benefit from Gallaudet's Scientific Researchers in Summer Program

Eight interns showed the results of their research in genetics, bioinformatics, ecology, and nanotechnology at a July 26 End-of-Summer Poster Symposium in Hall Memorial Building.

This is the eighth year that Gallaudet's Department of Science, Technology, and Mathematics (STM) has hosted a *summer internship program in the Science, Technology, Engineering, and Mathematics fields. Most of the students over the years have been from outside Gallaudet; many come from mainstreamed colleges and leave with very positive impressions of science at Gallaudet. To date, the STM program has received applications from students from 23 institutions. The acceptance process is highly competitive -- only about 50 percent of the applicants have been accepted to the program.

Summer STEM intern Gabrielle Humlicek practices for her final poster presentation. Also pictured are (clockwise from right): Dr. Caroline Solomon, Dr. Gaurav Aurora, interns Selman Jawed, Camac Kyre, and Jonathan Tikhonoff, and STM Laboratory Coordinator Anna McCall.

Maggie Gray, a senior at Montgomery Blair High School, and Selman Jawed, a mathematics major, presented a theoretical genetics poster using forward evolutionary simulations to show the effect of deaf-deaf mating on the frequency of deafness-causing alleles in the population. They worked with Dr. Derek Braun, director of the Molecular Genetics Laboratory and the Biology Program.

Jonathan Tikhonoff, a mathematics major, presented a poster in bioinformatics. His project looked for traces of genes from bacterial

TAP Award

Dr. Christian Vogler, Norman Williams, and Linda Kozma-Spytek from Gallaudet's Technology Access Program (TAP) were honored for their contributions to ensuring that technological advances can be accessed by deaf and hard of hearing people at the 22nd Biennial Conference of Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), held July 29, 2017 in North Bethesda, Md. The Hearing Loss Association of America (HLAA) co-sponsored the event.

Vogler, TAP director, accepted the Andrew Saks Engineering Award from TDI Vice President Andy Lange. The Saks award recognizes outstanding

Dr. Christian Vogler accepts the Andrew Saks Engineering Award from TDI Vice President Andy Lange.
Photo: TDI.

Norman Williams also recived a Saks award.

Linda Kozma-Spytek displays her HLAA Board Chair Award.
Photo: HLAA

contributions to improving accessibility in telecommunications through efforts in design, electronics, or engineering. Vogler and his team played a pivotal role in the transition from TTYs to Real Time Text (RTT) in 2016, working closely with consumer leaders on discovering ways of making emergency calls without relying on TTYs.

"I am humbled and honored to receive this award, sharing today with people I worked with for the past six years," said Vogler during his acceptance speech. "This award is not only about me—it is about an immense collaborative effort that has been in the making for decades. I especially want to thank my colleagues at AT&T who reached out to us and championed RTT at a key moment. I want to thank everyone from TAP, TDI, HLAA, and other agencies for their help and for their mentorship."

Williams, TAP senior research engineer, also received the Saks Award. He was recognized by TDI for more than 25 years of contributions in accessibility engineering, particularly in the areas of text and video telecommunications. TDI recognized the work Williams took part in during the 1990's with engineering and writing various applications, including Futura-TTY, a TTY software for PCs. Williams worked with the Cellular Telecommunication Industry Association to ensure TTYs were compatible with cellular phones. More recently, Williams developed a software prototype for faster text chat, adopted in AOL Instant Messenger, which ensures real-time instant messaging.

Kozma-Spytek, TAP senior research associate, was selected for HLAA's 2017 Board Chair Award, given to individuals who educate, inform, and support people with hearing loss, and who exemplify the mission of HLAA. Kozma-Spytek has served as HLAA's professional advisor for technology and counseled various projects, such as HLAA's N-CHATT program and the PSAP standards board. She accepted the award on June 23, 2017.

"Kozma-Spytek's dedication as an HLAA professional advisor for technology has been invaluable to ensure we have expertise in this area," said Barbara Kelley, HLAA executive director. "She always works with the best in mind for HLAA and people with hearing loss everywhere." ◆

Accessible Home Alerting

Accessible Home Alerting represents the first visually-oriented flashing light home alerting system, built on off-the-shelf smart home components, that is accessible to people who are deaf or hard of hearing. Through the use of flashing lights in different colors and patterns, and even strobe flashes -- completely under the control of the consumer -- deaf and hard of hearing people are alerted to a wide variety of emergency situations.

Norman Williams (right), senior research engineer for TAP, and student Aleksandr Rozentsvit (standing behind table) demonstrate the home alerting system at a recent Federal Communications Commission Accessibility Innovations Expo.

The system, a project funded by the Consumer Technology Association Foundation, and developed by Gallaudet's Technology Access Program (TAP), with TAP Senior Research Engineer Norman Williams serving as project leader, has been developed from a deaf/hard of hearing-centric perspective, based on survey data gathered from this population.

More specifically, the system builds on existing mainstream Internet of Things (IoT) technologies (e.g., Samsung Smart Things, Lifx lights, Hue lights) to provide user-configurable flashing lights that respond to common audible events, such as a ringing doorbell, knocking on a door, receiving a VRS call, a captioned telephone call, and so forth. Unlike similar previous attempts in this area, including systems from well-known VRS providers, the system is completely open and can integrate with a variety of IoT products – as long as they are compatible with one of the supported hubs. The project is also compatible with the web-based service If-This-Then-That, so it can be plugged into the huge existing third-party library of events and responses. ◆

SLAAASh research project furthers depth of knowledge about ASL

For language data to be usable for research, it usually needs to be annotated. This is especially true for sign language data collected on videotape. Currently, if one wants to find a specific sign on tape, they have to play through the video and look for it. There is no way to textually search videos without adding annotations. While large collections of material (corpora) have been assembled for the purpose of studying the structures of many languages, none currently exist for American Sign Language (ASL).

This lack of essential data for insightful studies on the intricacies of ASL is changing, however, thanks to research studies like Sign Language Acquisition, Annotating, Archiving, and Sharing (SLAAASh), a project conducted by Principal Investigator Diane Lillo-Martin of University of Connecticut through a grant at Yale University's Haskins Laboratories, which specializes in language research, with Gallaudet Department of Linguistics faculty members Julie Hochgesang and Deborah Chen Pichler. The goal of SLAAASh is to prepare a corpus of previously collected

The current SLAAASh team (from left): Carmelina Kennedy, Amelia Becker, Lettie Nazloo, Maura Beggins, Lee Prunier, Debbie Peterson, Donovan Catt, Julie Hochgesang, Jacob Veeder, Diane Lillo-Martin, Lily Kwok, Phoebe Tay, Doreen Simons, and Laura Levesque)

data on ASL acquisition to share with other researchers in order to permit more studies to be conducted that relate to ASL acquisition and use, as well as an annotating and archiving infrastructure that can be used by other projects that use ASL video data.

SLAAASh is an outgrowth of research done decades ago by Dr. Lillo-Martin, a professor of linguistics at the University of Connecticut and senior scientist at Haskins Lab. Lillo-Martin built a strong foundation of research in this area by collecting hundreds of videos of Deaf children of Deaf parents. Her studies inspired a noted sister project, known as BiBiBi. In that project, Lillo-Martin was joined by Dr. Chen Pichler, and Dr. Ronice Müller de Quadros, a professor in the Communication and

Expression Center of the Department of Foreign Languages at Universidade Federal de Santa Catarina, Brazil, to investigate how hearing children of Deaf families acquire both signed and spoken languages, and compare this process with what is known about the development of two spoken languages. Bimodal bilinguals' language development is also compared with the monolingual development of a spoken or signed language, including Deaf children who are acquiring sign language and learning a spoken language with the aid of a cochlear implant.

Dr. Hochgesang was Pichler's research assistant, then lab manager for the BiBiBi project. This, along with other language documentation experience, gave her the skills, and the enthusiasm, to continue research through SLAAASh, a four-year project funded by Haskins Laboratories that started in the fall of 2015. Today, Hochgesang is supervising the completion of annotations of the videos using EUDICO Linguistic Annotator (ELAN) computer software.

An equally exciting aspect of the SLAAASh project is the creation of an ASL Signbank to expand the database of unique glosses -- also known as ID glosses -- led by Hochgesang and research assistants at Gallaudet University. This creation of ID glosses started with Hochgesang's work with BiBiBi and subsequent efforts to create shared ID glosses across research groups (ID Gloss Project*). Because a commonly-accepted set of conventions for ASL doesn't exist, and there are inconsistencies among the transcription systems used by research groups, the most reliable practice is to base annotations on an ID gloss, where one word or phrase represents one sign; i.e., for each ASL sign there is an English word.

While it may appear that the Signbank will be a sort of dictionary for ASL, the researchers instead envision it as a lexical database of ASL signs that will be an invaluable tool for researchers. It also can be directly used in ELAN to annotate files through an external controlled vocabulary (ECV).The ASL Signbank will benefit the research using the SLAAASh data as well as any ASL video data, since annotation of ASL video data needs to be conventionalized in order to be a valid, reliable source for future linguistics research.

"The goal of the project is to systematize annotations and make available to

The ASL Signbank picture features signers Felicia Williams, Nayo Franck, Paige Hawkins, Renca Dunn, Mari Klassen, Franklin Jones Jr, April Jackson-Woodard, Conrad Baer, Norma Moran, Yvans Cator Jr, Raychelle Harris, Gabriel Arellano, Andrew Morrill, and Debbie Colbert.

researchers a set of previously recorded longitudinal spontaneous production data with accompanying metadata, annotations, and descriptive analyses," said Hochgesang. "The project begins with existing longitudinal corpora of four native signers, originally collected for the purpose of addressing specific theoretical questions about morpho-syntactic development." Prior to the current project, she said, these corpora had been partially annotated and analyzed. By summarizing the descriptive characteristics of the data, ensuring accurate and consistent transcription, and sharing it with the research and sign language communities, she explained, "there is much that can be gained in psycholinguistic understanding of how sign languages are acquired, as well as practical benchmarks for language development of Deaf signing children."

To date, almost 40 percent of the data has been annotated, community input has been collected on reconsenting and sharing protocol, and more than 2,000 entries have been made to the ASL SignBank, said Hochgesang. She added that the SLAAASh researchers plan to continue to apply for grants after the current grant period expires in order to continue work on the ASL Signbank. "This will be an ongoing project," she said, "not to mention maintaining the archives that should result from our work."

Gallaudet University and SignAll form Partnership

By Patrick Boudreault

Co-principal investigators Dr. Patrick Boudreault, associate professor in the Department of Interpretation and Translation, and Dr. Christian Vogler, professor in the Department of Communication and director of the Technology Access Program, have partnered with SignAll (signall.us), a start-up research and development company based in Budapest, Hungary. SignAll is pioneering an automated sign language translation solution based on computer vision and natural language processing.

Gallaudet President Roberta Cordano experiences SignAlL technology with the prototype scaffold.
Photo: Genie Gertz

The Sign ALL team is shown with the Gallaudet delegation.
Photo: SignALL

The company's aim is to enable everyday communication between individuals who use spoken English and Deaf individuals who use American Sign Language (ASL). The goal of the partnership is to create full accessibility for the Deaf community and to broaden the possibilities of communication across different languages and modalities. The co-principal investigators serve as experts in ASL, translation, and telecommunications accessibility.

The first phase of collaboration and consulting between Gallaudet and SignAll started in January 2017 with a lab located in Fowler

The SignAll laboratory is currently housed in the Department of Interpretation and Translation.
Photo: Tony Ellis

Youth Benefit from Gallaudet's Scientific Researchers in Summer Program

viruses in the bacterium Yersinia pestis, which caused the black death (bubonic plague) during the middle ages. His mentor was Dr. Gaurav Arora, an assistant professor in the Biology Program.

Gabrielle Humlicek, Camac Kyre, and Anthony Laucevicius presented a poster on aquatic ecology. Their project studied nutrient runoff in the Anacostia River. A major sewer upgrade is planned for this year, and STM researchers are particularly interested in measuring the hopefully positive ecological impact of this upgrade. Their mentor was Dr. Caroline Solomon, professor in the Biology Program.

Jacquelyn Lalescu and Jonathan Gutierrez presented a poster on nanotechnology. They studied new ways of forming molybdenum disulfide monolayers. Their mentor was Dr. Paul Sabila, a professor in the Chemistry Program.

Two additional summer interns, Kelsey Prickett and Brandt Marceaux, worked with Dr. Daniel Lundberg, a professor in the Chemistry Program, in Minnesota.

In the spirit of working with the outside community, Dr. Solomon invited stakeholders involved in restoring Washington, D.C.'s Anacostia River to the symposium.

Many interns from past summer programs have gone on to present their posters at professional conferences and at the University of Maryland Undergraduate Symposium, where they have won several first- and second-place awards.

Parent-Child Interaction Therapy Training and Research Clinic

By Lori Day

Dr. Lori Day oversees PCIT clinic training and research proceedures.

Dr. Lori Day, associate professor in the Department of Psychology at Gallaudet University, and her colleague, Dr. Elizabeth Adams Costa, clinical psychologist at the River School, along with graduate students from Gallaudet University's Clinical Psychology doctoral program, have identified a formal cultural adaptation procedure for evidence-based mental health interventions that can be used with deaf individuals. Day is currently evaluating this procedure with a specific intervention called Parent-Child Interaction Therapy (PCIT).

PCIT is an evidenced-based parent training intervention designed to support parents/caregivers in both building a warm relationship with their young children, as well as effectively managing their children's disruptive behavior. For families with children between the ages of 2 and 7 who have behavioral concerns, impulsivity, hyperactivity, oppositional behavior, and/or difficulty following parental instructions, PCIT has been shown to decrease disruptive behaviors, improve language, and increase positive parent-child interactions. Through services that work with the child and caregiver together, the child's behavior improves and the parent's stress level reduces.

The Department of Psychology has a PCIT training and research clinic on the Gallaudet campus where accessible services are available to local families who have one or more deaf members. During weekly one-hour sessions, for generally 12-18 weeks, parents are taught specific skills that target healthy attachment and child behavioral compliance, and they are coached in American

Dr. Day discusses plans with a PCIT team member.

Clerc Center Team Develops Research Advocating for Traditionally Underserved Families

The Laurent Clerc Deaf Education Center's (Clerc Center) Monitoring, Evaluation, and Research team is developing a new research project focusing on traditionally underserved families and advocacy on their part. The project supplements the original parent advocacy survey conducted by Dr. Christen Szymanski, Clerc Center psychologist, and Dr. Paul Jacobs, a former research associate in the department, in 2014.

This new program will address the research gaps in understanding the advocacy efforts of families with deaf and hard of hearing children from various underserved populations. A better understanding of the advocacy efforts of families with deaf and hard of hearing children from underserved populations would enable the Clerc Center to develop and provide resources that support and enhance school professionals' knowledge of working with diverse families.

This project addresses the problematic systematic assumptions of what constitutes successful parent advocacy, which comes from the dominant white middle class values (Lo, 2008; Hughes, Valle-Riestra, & Arguelles, 2002). The assumptions of successful parent advocacy require specific skill sets such as knowing the laws, being able to navigate through educational system, and active parental involvement with the IFSP/IEP process (Stanely, 2015; Trainor, 2010; Lo, 2008). According to Clerc Center Project Manager Mary Ann Kinsella-Meier's (Laurent Clerc National Deaf Education Center Internal Paper, Jan. 3, 2017) synthesis of the literature review on parent advocacy in special education, parents need to have some understanding of the special education laws, their child's educational system, and their rights to be able to advocate successfully for their deaf and hard of hearing children's education.

This dominant persuasive systematic assumption of parent advocacy from special education perspective does not include different approaches to parent advocacy and not all families share the same understanding and perspective of what advocacy means from the special education perspective.

The foundation of this project comes from Trainor's (2010) study on parent advocacy, which she has identified four approaches to advocacy that families use to support their children in special education. The four types of parent advocates Trainor (2010) has identified are intuitive approach, disability expert approach, the strategist approach, and change agent approach. The first approach

INTERNATIONAL DEVELOPMENT MA PROGRAM FALL 2017 ACTIVITIES

IDMA Student Presents Original Research at the 14th Inter-American Symposium on Ethnography and Education

On September 21, 2017, Stephanie Niaupari ('17 and first year graduate student in the M.A. Program in International Development) presented original research titled "Perspectives on the Barriers Facing the Ecuadorian Deaf Education System in Quito, Ecuador."
Niaupari presented in ASL and engaged audience discussion of her major research findings, as well as an extended discussion of "power behind language"-- in Quito and elsewhere. ◆
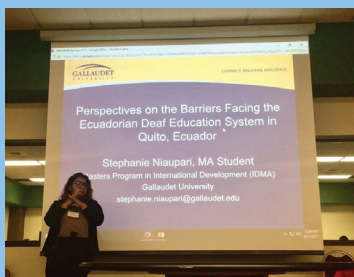
IDMA Program Director Audrey C. Cooper Enters New Book into the Library of the National Museum of Ethnology, Japan

While attending the 6th Meeting of Signed and Spoken Language Linguistics Conference in Osaka, Japan, Cooper (right) had the honor of entering a copy of her book, *Deaf to the Marrow: Deaf Social Organizing and Active Citizenship in Việt Nam*, into the library of the Minpaku Sign Language Linguistic Research Section of the Graduate University for Advanced Studies/National Museum of Ethnology (Osaka, Japan). Cooper is pictured with Dr. Kikusawa Ritsuko (Conference Chair). ◆

IDMA Program Hosts United Nations Development Programme UNDP Partners

On September 11, 2017, Liz Huckerby (UNDP Chief of Integrated Talent) and Irina Stavenscaia (UNDP Head of Employee Engagement) visited the IDMA Program to dialogue about multilingual, Deaf and disability-inclusive development, and to share internship and employment opportunities at the United Nations. ◆

Irina Stavenscaia (left) and Liz Huckerby (right), with BJ Kammerer (center) providing ASL-English interpretation.

From left: Izumi Takizawa, Jarvis Grindstaff, Christine Feinbaum, Stephanie Niaupari, Jeremy Daffern, Alex Mentkowski, Irina Stavenscaia, Meg Shanks, Olufemi Ige, Audrey Cooper, MJ Jones, Liz Huckerby, Erik Jeune, Habtamu Buli, Nichelle Steffen, Eugenio Ravelo-Mendoza, and Sonia Holzman.

UNICEF-Gallaudet University Accessible Textbook Initiative Technical Workshop

From September 25 to 28, 2017, Gallaudet University partnered with UNICEF to host a technical workshop focusing on UNICEF's Accessible Textbook Initiative. Workshop participants represented worldwide partners, their accessibility interests, participatory values, and input on processes related to technical, operational, policy, and protocol concerns, as well as language and translation. Coordination of the Gallaudet University participation was led by Melissa Malzkuhn and Dr. Melissa Herzig (VL2), and Dr. Audrey Cooper and Maegan Shanks (IDMA Program). ◆

From left: Meg Shanks, Izumi Takizawa, Eugenio Ravelo-Mendoza, MJ Jones, Erik Jeune, Nichelle Steffen, Olufemi Ige, Sonia Holzman, Habtamu Buli, Alex Mentkowski, and Audrey Cooper.

INTERNATIONAL DEVELOPMENT MA PROGRAM FALL 2017 ACTIVITIES

IDMA Graduate Students Present Preliminary Research at American University's Public Anthropology Conference

On November 3, 2017, six IDMA students co-organized and presented three panels describing preliminary research projects.

The panel Addressing Audism in Academic Scholarship and Education included three presentations: "Language Deprivation in Education: A Preliminary Research Study," given by Nichelle Steffen; "Social Space and Proximity," given by Jenifer Baker (M.A. student, Department of ASL/Deaf Studies), and "Findings in Ethnographic Research: Advantages and Disadvantages of Students and Faculty in Higher Education," given by Eugenio Ravelo-Mendoza.

From Left: Olufemi Ige, Habtamu Buli, and Christine Feinbaum.

The panel Challenges and Opportunities of Inclusion and Accessibility in International Development included three presentations: "Problems and Prospects of Implementing Inclusive Education Policy in Nigeria with a Focus on Deaf and Hard of Hearing Children," given by Olufemi Ige; "Inclusion through the Convention on the Rights of Persons with Disabilities," given by Habtamu Buli; and "The Americans with Disabilities Act and Employment of Deaf People and People with Disabilities," given by Christine Feinbaum. "Inclusion for Transgender and Gender Non-Conforming Scholars" was given by MJ Jones with Britton Auman co-presenting (Gallaudet University undergraduate student). ◆
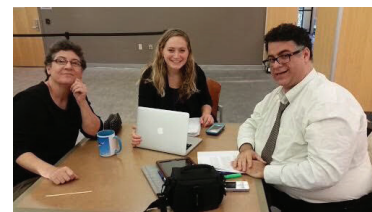
From left: Jennifer Baker, Nichelle Steffern, and Eugenio Ravelo-Mendoza.

From left: Britton Auman and MJ Jones.

Clerc Center Research

is the intuitive approach, which Trainor (2010) illustrates as the "intuitive knowledge encompasses perspective insights parents develop through relationship with their children" (p. 40).

In other words, parents advocate for their child's preferences, strengths, and needs with school professionals, with the emphasis that they know what's best for their child. Parents using the disability expert advocacy approach tend to develop sophisticated knowledge of their child's disability through different sources, such as doctors, organizations, and other resources. These parents advocate for their children through their knowledge of the child's disability. The third approach is the strategist approach to advocacy, which Trainor (2010) defines as parent advocates who have sophisticated knowledge about IDEA, including an understanding of special education laws, process, and parental rights. The strategist approach fits with the dominant perspective of what successful parent advocacy entails as mentioned earlier.

The fourth approach is the change agent approach to advocacy, whereas the parents tend to take advantage of their knowledge of the special education laws and educational system as well as social networking with various professionals and families to change the system. Change agent parent advocates, according to Trainor's (2010) study tend to be parents with intensive networking and knowledge of how special education system works. All four approaches to parent advocacy will be considered in this new project on traditionally underserved families and advocacy for their deaf and hard of hearing children in education.

The results of this study will not only provide the Clerc Center a better understanding of advocacy efforts among diverse groups of parents, but with the rest of the nation, especially among those who work with diverse families with deaf and hard of hearing children.

This project has the potential of dismantling the systematic dominant perspective of parent advocacy and creating new shared understanding and respect of different approaches to parent advocacy. With that being said, professionals working with families would have a more inclusive understanding of how they support and honor families using different approaches to advocacy. ◆

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Gallaudet University and SignAll form Partnership

Hall. The emphasis for the first six months of the project was to evaluate the best methods of the data collection with the ultimate goal of having a large database in ASL. This collaboration is a tremendous way to integrate science, technology, and liberal arts on campus. A team of graduate and undergraduate students from various program on campus formed part of the unique opportunity to learn the applications of artificial intelligence (AI). They also worked as ASL models to provide sign language data and served as operators of the recording technology. This initiative allows the emerging field of AI research to involve Deaf people in each step of the process. "This is a unique opportunity to examine sign language in context and the cooperation is key to successfully delivering the best possible translation software," said Zsolt Robotka, CEO of SignAll.

As of September 2017, the project entered its second phase and relocated to a laboratory in Hall Memorial Building within the Department of Interpretation and Translation. The aim of this phase is to expand the database specifically targeted for the pilot to be located at the future McGuire Welcome Center in spring 2018. This pilot effort will be a model for future applications in public and business spaces where there are direct interactions between non-signers and deaf individuals using ASL. Two Gallaudet students, Jade DeLaO, '18, B.A. in ASL, and Derek Frank, '18, B.A. in communications, work as project outreach, coordinators, and data collection specialists. They work in tandem with Dawn Croasmun, the ASL expert from SignAll and a graduate of the Gallaudet M.A. in sign language education.

SignALL had its first public demo at the International Conference of World Federation of the Deaf in Budapest last November, where Dr. Boudreault, Dean Genie Gertz of the College of Arts and Sciences, and President Roberta Cordano were present. While in town, they had a wonderful opportunity to visit SignALL headquarters, meeting the CEO, Zsolt Robotka, and his team of innovative engineers, and Ms. Croasmun, who worked in the Budapest headquarters for two years. President Cordano had the opportunity to test the prototype with its colored gloves, which captures detailed hand movements as part of the development stage, and facial recognition as well with an infrared motion sensing device.

Gallaudet is proud to be part of this endeavor, with the idea of embarking on the current Artificial Intelligence and language recognition bandwagon, which encompasses information technology, engineering, communication, ASL, and translation.

Contact Dr. Boudreault at patrick.boudreault@gallaudet.edu or Dr. Vogler at christian.vogler@gallaudet.edu with further inquiries. ◆

Creative Collaboration Project in 2018 Grant From U.S. Department of State and World Learning

Melissa Malzkuhn, director of the Motion Light Lab at Gallaudet University, suits up in motion capture to record a nursery rhyme for deaf children.

promote cross-cultural understanding.

"We're thrilled to partner with BOZAR and build our creative network and turn this into a collective experience through the power of narratives. This project will bring a deeper understanding of our cultural values and self-representation as digital citizens, across nations," said Malzkuhn.

At its core, the project is about youth civic engagement, collaboration, social inclusion, and celebrating deaf heritage as being both distinct from and interconnected with broader American and Belgian heritages.

"We're looking forward to this great opportunity for Gallaudet and its students to take part in the collaboration with BOZAR to learn, engage, and deliver a special creative project that speaks to both communities," said Benedict.

Virtual exchanges began on January 11 and will continue every Thursday, leading up to the in-person exchanges and public exhibitions in the spring and summer. A special topics course also has been established as a part of this program, providing an immersive experience for Gallaudet students, culminating with a trip to Brussels in May. For more information, visit www.motionlightlab.com/connectingcapitals. ◆

Expo 2018 to Focus on Research Across Disciplines

presentations before RExpo 2018.

RSIA wants to make available all of the necessary campus resources to present research studies effectively. Early-career researchers in particular should be aware that attending one or all of these will not only benefit them for RExpo 2018; the lessons they learn should prove invaluable for presenting at future professional conferences after they graduate from Gallaudet.

Participating in a RExpo 2018 workshop is a great way to provide opportunities for researchers to interact with their peers and learn from each other. They are open to researchers of all skill levels, and researchers are strongly encouraged to attend as many workshops as they can. Classes are also welcome to join.

The workshop schedule is as follows:

VIDEOGRAPHY -- February 8, 2018
Hoon Jeong, Video Communications, Training, Products & Dissemination
Bilal Chinoy, Marketing & Creative ServicesJavier Tabares, ASL Connect, ASL & Deaf Studies

Guidance will be offered in how to turn research data into a video that people truly want to watch. Participants will have an opportunity to learn about the available resources that help in producing and editing video clips. They also will learn about data storytelling by presenting their data alongside animated infographic images.

DATA VISUALIZATION: "Telling Stories with Data"-- March 22, 2018
LCB220 (E-Learning Lab room)
Dr. Gaurav Arora, Science, Technology & Mathematics

Interested in telling effective stories with data? Want to know how to remove clutter from your da-ta? This workshop will teach you which visualization works best for your data. It will be hands on, and we will work on a simple example to help you better understand your data so that others notice the stories you have to tell. No prior computer knowledge is required. BRING YOUR LAPTOP IF YOU CAN.

INFOGRAPHICS: "Visualizing Data" -- March 27, 2018
Dr. Jeffrey Levi Palmer, National Deaf Center, University of Texas
Whether you are working on a research poster or presentation, nothing tells a complex story faster than an infographic. In this workshop we'll explore the fundamentals of data visualization and learn how to create memorable static infographics.

We'll also review best practices for making infographics maximally accessible to sighted and non-sighted audiences. Let's enhance communication by making our data and research maximally accessible!

RESEARCH POSTER DESIGN -- April 3, 2018
Dr. Caroline Kobek Pezzarossi, Psychology
Dr. Julie A. Hochgesang, Linguistics

Participants will learn how to design professional research posters that include a blend of brief text summaries, tables, graphs, pictures, and other visual formats. Discussions will include how to determine the most important/interesting/astounding findings from a research project that should be featured on the poster; the best way to display visual research through charts, graphs, or images; what kind of information presenters can convey during a talk that will complement their poster; and most important of all, which software is best to use for poster designs and templates.

RESEARCH PRESENTATION SKILLS 101 -- September, 2018
Students will learn tips and strategies in how to deliver an effective presentation. Discussions will include how to prepare slides to emphasize the main points of a presentation -- what information and how much -- should be given, the right amount of technical depth to go into without confusing the audience, and proof that the research worked or warrants further study. Students will also learn how to choose the right words, the proper use of signs, and fingerspelling, for their final presentation.

For more information, please email Senda Benaissa, RSIA senior research associate/international academic coordinator, at researchexpo@gallaudet.edu. ◆

Gallaudet Adopts New Research Priorities

issues surrounding these manifestations of diversity.

Priority #3: Accessibility
Accessibility for d/Deaf, hard of hearing, and Deafblind people in the workplace and in society at large as made possible by a wide range of technologies in several domains including but not limited to telecommunications, captioning, robotics, avatars, speech/sign recognition, and ergonomics.

Priority #4: Deaf Experience
The subjective experience of living as a d/Deaf, hard of hearing, or Deafblind individual as understood through a variety of methodologies used in the fields of biology, psychology, economics, sociology, anthropology, linguistics, political science, and history and philosophy, among others.

Priority #5: Language and Cognition
The relationship between linguistic and cognitive phenomena and the underlying physical substrate of the brain in d/Deaf, hard of hearing, and Deafblind individuals as studied through the processing of visual, tactile and auditory stimuli in multiple contexts, including language development and learning throughout the lifespan. ◆

Professor Laura-Ann Petitto Robot-Avatar "RAVE" Learning Tool Prototype

essential for later language and literacy growth. When the baby's attention drops, the robot engages in attention-getting strategies. Petitto is pleased to share that tests of the RAVE learning tool successfully gripped the attention of the 30 babies, sustained their attention and, remarkably, stimulated many babies to produce parts of sign language back to the ASL signing avatar.

"These exciting pilot findings suggest that RAVE may be an effective language learning tool for young deaf babies who have drastically reduced exposure to natural sign language in early life," said Petitto. The NSF INSPIRE team participants involved in the recent testing included: Professor Laura-Ann Petitto, P.I. (Cognitive Neuroscientist, fNIRS brain imaging, Gallaudet University); Dr. Barbara Manini (Post-Doc Petitto Lab/Thermal IR Imaging, Gallaudet University); Geo Kartheiser (Ph.D. in Educational Neuroscience program Graduate Student, Petitto Advisor, Gallaudet University); Melissa Malzkuhn (Creative Director ML2 and Mocap Studio, Gallaudet University); Jason Lamberton (Mocap Scholar, ML2 and Mocap Studio, Gallaudet University); Professor David Traum (Virtual Human Scientist, University of Southern California); Setareh Nasihati Gilani (Graduate Student, Traum's Virtual Human Lab, University of Southern California); Professor Arcangelo Merla (Thermal IR Imaging Scientist, Università Gabriele D'Annunzio, Chieti-Pescara, Italy & Next2U-solutions); Chiara Filippini (Università Gabriele D'Annunzio & Next2U-solutions); Edoardo Spadolini (Next2U-solutions); Professor Brian Scassellati (Robotics Scientist, Yale University); and Jake Noah Brawer (Graduate Student Scassallati's lab, Yale University).

From left: Setareh Nasihati Gilani (Graduate Student, Traum's Virtual Human Lab, University of Southern California); Prof. Arcangelo Merla (thermal IR Imaging Scientist, Università Gabriele D'Annunzio, Chieti-Pescara, Italy); Dr. Barbara Manini (Post-Doc Petitto Lab/ thermal IR Imaging, Gallaudet University); Prof. Brian Scassellati (Robotics Scientist, Yale University); Prof. Laura-Ann Petitto, P.I. (Cognitive Neuroscientist, fNIRS brain imaging, Gallaudet University); Prof. David Traum (Virtual Human Scientist, University of Southern California); Dr. Katherine Tsui (Post-Doc, Scassellati Robotics Lab, Yale University); Melissa Malzkuhn (Creative Director ML2 and Mocap Studio, Gallaudet University); Jason Lamberton (Mocap Scholar, ML2 and Mocap Studio, Gallaudet University).

Petitto also welcomed several NSF program directors who wished to observe RAVE, including Dr. David Moore (Developmental Sciences Program); Dr. Soo-Siang Lim (NSF Science of Learning Center Head), and Ms. Dawn Moore (Manager, Claremont Infant Study Center). Since the time of this meeting, RAVE has been featured in *WIRED Magazine* (December 5, 2017) and *Newsweek Magazine* (October 15, 2017). To view complete media coverage and to learn more about the RAVE learning tool prototype, visit http://petitto.net/whats-new/rave/. ◆

PEN Program/Psychology Faculty Awarded Grant

skills and emergent literacy among these children predict later academic skills, including their literacy, writing, and numeracy skills.

The inclusion of numeracy skills as a focus of interest in EELS-II is noteworthy, as it will allow the team to answer critical questions regarding the relationship between early language skills and the development of numerical cognition. Dr. Berteletti has considerable expertise in the study of math and numerical cognition among hearing children, which will be explored here with deaf children the first time.

The research team hypothesizes that the impact of language skills on early reading will persist through all stages of reading skill development and also predict cognitive skills associated with numeracy and writing through middle school.

EELS-II will allow Dr. Allen and his team to develop predictive models of learning that include measures of early visual language experience on later academic outcomes. Influences of home and classroom strategies on academic growth trajectories for children with different language histories and demographic backgrounds will also be evaluated.

"My team is very excited to launch EELS-II. The study will provide new insights into predicting developmental success in young deaf children," said Dr. Allen. "These insights will contribute mightily to advancing both early childhood and later childhood education for students who are deaf."

EELS-II launched on October 1, 2017. For current updates on the study, visit http://vl2.gallaudet.edu. ◆

Beat the "Research Blues"
by Brenda Nicodemus

From left: DoIT students, faculty, and guests gather on the second floor of the Cafeteria to continue the conversation after the Colloquium Lecture Series. (Photo: Tony Ellis)

Faculty Research Brown Bag Gatherings

In another initiative that was specifically designed for faculty, DoIT established Faculty Research Brown Bag Gatherings. Following monthly faculty meetings, interested faculty gather over lunch to "talk shop" about research. They discuss their ongoing research projects, describe conferences they've attended, give grant writing advice, and share other resources about research. A secondary benefit of these gatherings is that faculty can learn about their colleagues' research studies and incorporate them into classes they are teaching.

Colloquium Lunches

A third initiative involving research relief is tied to the acclaimed Department of Interpretation and Translation Colloquium Lecture Series. Every year, the department hosts four lectures by departmental, national, and international scholars to discuss research in Interpreting and Translation Studies. Following each lecture, students from each of three departmental programs (B.A., M.A., and Ph.D.) and DoIT faculty gather in the Gallaudet Cafeteria for an extended lunch in which they can chat with the lecturer one-on-one and mingle with faculty and other student in an informal setting. In a large department with 126 students, these DoIT lunches offer a way to build community around a research event.

Conclusion

The Department of Interpretation and Translation is highly productive in producing scholarship with students and faculty publishing numerous research articles, chapters, and books every year. But we also recognize the sense of isolation and loneliness that can result in the long and arduous research process. Through our various initiatives, the department is working to eliminate the sometimes lonely process of research and provide opportunities to come together as an intellectual community in support of one another's journey. ◆

2017 Nanotechnology Internships and Research

Gutierrez, who is majoring in chemistry, presented "Bismuth Telluride." This module concentrates on preparation of bismuth telluride nanomaterials. Bismuth telluride can be used for generating electricity from heat. Nanomaterials are "super small" materials at the scale of one billion times smaller than a meter and have various applications. Gutierrez was mentored by Dr. Paul Sabila, Gallaudet STM professor.

Lalescu, who is double-majoring in chemistry and biology, presented "Exfoliation of Molybdenum Disulfide using n-Butyllithium." She focused on the synthesis of molybdenum disulfide by the exfoliation process, which involves the insertion of lithium ions followed by peeling of layers by addition of water then depositing the material on silicon wafers. Molybdenum disulfide is currently being studied for electronic and superconductor applications and may even replace silicon in the future. Lalescu also was mentored by Sabila.

The students worked in Sabila's research laboratory at Gallaudet to synthesize the nanomaterials, and then at Howard to use more specialized equipment to analyze the nanomaterials. They also attended internship orientations at Howard and Harvard. At the end of their internship, they both gave poster presentations alongside other Department of Science, Technology, and Mathematics (DSTM) interns at Gallaudet on July 28, 2017. They returned to Harvard for summer convocation August. 8 to 10, and for the CIQM Annual meeting and poster presentations on October 12.

Also during the summer, Gutierrez and Lalescu gave presentations on "Introduction to ASL and the Deaf Culture" at Howard and Harvard to acquaint hearing interns with basic ASL signs and provide an introduction to deaf culture.

During the fall semester, Gutierrez and other DSTM interns participated in the 21st Annual Undergraduate Symposium in Chemical and Biological Sciences held at the University of Maryland-Baltimore County (UMBC), where they gave poster presentations on their research. The UMBC symposium usually attracts more than 200 student presenters from universities across the Mid-Atlantic states. During the symposium, Dr. Adebowale Ogunjirin, a faculty member in the biology program at Gallaudet, served as a judge. Kelsey Prickett (whose internship was done under the mentorship of Dr. Daniel Lundeberg, DSTM professor) won first prize. Lastly, the students gave a poster presentation to the Gallaudet community on October 24.

During the 2017-2018 academic year, the two students continue to work with Sabila at Gallaudet on various projects, including organic synthesis, development of new synthetic strategies, and synthesis of natural product-like molecules, as well as nanotechnology. They also act as mentors for new students interested in pursuing research and majoring in chemistry.

In preparation for the 2018 nanotechnology Internships, Sabila arranged with several of his collaborators to give presentations to Gallaudet students. On October 3, he invited Dr. Kathryn Hollar, internship coordinator, and Christina Zaldana, administrator of advising programs and diversity outreach, both from Harvard, to give presentations to Gallaudet students. Hollar presented on internship opportunities at Harvard and MIT, while Zaldana gave information on how to apply for graduate programs at Harvard. On November 14, Dr. Tina Brower, CIQM participant and professor at Howard, gave a presentation on nanotechnology internships at Howard, Harvard, and MIT.

Parent-Child Interaction Therapy Training and Research Clinic

Sign Language during live play sessions with their child.

Day first began meeting with families in the PCIT Clinic in 2015. Over the last three years, the Clinic has provided PCIT services to a number of local families who have at least one deaf family member and now serves as a therapy training track for clinical psychology doctoral students. Research through the PCIT Clinic is ongoing, with plans to continue beyond the 2018 calendar year. To date, weekly progress data that have been collected from families support the use of the PCIT intervention with deaf individuals, and families report improved relationships with their children. The PCIT team is grateful to the families who have participated in its services and takes their responsibility to provide them with a valuable and confidential service seriously.

Moving forward, Day and her team plan to continue to explore the ways in which evidence-based mental health interventions can be successfully adapted for deaf individuals. She is now working to disseminate PCIT to professionals across the country who work with deaf families. Last fall, she trained a group of clinicians at the Walden Community Services in Framingham, Mass. in the adapted version of PCIT to support their aim of offering evidenced-based clinical services to their local deaf families.

If you or someone you know is interested in learning more about PCIT services, visit the PCIT Clinic website: https://my.gallaudet.edu/parent-child-interaction-therapy-clinic or email us at: PCIT@gallaudet.edu . ◆

Interactive Learning

training and counseling system that provides engaging simulations of real-life listening situations, and allows a HAT user to directly experience its benefits and limitations. The training program is based on the principles of implicit learning that include minimal supervision, provision of a multimodal setting with a story-line and action goals, multiple tokens that vary in a way that reveals regularities, and an intrinsic reward system. Research applying this learning paradigm has revealed greater training efficiency, partly accounted for by the participant's sustained interest.

The program utilizes state-of-the-art technology that allows the user to engage in real-time, intuitive manipulations of his/her auditory environment. The participants use a game-like graphic interface to complete exercises in which they select and alter acoustic factors that affect hearing, HAT solutions, and communication strategies that are aimed at improving sound detection, speech comprehension, and the overall listening experience. Through self-guided manipulation of the listening conditions, the participants are able to explore both their individual and joint perceptual effects.

The system is designed to be used both in clinics to provide cost-effective post-fitting services, and in research to create complex, dynamic listening conditions for more ecologically valid studies.

In October 2017, Barac-Cikoja and Cole traveled to Oslo, Norway to present and demonstrate their work at the Kyma International Sound Symposium (KISS).
See also: http://www.gallaudet.edu/department-of-hearing-speech-and-language-sciences/research/interactive-learning-lab

*Cole was a research applications programmer at Gallaudet's former Gallaudet Research Institute.

RECENT SELECT RESEARCH PUBLICATIONS

Reviews of Books by Gallaudet University Faculty

1) Jean Andrews. 2017. Review: Barbara Gerner de Garcia and Lodenir Becker Karnopp. 2016. Change and Promise: Bilingual Deaf Education and Deaf Culture in Latin America. Washington, DC: Gallaudet University Press. Journal of Deaf Studies and Deaf Education, 22(43): 346-347.

2) Millicent M. Musyoka. 2017. Review: Audrey C. Cooper and Khadijat K. Rashid (eds.). 2015. Citizenship, Politics, Difference: Perspectives from Sub-Saharan Signed Language Communities. Washington, DC: Gallaudet University Press. Journal of Deaf Studies and Deaf Education, 22(4): 436-437.

New Releases from Gallaudet University IDMA Faculty and Alumni
Peer Reviewed Articles

1) Audrey C. Cooper and Nguyễn Trần Thủy Tiên. 2017. Composing with Signed and Spoken Languages: Our Process. Composition Studies, 45(1): 13-18.

2) Maartje De Meulder and Joseph Murray. 2017. Buttering Their Bread on Both Sides? The Recognition of Sign Languages and the Aspirations of Deaf Communities. Language Problems and Language Planning, 41(2): 136-158.

RECENT SELECT RESEARCH PUBLICATIONS

Single Author Books

Audrey C. Cooper. 2017. Deaf to the Marrow: Deaf Social Organizing and Active Citizenship in Việt Nam. Washington, DC: Gallaudet University Press.

From Press Release:
Ethnographic and Language-Centered Accounts of Deaf Social Organizing.

• Illuminates the ways that Deaf citizens are assuming self-determining roles in decisions of local, national, and international importance.

•Addresses the impact of international aid agendas on education, especially those related to disability.

• Considers new perspectives in Deaf studies, Deaf education, linguistic anthropology, language policy and planning, international development, and Southeast Asian studies.

Audrey C. Cooper's new study, Deaf to the Marrow: Deaf Social Organizing and Active Citizenship in Việt Nam, draws on research data and work with Vietnamese Deaf colleagues covering an eight-year span. "My main argument," she contends, "connects three propositions. First, that educational structuring reflects ideologies of sign language (ngôn ngū ký hiệu) and of Deaf people as a subject group, thereby facilitating forms of inclusion and exclusion in the contemporary moment. Second, that Deaf people's responses to educational structuring—and other social and political economic forces—involve HCMSL [Hô Chí Minh Sign Language]-centered social action, thus contributing to sociopolitical formation among and between Deaf and non-Deaf people. Third, that such signed language–based social action contributes to broader sociopolitical transformation within Việt Nam. Ultimately I argue that differently positioned evaluations of HCMSL and notions of Deaf social capacity reflect and respond to concerns over the changing limits of citizenship under contemporary market socialism, particularly those connected to increasing demands on the development-oriented state. Moreover, this study shows that differing understandings of, or stances on, 'sign language' are strongly influenced by language ideologies connecting language (and language modalities) with idealized forms of national participation."

Nguyễn Trần Thủy Tiên writes in the foreword: "In order to contribute more of our knowledge, skills, and creativity, Deaf social leaders ask that hearing people in Việt Nam—and Deaf and hearing supporters around the world—think deeply about the barriers that keep us from taking an equal place in Vietnamese society today. This book contributes to our effort to share our experiences and to increase support for Deaf leadership in Việt Nam."

Recent English-Language Publications on Signed Languages, World Deaf Communities, and Deaf Mobilities

1) Erin Moriarty Harrelson. 2017. Deaf people with "No Language": Mobility and Flexible Accumulation in Languaging Practices of Deaf People in Cambodia. Applied Linguistics Review: https://doi.org/10.1515/applirev-2017-0081.

2) Vaddim Kimmelman and Lianne Vink. 2017. Question-Answer Pairs in Sign Language of the Netherlands. Sign Language Studies, 17(4): 417-449.

3) Annelies Kusters. 2017. Gesture-Based Interactions: Deaf and Hearing Mumbaikars' Multimodal and Metrolingual Practices. International Journal of Multilingualism: DOI: 10.1080/14790718.2017.1315811.

4) Annelies Kusters, Maartje De Meulder, and Dai O'Brien (eds.). 2017. Innovations in Deaf Studies: The Role of Deaf Scholars (Perspectives on Deafness). Oxford, UK: Oxford University Press.

5) Annelies Kusters, Max Spotti, Ruth Swanwick & Elina Tapio. 2017. Beyond Languages, Beyond Modalities: Transforming the Study of Semiotic Repertoires. International Journal of Multilingualism 14(3). 219–232.

6) Anita Small. 2017. Introduction to NGT Performing Arts in the Netherlands through the Work of Poet Wim Emmerik. Sign Language Studies, 17(4): 481-514.

7) Paul, J.J. & Snoddon, K.2017. Framing Deaf Children's Right to Sign Language in the Canadian Charter of Rights and Freedoms. Canadian Journal of Disability Studies, 6(1).

8) Kristin Snoddon, K. 2017. Uncovering Translingual Practices in Teaching Parents Classical ASL varieties. International Journal of Multilingualism, 14(3).