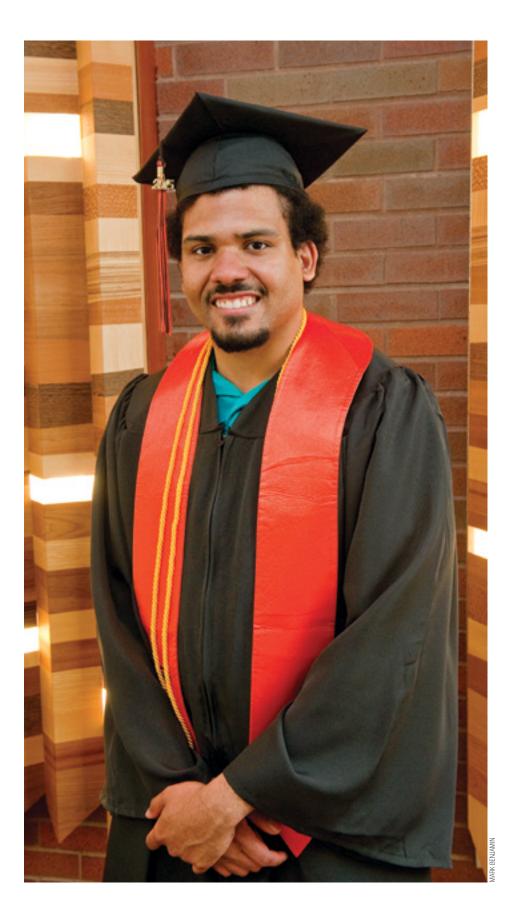
National Technical Institute for the Deaf • Rochester Institute of Technology



50th Anniversary of the Signing of the NTID Act

Congratulations to the Class of 2015!

ranly Ulerio Nunez from New York City graduated with an associate degree in Laboratory Science Technology and was selected as the 2015 NTID college delegate for undergraduate students. Nunez also received the Academic Achievement Award for students seeking an associate degree. In 2014, he presented his research on Fingerprinting the Biochemical Make-Up of Fruits Available to Migratory Birds via Multidimensional Fluorescence and Chemometrics at the National Meeting of the American Chemical Society in San Francisco. He completed a co-op at the Dow Chemical Company, which he refers to as "a great adventure" that helped him "grow professionally and personally." Nunez is back on campus to pursue a bachelor's degree in Biochemistry in RIT's College of Science.



I NTID

National Technical Institute for the Deaf • Rochester Institute of Technology



ABOUT THE COVER

This stained glass window, designed and created by deaf Belgian artist Sander Blondeel, was installed in NTID's Lyndon Baines Johnson Hall in 2002. It symbolizes the signing on June 8, 1965, of Public Law 89-36, also known as the National Technical Institute for the Deaf Act. which authorized establishment of NTID. Portrayed in the foreground is President Johnson, for whom NTID's main building on the RIT campus is named. Depicted in the background (left to right) are Dr. D. Robert Frisina, founding director of NTID; Mary E. Switzer, Commissioner of the Rehabilitation Services Administration of the U.S. Department of Education; and Congressman Hugh L. Carey of New York, who introduced the bill to enact PL 89-36 in the House of Representatives. Mr. Carey subsequently served as a member of the NTID National Advisory Group. NTID's other academic building on the RIT campus is named for Congressman Carey.



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Marking a Special **Anniversary**

n June 8, 1965, President Lyndon B. Johnson sat at a desk in the White House Rose Garden, flanked by a crowd of onlookers that included Senator Robert F. Kennedy, to sign a bill drafted by New York Congressman Hugh L. Carey. With President Johnson's signature, that bill became Public Law 89-36, creating the National Technical Institute for the Deaf.

Just three years later, NTID enrolled its first class of 70 students on the campus of Rochester Institute of Technology. NTID's first director, Dr. D. Robert Frisina, assembled in short order a faculty and staff that included Robert F. Panara, Dr. William E. Castle and others who came to join what Dr. Frisina called "The Grand Experiment." Six years after that, I arrived on campus as a wide-eyed member of SVP '74.

I did not dream then, and I suspect that not even Dr. Frisina could have imagined, what NTID would become. Since its establishment,

NTID has graduated more than 7,000 deaf and hard-of-hearing students, and I'm proud to be one of them. I'm prouder still to now lead the college as we continue to help students earn degrees and hit the ground running in scientific, technical and professional careers (see pp. 6, 9 and 12).

Historically, 92% of deaf and hard-of-hearing RIT/NTID students who seek employment after graduation find a job within one year. Our alumni are pursuing successful careers around the country and the world in business, industry, education, government and many other sectors (see pp. 3, 13 and 15). They are contributing to the economy and to the communities in which they live, and it all began with the signing of PL 89-36 (see front cover of this issue and p. 14).

As we reflect on the successes of the past 50 years, we thank those, too numerous to name here, who devoted their professional lives to making those successes happen. NTID would not be where it is today without them.

NTID is a federal program that clearly is working and benefitting deaf and hard-of-hearing citizens of our nation in a manner consistent with our mission and the reasons we were established that June day 50 years ago.

May the next 50 years be just as fruitful for NTID and those we serve.

Dr. Gerard J. Buckley NTID President RIT Vice President and Dean

ASL Music Videos Break the Sound Barrier

BY SUSAN L. MURAD

young college professor in New York creates and stars in music videos with more than a million online views. An unknown hip-hop artist in Detroit shares a stage in L.A. with Stevie Wonder and signs with the same record label that helped launch Eminem.

And both are RIT/NTID alumni.

Dr. Jason Listman and Sean Forbes are among a growing number of deaf artists who are breaking the sound barrier and leading the national and international popularity of music videos in American Sign Language. While foreign language study is declining in high schools and colleges, American Sign Language is experiencing a boom, with more than 200 percent growth in enrollments nationally, providing an even larger and more enthusiastic audience for these videos.

Other ASL music video artists include Rosa Lee Timm, who is featured in the popular ASL version of Pharrell William's *Happy*, and Amber Zion, who along with Listman, collaborated on the Disneyapproved ASL version of the song *Let It Go*—a version that the song's Oscar®-winning composer, Bobby Lopez, said is "absolutely beautiful."

These trail blazers have something else in common—they, too, are graduates of RIT/NTID, making RIT/NTID and its graduates as connected to ASL music videos as Motown and the Brill Building were to popular music in the 60s and 70s.

"Artists need an outlet," says Listman, who has produced videos with fellow RIT/NTID alumna Jessica Thurber. "Creating these videos was at first just for me, but I soon realized they were having an impact on others as well. I was involved in theater when I was a student here and would love to be more involved, but my academic work takes priority now. Creating ASL music videos is a way for me to fit my artistic expression into my life. So many friends and fellow alumni have become involved in ASL music video creation. Between RIT/ NTID's Performing Arts program and RIT's Film and Animation major, it's a natural fit.

"YouTube changed the game for this type of video creation," he says. "We can showcase videos to the world. I recently was in Italy and came upon four deaf individuals, two American and two Italian, and one of them recognized me from YouTube. I never expected to be recognized in Italy!"

To date Listman has more than one million views on his videos, and more than 10,000 subscribers to his YouTube channel. He has created video covers of songs by popular artists such as Bruno Mars, Christina Aguilera and Katy Perry.

Amber Zion has covered hits by Adele and Katy Perry, among others, and Rosa Lee Timm has covered many artists, most recently adding her expressive story-signing style to *The Last Midnight* from the film version of Stephen Sondheim's *Into the Woods*.

"What people don't realize is that deaf people do love and enjoy music, and now we have access to more of it through YouTube," says Zion. "Everyone is starting to express their versions of songs. It's wonderful to see it grow; I am really looking forward to more ASL music videos.

"My experiences as an actor in several productions in NTID's Performing Arts program helped me develop my craft," Zion says. "That experience helps me popular languages learned in schools," Forbes says. "And D-PAN is becoming the go-to place to watch quality ASL content.

"In high school I didn't have anyone who was like me to share music with. When I came to RIT/NTID, I met others who loved music just like I did. When I founded D-PAN there were no ASL music videos on YouTube. I came up with this idea at RIT/NTID while sharing songs with my friends into the wee-hours of the morning; those were some of the best times. I work closely with my film director Adrean Mangiardi (RIT Film and Animation '07). Our goal with my music videos, which are all original songs I wrote, is to ensure that they're accessible with sign language, captions and cuts that represent the beat. Adrean is the best at this, and I wouldn't be the visual artist I am today without him."

Camp Mark Seven's popular Deaf Film Camp, run by alumna Stacy Lawrence, created the ASL cover of Pharrell Williams' *Happy* that was shared internationally and featured students from the camp and fellow alumna Rosa Lee Timm.

RIT/NTID alumni aren't only making accessible music videos, some also make live concerts accessible to deaf and hard-of-hearing audiences, and have earned the respect of the performers



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งพระหวางสร้ายสามาหาว เพราะ เลือน Sean Forbes performed on campus in 2013 as part of

RITON TSD Astudents, J. Reureon 'Ren' Putz and Keely Hall, who attended our workshop back in 2013, created their own ASL music video of Let It Go, and their video went viral. Last year, we hosted a workshop at the Mill Neck School for the Deaf, and one student, who used to be unsure about his future, made an important decision to apply to RIT/NTID to be a video editor and got accepted! We are dedicated to encouraging these young Deaf people to be part of the growing community."

According to Nick Zerlantes, who produced Listman and Zion's Let It Go video, "We chose Let It Go not only because of its popularity, but also because of the message the song sends to everyone about being themselves and showing their true colors. It's one of the reasons we created a team of all deaf and hard-ofhearing artists."



All-Deaf Creative Team Left to right: Nick Zerlentes, producer; Sophia Ballester, makeup artist; Amber Zion, performer; Jason Listman, performer; Jules Dameron, director and editor; Shannon Rusnak, special effects supervisor and animator; Quinn Cooke, key grip; Jess Thurber, assistant producer; Arleta Meeker, first assistant director; Ruan du Plessis, director of photography.

Innovation in the Classroom

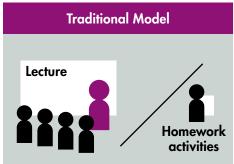
BY ILENE J. AVALLONE

he "flipped classroom" has become a hot topic in the higher education community over the past several years, and this method of instruction is empowering faculty and students at NTID to engage in learning in a whole new way.

The flipped classroom essentially reverses the structure of traditional teaching. Instead of lectures occurring in the classroom and assignments being done outside of class, the opposite occurs. Pre-recorded lectures are viewed by students outside of class, via videos or podcasts created by faculty, and class time is devoted to hands-on learning activities for students such as completing problem-based assignments, collaborating on projects with their peers and the instructor, discussing concepts in greater depth, or doing other more engaging and interactive activities.

Wes Blue, supervisor for the NTID Learning Center, secured a three-year, \$46,000 grant to explore the use of flipped classroom instruction and technology at NTID to see how it impacts the engagement and persistence of deaf and hard-of-hearing students in associate degree programs at the college. The grant provided funding for the purchase of video equipment and software, establishment of a dedicated flipped classroom studio for instructors to use to pre-record lectures, and training and technical support for instructors on how to develop pre-recorded videos.

Over the past three years, NTID instructors from across disciplines, including math, engineering, business, art and design, and interpreting have incorporated the flipped classroom approach, which offers several advantages. It maximizes face-to-face time for discussion, where students are able to ask questions and interact with their instructors and fellow classmates in the classroom. Rather than studying alone in their dorm or at the library when working through complex topics or homework questions, students benefit from the instructor's presence, coaching and guidance.



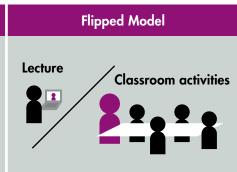
thoubays closs time for lab as a menuss in class. Having the lectures online also enables his students to watch parts of lectures over again if they don't understand a concept.

Mike Kane, an instructor in the NTID Business Studies Department, thought this approach would appeal to his tech-savvy students. It's been so successful for him over the past two academic years that he now flips many of his accounting and Microsoft Excel classes.

"The flipped classroom approach facilitates a shift from an instructor-centered classroom to a student-centered learning environment," Kane explains. "Students like to have access to lectures 24/7, and also can take their time to complete their notes, reflect, pause and replay the lectures to spend time digesting complex lecture-based topics by watching the lectures online, outside of class. Students are able to better prepare for classroom discussions—and engage in them—through being better informed of the main topics and concepts before coming to class," he says.

As evidenced by feedback surveys, many students in NTID flipped classrooms seem to embrace this model, and indicate that the hands-on activities in class give them a better grasp of the information and more confidence in what they have learned than they could have gotten from a traditional in-class lecture.

Angela Paz, an Accounting Technology major, says she likes doing her homework assignments in class instead of outside of class because if she doesn't understand a problem, she can get immediate assistance and clarification from



successively their knowledge cross in their understanding become visible to both themselves and the instructors," says Kane. "In my opinion, this approach seems to help students move from merely understanding the material, to mastering it."

VIDEO EXTRA:

 Watch an example of a pre-recorded flipped classroom lecture at bit.ly/FOCUSflipped



Working Together Dr. Raja Kushalnagar (left) works with student Victor Ortiz to adapt glasses to increase visual accessibility in the classroom for deaf and hard-of-hearing students.

Research at NTID: 50 Years and Counting

BY KATHY A. JOHNCOX

review of NTID's current research initiatives affirms the creativity, dedication and success that has resulted in nearly 50 years of ongoing outside sponsorship for and encouragement of strategic research at RIT/NTID. From the time NTID was established in 1965, research efforts have focused on teaching and learning, communication, access technology, and employment success for deaf and hard-of-hearing students, and that continues to be the direction of research at RIT/NTID. With a rich history of creating research-based solutions to issues facing deaf and hard-of-hearing students, NTID is a leader in research projects that include faculty-student scholarship collaboration in emerging and relevant topics.

"RIT/NTID is the one place in the nation focused on STEM education for deaf and hard-of hearing students," says Gary Long, interim associate dean of research at RIT/NTID. "With our 50

years of experience and track record of prior funding, we are uniquely positioned to look at the best way for deaf and hard-of-hearing students to learn the information required in STEM subjects. We have studied how they best go about learning it, and we look at the best ways to teach it. Our students are involved in the research and can be both subjects in studies and co-researchers with faculty. This allows students to learn about the research process itself."

A New Approach

With the opening of Rosica Hall and the dedicated space it brings for faculty and students to come together to brainstorm and implement innovative ideas, NTID has adopted new approaches to research, employing two research models: discipline-based research, where faculty work on research, often with students, within their own academic departments, and center-based research, where various individuals or departments come together in research centers and or labs to work collaboratively with students and colleagues across disciplines.

Discipline-based research

NTID faculty member Dr. Raja Kushalnagar's Accessible Multimodal Interfaces program, a collaboration between NTID and RIT's Golisano College of Computing & Information Sciences, is an example of disciplinebased research. Ten students from all over the country have come to RIT to research solutions for accessibility to learning for people with sensory disabilities. Some of the students are deaf, some are hard-of-hearing and some are hearing and all are working on Kushalnagar's \$400,000 National Science Foundation grant, which is part of the NSF's Research Experience for Undergraduates (REU) Program.

The goal of this 10 weeks is to have students with and without disabilities engage in research together. Each team of students uses computer technology to create a research project that addresses unsolved accessibility challenges for deaf and hard-of-hearing students.

"Involving students is key to the research. One of the goals for the students is to be able to apply computer and information-based technologies to real-world problems," says Kushalnagar. "They can bring this experience to their future careers, and those who will become computing researchers or developers will be aware of accessibility issues right from the start of the project, and not view them as an afterthought."

Victor Ortiz is an REU student and a Computer Science major from New York City.

"Research demands a look at the facts using a new way of thinking," he says. "My research is influencing my software development approach to allow appropriate communication."

Eric Epstein, a Software Engineering major from Tuscon, Arizona, enjoys the flexibility this REU offers for students to do their own work with mentors who can connect at any level of the project.

"Research allows me to work on what I'm passionate about," says Epstein, "and this gives me experience as a software developer and adds to my skills as a programmer."

Center-based Research

The Research Center for Teaching and Learning is one of the six units conducting center-based research (see sidebar). Within the center, a diverse team of hearing, deaf and hard-of-hearing members are working on a project entitled *Thinking CAP*: Communication Access and Persistence Among Deaf and Hard-of-Hearing Students in Foundational Statistics Courses. This three-year \$400,000 NSF grant was awarded to RIT Principal Investigator Dr. Carol Marchetti, and NTID co-PIs Dr. Susan Foster, Jane Jackson and Keith Mousley. The project is investigating the potential of Supplemental Online Learning Tools (SOLTS) to increase the academic success of deaf and hard-of-hearing students in foundational statistics courses by combining visual representations of complex concepts with signed explanations, voice and captioning.

"Introduction to Statistics is a required class as students move through the pipeline to more advanced courses and degrees, particularly in science, technology, engineering and mathematics," says Marchetti, an associate professor in RIT's School of Mathematical Sciences. "There are many videos available to support statistics classes, but some of them aren't even captioned. Even those that are may not be completely accessible."

For the project, she recruited deaf and hard-of-hearing students to review the course and suggest alternative methods to present difficult material. This information will be used to develop SOLTS.

Renee Saraceni, now a graduate of NTID's Master of Science program in Secondary Education, was a research project participant. "This project has helped me prepare for my future as a teacher of the deaf. I now have a better understanding of how simple concepts in English can be lost in translation. I now have good ideas on how to make learning more visual and more accessible."

"NTID has received the two largest NSF grants in RIT history, a total of about \$8.5 million, because we can show what we have learned over the years and how we apply this information to create the best real-world success for deaf and hard-of-hearing students and graduates," says Long.

RIT/NTID Research Overview

Four strategic areas are the focus of research at RIT/NTID—teaching and learning; communication; technology, access and support services; and employment and adaptability to social changes and the global workplace.

Research Centers

- The NTID Center on Access Technology (CAT) is charged with investigating, evaluating and reporting on the most effective and efficient use of access technologies, and with training individuals in their use in order to accelerate the widespread implementation of best practices within deaf education at the postsecondary level. Learn more at rit.edu/ntid/cat.
- NTID's Center for Education Research Partnerships (CERP) seeks to establish and join research partnerships concerning development and learning among deaf and hard-of-hearing students in various educational settings. Learn more at rit.edu/ntid/cerp.
- The primary mission of the Research Center for Teaching and Learning (RCfTL) is to create a setting in which diverse teams of faculty and students from NTID and RIT's other colleges conduct research that will improve deaf education, expose students to research practices and prepare a future generation of educational researchers and scholars. Learn more at www.ntid.rit.edu/rcftl.
- The focus of the Research on Employment and Adapting to
 Change (REACH) Center for Studies on Career Success is to conduct collaborative scholarly research on the employment and career outcomes of deaf college graduates, including the examination of the multiple factors that contribute to their career and life success.

 Learn more at rit.edu/ntid/reach.

National Science Foundation Advanced Technological Education Center of Excellence

 DeafTEC: Technological Education Center for Deaf and Hard-of-Hearing Students is a National Science Foundation Advanced Technological Education Center of Excellence, and serves as a resource for high schools and community colleges that educate deaf and hard-of-hearing students in STEM-related (science, technology, engineering, and math) programs, and for employers hiring deaf and hard-of-hearing individuals. Learn more at www.deaftec.org.

Research Labs

- The Deaf Studies Laboratory (DSL) investigates cognitive, linguistic
 and social aspects of the Deaf Experience. It aims to bring more deaf
 individuals into a variety of fields of research in an American-SignLanguage-based student-centered environment, partnering with many
 universities and centers nationally and internationally. Learn more
 at www.ntid.rit.edu/dsl.
- The Collaboratory on Economic, Demographic and Policy Studies seeks to describe the demographic and economic conditions of the deaf and hard-of-hearing population in the U.S., with emphasis on the impact education has on improving these conditions. Learn more at www.ntid.rit.edu/collaboratory.

Making a Difference in Deaf Education Worldwide

BY ILENE J. AVALLONE

he Nippon Foundation of Japan has awarded RIT/NTID more than \$15 million in funding over the past 15 years, and this has reaped benefits for deaf people around the world.

In 2001, funds provided from The Nippon Foundation to RIT/NTID created The Postsecondary Education Network-International (PEN-International), a 10-year multinational partnership of colleges and universities worldwide whose goal was to bring 21st century educational technology and proven educational practices to deaf students, primarily in the Pacific Basin.

Ten years later, The Nippon Foundation provided additional funds to establish The Pre-College Education Network (P-CEN), and expand into the Association of Southeast Asian Nations (ASEAN) region.

PEN-International

The Nippon Foundation's original investment enabled PEN-International to forge partnerships and collaborations at 18 colleges and universities in Japan, China, Russia, the Philippines, the Czech Republic, Thailand, Korea, Vietnam and Hong Kong. With this support, PEN-International became a highly respected source for schools and individuals seeking guidance on the best and newest technologies available in deaf education.

The first phase of the program involved establishing a core network of universities and providing multiple strategies to improve and expand postsecondary education for deaf and hard-of-hearing individuals. These strategies included conducting faculty professional development and training workshops, sponsoring cultural exchanges and events, constructing state-of-the-art multimedia computer laboratories at partner institutions, providing partners with a platform to share experiences and expertise with other colleagues, and disseminating educational resources throughout the world to aid in the teaching and learning process of deaf and hard-of-hearing individuals.

The second phase of the program focused on expanding the network



CARB Florifiered wild strategy the PEN partners attended the annual business meeting at WorldWide 2010 benefitted International's 10-year anniversary. implementation of new ideas, skills and technologies learned through PENpartner training initiatives.

P-CEN

In 2011, The Nippon Foundation asked NTID to be the hub institution for P-CEN for the next five years.

"P-CEN was established to influence attitudes, practices and policies at secondary institutions and vocational training programs in the ASEAN region," says Thomastine Sarchet, associate director and co-principal investigator for P-CEN. "The long-term goal is to prepare professionals to work with deaf students at the secondary school level, so that people who are deaf or hard of hearing are not blocked from access to college, technology or employment."

The target areas for implementation started with pre-college programs in the Philippines and Vietnam, and expanded to include programs in Thailand, Cambodia and Myanmar.

P-CEN uses the same model as PEN-International: to move each country from being an importer of its services to becoming self-sufficient and finally to exporter status.

Over the next year, NTID and The Nippon Foundation will be working to establish De La Salle-College of St. Benilde (CSB) in the Philippines as the new P-CEN program hub. In subsequent years, NTID will continue to work with

Animation Creation Thrills Students and Client Alike

BY SUSAN L. MURAD

aving the opportunity to work on a video for one of today's most popular children's music artists would be a thrill for any professional animator. But it was students and faculty from RIT/NTID's Visual Communications Studies Department who recently had the experience and all the thrills that went along with it.

Genevieve Goings, host and "conductor" of the popular Disney Junior Channel musical series *Choo Choo Soul*, also is the host of Radio Disney Junior and a successful children's music composer and performer who gives concerts to enthusiastic crowds of children and parents throughout the country. She was working on a project to animate the popular Fisher Price "Little People" line, and learned RIT/NTID through a mutual acquainta of hers

and VCS faculty member Heather L. Smith. Smith, VCS Department Chairperson Kurt Stoskopf and four students made up the animation team.

"My animation students and
I were ecstatic that we were chosen to
create the animation for Genevieve
Goings' music
video," says Smith. "It was a
surreal opportunity for our
students, especially doing work
on a project where they were
able to experience working as
an animator. This is the best assignment
we could give our
VCS students. This is a win-win situation
for everybody."

"I was recorded in front of a 'green screen' and then I asked my fans on Facebook to vote for the c palette that they wanted to see used in the video," says Goings. "Working wit Kurt, Heather and the students was an amazing and positive experience! Everyone was so professional and creat It really was magical to work with the

Stoskopf explains the process: "Heat and I worked on the concept design and I worked o

approaches used in the music video. It was a collaborative effort between Heather

some of the individual animations and

and me and the students, with feedback from Genevieve," he says.

The video will be released later in the year, and there will be a credit at the end thanking the students, Smith and Stoskopf for their work.

"I've never worked with college students before," Goings says. "This is the first episode in an animated series that we're calling the *Do You Know Show*, and I would love to work with RIT/NTID students and faculty again! The album and web series will be fun, funny, educational and full of soul!"

clients," he says.
"I'd love to work on a project like this again!"

"I enjoyed being part of this project for Genevieve so much," says Joshua Smith of Atwood, Indiana. "It was a worthwhile experience for me to see what future jobs might look like, and it prepared me for what to expect."

The experience has inspired Goings to possibly incorporate sign language into future videos.

"I feel like I'm the big winner here," she says.



of animation.



because it offered me



planning the animation, and the student Makingu Caprillagerd to create project for animation in Heather's animation class developed created by Wilden Thou side on the control of the cont

chat with Administrative Support Technology student Mason Chronister, 23, reveals that he feels as though he found himself at RIT.

Growing up in Red Lion, Pennsylvania, Chronister attended a mainstream school, and wanted to find a college where he could socialize with both hearing and deaf people as well as a place that welcomed people from all races, religions and diverse backgrounds. Chronister, who has Usher syndrome, a disease that causes deafness as well as progressive vision loss, also searched for a college that offered the best services for people with low vision. He found that environment at RIT.

"The services at RIT for students who are deaf with low vision are ideal," says Chronister. "RIT provides a welcoming and friendly environment for deaf people and a level of accessibility that I didn't find at other colleges," he says.

Chronister started in NTID's Laboratory Science Technology program, but transferred to the AST program.

"I really felt like the AST program was a better fit for me," he says. "I enjoy working with all kinds of software programs and producing different media."

During his studies, he became a certified Microsoft specialist in Word, Excel, Access and PowerPoint.

Chronister, who graduated in May, made the most of his time at RIT.

He was president of the Deaf International Student Association; Public Relations co-director and treasurer for Suits, the former NTID Business Club: and participated in productions offered by the NTID Performing Arts program.

For his co-op, Chronister provided administrative support at the Defense



Logistics Agency, a branch of the U.S. Department of Defense in New Cumberland, Pennsylvania.

"I loved working there and assisting the military personnel in documenting sensitive military information," he says.

He hopes the successful co-op opportunity will lead to a job there after graduation.

Kim Hoang

BY KATHY A. JOHNCOX



klahoma City, Oklahoma, is a long way from RIT, but that didn't stop Kim Hoang from making the trip to achieve a few of her goals—getting a good education in a major she loves and being in a community with other deaf and hard-of-hearing people. Born in Vietnam and the only deaf person in her family, Hoang, 25, moved to Oklahoma at age 4 and attended mainstream schools. A friend at RIT told her about NTID's graphic design program, and Hoang was on her way.

"I love all my classes here, and I love the art on campus," says Hoang. "The galleries filled with paintings and sculptures impress me with the great skills students are developing with art in general."

"I always have been interested in the beautiful designs on book covers, magazines, cartoons and other media. I love drawing and graphic design, so Design and Imaging Technology is a perfect major for me. After graduation, I hope to find a good design job in my hometown," says Hoang.

She already has been offered a co-op for this summer as a designer at a non-profit near her home that deals with substance abuse and treatment. There she will get to use her Principle of Design and Color, Visual Idea Development, and Publication Design classes that challenge her and help her improve her design skills.

"I know that the combination of my great job counselors and amazing professors will help me get a good job in the future," she says.

Even Hoang's spare time includes art nail art. "I have a certificate of manicure technology, and I polish and do nail art for fun when I have free time," she says.

Hoang has persevered in her studies, following a quote by Theodore Roosevelt that she finds inspiring: "Believe you can, and you're halfway there."

"I am confident and believe I can, so I will continue, finish here and graduate!"

er early years as a deaf child in school in Africa without interpreters led Amie Sankoh to love math.

"Growing up in Sierra Leone, math was my best friend," she says. "I was good at it, could do it myself and didn't need to know words for the numbers."

After a harrowing experience hiding from rebels, and nearly stepping outside in front of them because she couldn't hear them coming, her family moved from Africa to Maryland when she was 12. She went to a mainstream high school and fell in love with chemistry. She chose RIT for its expertise in chemistry and math, and for its Deaf community.

"My mother said every child should go to college," says Sankoh, 24. "My mother and father were both well-educated and encouraged all of us. And as for me, I always wanted to prove people wrong when they thought that someone who is deaf couldn't do things, couldn't succeed."

Sankoh is succeeding just fine. Her studies toward a bachelor's degree in Biochemistry are paving the way for her choice of career-a research scientist. From there she hopes to complete pharmaceutical college and return to Sierra Leone to set up a lab and a

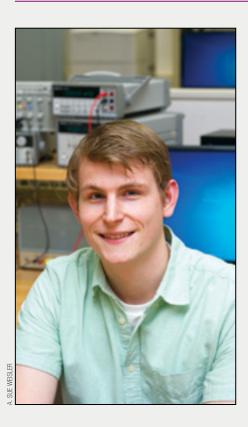
pharmacy. She won the 2013 American Chemical Society Undergraduate Award for Outstanding Achievement in Chemistry, has presented at the ACS Undergraduate Research Symposium several times, and was recognized last year with the NTID Outstanding Graduate Award for students earning an associate degree.



"The professors here want everyone to succeed," says Sankoh. "They support me so well, and after my two co-ops at the Dow Chemical Company, I am well-prepared for jobs and for the world. I am so proud. There are so many opportunities here. Students need to grab them. They can benefit you so much in the future."

Lucas Prilenski

BY ILENE J. AVALLONE



hen Lucas Prilenski was 10, his mother gave him an electronics book to read. and it sparked an interest that resonated with him.

"My parents instilled in me at a young age that I was to go to college, and I knew that I would need to do well in high school to further my education in the electronics field," says Prilenski, 21.

A Dean's List student from Chesterfield. Missouri. Prilenski is enrolled in the bachelor's/master's dual degree program in Electrical Engineering with a focus in devices and integrated circuits in RIT's College of Engineering. His brother, also an RIT/NTID student, graduated this year with a degree in Mechanical Engineering.

"Even though my brother was a student here, I chose RIT for other reasons, including its outstanding electrical engineering program, the co-op program and thesis opportunities I wouldn't have had elsewhere," he says. "The

fact that there are tutoring services specifically for deaf and hard-of-hearing students in my major also is a unique feature, and a service I have benefitted from using."

Prilenski says what he enjoys most about his major is solving complex problems and finding new approaches.

"I have a passion for analog design because it's like solving a puzzle; it takes a thorough understanding of the problem as well as intuition for the best possible solution," he says.

Prilenski tutors students in math and works as a research assistant. He also designs audio amplifiers and plays the guitar.

He completed co-ops at the NASA Ames Research Center in the Rotorcraft Aeromechanics Department in Mountain View, California, and at Northrop Grumman in Baltimore, Maryland. He plans to find a job as an analog designer in a large semiconductor company.

RIT's co-op program may be a requirement, but it's also a big draw for savvy students who know that getting real-world work experience while in college can give them valuable information related to their future career choices. Here are some students who recently have completed successful co-ops.

BY KATHY A. JOHNCOX









Sarah Flowers

Hometown: Buffalo, New York

Degree program: B.S., International Hospitality and Service Management with a concentration in Food and Beverage Management, minor in Communication, May 2016.

Employer: DoubleTree by Hilton in Rochester, New York

Job duties: I worked as a busser, bartender, waitress, room service attendant and a line cook within the food and beverage department to gain experience and see what I liked. I realized that my passion is in the kitchen, so my boss placed me there for the second half of the co-op. I worked in the omelet station, making fresh omelets, waffles, crepes and eggs to order. I also prepared food for lunch and dinner.

Benefits of co-op: My co-op gave me the opportunity to increase my knowledge of the hospitality field and see what I really want to pursue as a career. I gained culinary skills, and learned about time management, conflict resolution, decision-making, communication, creativity, teamwork and collaboration.

Tony Nguyen

Hometown: Pennsauken, New Jersey

Degree program: AAS, Graphic Design, May 2015. Plans to continue for BFA in Industrial Design.

Employer: Boat People SOS (BPSOS), a non-profit organization in Pennsauken Township, New Jersey

Job duties: Boat People SOS serves the Vietnamese community in the Pennsauken area. During my co-op, I designed posters, flyers and logos for my employer's events. I also redesigned business cards. My supervisor assigned me to research and compare prices for printing designs at printing stores. Sometimes, I took pictures of events for their website. One of the biggest projects I had was to design the poster and flyer for the Philly Viet Vote Project, a voter registration project for the Vietnamese community. It was a big event!

Benefits of co-op: I was able to use my design skills in a real job. I made many good friends, and my communication skills improved a lot by speaking with my team and supervisor. I also learned a lot of patience.

Christopher Fenn

Hometown: Pittsburgh, Pennsylvania

Degree program: B.S./M.Eng., Industrial Engineering and Engineering Management, Spring 2017

Employer: General Electric-Aviation, Baltimore, Maryland

Job duties: I was a supply chain intern, and I worked closely with the production control (PC) department. I assisted with the transition of the CF34-10E engine composite program from a facility in Mississippi back to Baltimore. I was responsible for coordinating with the master schedule for meeting production flow deadlines and creating efficiency recommendations. I also was assigned to other process improvements.

Benefits of co-op: The most important thing I learned was don't underestimate your abilities. Get out of your comfort zone and try something new each day. The co-op opened my eyes to the opportunities that exist. Networking is important, and it's important to be as active as possible at your place of employment for your reputation and recognition.

Amanda Geffen

Hometown: East Meadow, New York

Degree program: B.S., Business Management, May 2015

Employer: Defense Finance and Accounting Service, Rome, New York

Job duties: I was a student trainee in financial management. I received requests from both internal and external customers to correct lines of accounting. Then I would validate the information that had been entered into the accounting system to see if it was accurate. I also verified documents to ensure readability, accountability and completeness and made sure that everything matched up between the submitted hard copy and the electronic entrees.

Benefits of co-op: My co-op was a rich experience where I could apply classroom learning in a real work environment. The experience increased my self-confidence and gave me valuable information about the type of job I want in the future. Working for the federal government definitely is one of my goals after graduation.

Distinguished Alumnus David J. Nelson

BY SUSAN L. MURAD



Distinguished Alumnus RIT/NTID's Distinguished Alumnus David J. Nelson believes in being open to change and growth.

ou can't compare students from back in my day to now," says RIT/NTID's 2015 Distinguished Alumnus David J. Nelson. "They are a different generation growing up with different systems around them. However, it's important to emphasize that they, too, have a responsibility in the workplace regarding the perception they give their coworkers. Come in early. Leave late. People will recognize that you are willing to work and do more than what you were hired to do. Work hard to sell yourself."

It's this kind of thinking that makes Nelson, a senior community outreach specialist in Government Affairs at the National Railroad Passenger Corporation (Amtrak), an outstanding example of the dedicated RIT/NTID alumni who achieve great things and give back.

Nelson graduated from RIT/NTID in 1981 and 1985 with degrees in Computer Systems Programming. He was active as part of NTID's Student Congress and worked nationally to establish a network of student leaders from NTID, Gallaudet and CSUN.

Today, Nelson is responsible for providing accessibility information, managing outreach activities by Amtrak to the disability community and overseeing internal projects to ensure accessible compliance. He is an active member of the National Association of the Deaf, has received the organization's Frederick C. Schreiber Distinguished Service Award, and represents NAD on issues concerning telecommunication and transportation.

"Maybe I'm old-fashioned, but I read newspapers in print—not just online," he says. "We need to understand the full story and be aware of all that is happening, not just the summary. I tell students to read the business section and learn what is changing, especially in the careers you are training for. You can't

ignore the writing on the wall."

Nelson believes that, both in our culture and in the workplace, we must be prepared for what comes next.

"Over the years, I've learned that being open to change and growth in the workplace and life is crucial — we must be flexible and learn to adapt," he says. "Many of us never dreamed or even considered the super high speed at which technological and cultural changes have reshaped American life and made us more global citizens. It's hard to imagine what the future might hold when so many perceived limits have given way.

"I am trying with all my energy to make places and services accessible not only to people with disabilities, but to everyone," he says. "We may take things for granted in our daily lives as we go about our usual routines—but much of it is possible because there are people working towards making everything accessible." NTID's history is rich in milestones and achievements that have fueled the success of thousands of students and graduates. This new FOCUS feature will provide a look at some of the people and events that have been significant in the history of our college community.



The Signing of the National Technical Institute for the Deaf Act, 1965

Public Law 89-36, known as the National Technical Institute for the Deaf Act, was signed by President Lyndon B. Johnson on June 8, 1965. The bill, drafted by New York Congressman Hugh L. Carey, established, for the first time in our nation's history, a technological college for deaf and hard-of-hearing individuals to pursue careers in science, technology, engineering and mathematics, more commonly known now as STEM.

In the years since NTID first opened its doors on the RIT campus, deaf and hard-of-hearing students have come from all over the United States and around the world to take advantage of the outstanding career education and unparalleled access and support services that RIT/NTID provides. And research conducted in collaboration with the Social Security Administration shows that deaf and hard-of-hearing RIT/NTID graduates, across technical and non-technical fields, experience higher rates of employment and salary over their lifetimes as compared to their deaf and hard-of-hearing peers who graduate from other colleges and universities around the country.



The Signing of the Americans with Disabilities Act, 1990

Twenty-five years after PL 89-36 was enacted, President George H. W. Bush signed the Americans with Disabilities Act on July 26, 1990. The ADA prohibits discrimination against individuals with disabilities and requires employers, schools, businesses and other entities to provide reasonable accommodations to ensure access for individuals of all abilities. As President Bush said in his remarks that day, "With today's signing ... every man, woman and child with a disability can now pass through onceclosed doors into a bright new era of equality, independence and freedom." Much has happened in the intervening years, and countless individuals have benefitted from the ADA in education, employment and innumerable other ways. NTID President Gerry Buckley was invited by Senator Robert Dole to witness the signing of the ADA.

Trivia Tidbit by SAM HOLCOMB

Q: Did Lyndon B. Johnson, 36th U.S. President, attend the dedication ceremony of NTID buildings in 1974?

A: No, President Johnson died in 1973, but his wife, Lady Bird Johnson, attended the ceremony on the RIT campus.



Sam Holcomb is a retired faculty member from NTID's American Sign Language and Interpreting Education Department.

From the Archives



First Lady on Campus Lady Bird Johnson participated in the dedication of the NTID building named for her husband, President Lyndon Baines Johnson, in 1974.



elly S. Kim believes the most important lesson in life is to be true to yourself. Born in Atlanta and raised in Marietta, Georgia, Kim lives in Marlborough, Massachusetts, with his husband, foster son, two cats and a dog, and is a middle school teacher in the secondary program at The Learning Center for the Deaf in Framingham, Massachusetts. But he almost took a different path.

"Growing up, I thought about becoming a teacher, but my parents didn't think it was a good idea," he says. "I then thought about becoming a counselor or a psychologist for deaf children, but realized that might not be in my future. RIT's master in Psychology program required me to take a few MSSE (Master of Science Program in Secondary Education of Students who are Deaf and Hard of Hearing) classes, and I fell in love with education and teaching."

Kim graduated from the MSSE program

in 2003. He teaches English/Language Arts and Literature to sixth - eighth graders who are deaf and hard of hearing, and also teaches some science classes. He is board president for DEAF, Inc., a multi-service community-based non-profit agency in the Boston area, and also chairs the Statewide Advisory Council, under the auspices of the Massachusetts Commission for the Deaf and Hard of Hearing. He recently received the Early Career Educators of Color Leadership Award from the National Council of Teachers of English, and will be presenting at the organization's conference later this year.

"RIT/NTID was a perfect choice for me when I thought about going to graduate school," he says. "I knew that it provided interpreting services, wonderful professors and has a thriving deaf and hard-of-hearing community. RIT/NTID provided me a foundation to launch my dreams and goals, and the many friendships I maintain to this day."

Jacquelyn Wilson

BY SUSAN L. MURAD

Being part scientist and part detective leads alumna Jacquelyn Wilson to some interesting discoveries. As an agriculture specialist with the U.S. Customs & Border Protection, she helps ensure shipments coming in from other countries have no agriculture-related threats.

"Our job is to find invasive plants, seeds, pests and diseases to protect our environment," says the 2005 Laboratory Science Technology and 2007 Applied Arts and Sciences graduate. "We also collaborate with U.S. Fish and Wildlife Services and other agencies, depending on our discoveries."

Wilson has held this position for seven years, and recently transferred to the Port of Savannah in Savannah, Georgia, from Miami International Airport. She also works at Savannah International Airport on occasion. Her scientific/detective work has uncovered some significant issues,

which if gone unnoticed, could have had dangerous consequences.

"We once found Long-Horned Beetle larva—one of the most destructive non-native pests in the United States—inside wood packing material," she says. "These pests infest hardwood trees, causing them to die and potentially can cause billions of dollars of damage."

Wilson truly loves her work and encourages others with an interest in science to look into the field.

"My advice to those who are interested in becoming an agriculture specialist would be to earn a bachelor's degree in



any science field; to not be shy because there is a lot of social interaction with co-workers and people you work with; and to have a desire to protect the homeland of the United States of America."



teadfast and strong-minded are two adjectives that Marguerite Carrillo uses to describe herself. A lecturer in NTID's Department of American Sign Language and Interpreting Education who left her home in Las Cruces, New Mexico, after high school with only \$2,000 in hand, this determined young woman set off to California without her parents' approval, to join AmeriCorps. Six months later she returned home when things didn't work out.

"My parents, who are deaf, instilled in me the importance of an education and fought for the best education for me," says Carrillo. "So this time I followed their advice, and enrolled at RIT to major in Business, a field I felt could bring me many opportunities in the future."

While she was studying at RIT, she worked as a tutor for interpreting students, and as a peer instructor for RITSign, an RIT student program where she assisted in teaching American Sign

Language to hearing and deaf students.

"I enjoyed this teaching experience and seeing the faces of students light up when they learned new signs, and when they realized how ASL is its own language with its own grammar," she says.

The passion she felt for teaching through her student work experience led her to pursue a master's degree in Secondary Education for Students Who are Deaf or Hard of Hearing.

Today she teaches ASL to interpreting students and ASL to hearing and deaf students in RIT's College of Liberal Arts. She took over this year as coordinator for NTID's New Signers Program, a one-week orientation where newly accepted students who do not sign are introduced to sign language and Deaf culture.

Outside of work, Carrillo is focused on her family and raising her two-year-old daughter, who also is deaf. Her free time is dedicated to exploring ways to improve and expand RIT's ASL curriculum.

Erwin Smith

BY ILENE J. AVALLONE

25-year relationship with the Rochester School for the Deaf, and the right combination of job skills, led Erwin Smith, assistant vice president for Information Technology and College Operations, to NTID.

Smith's eldest son is a graduate of RSD, and Smith continues to stay involved at the school. He serves on RSD's Board of Directors as treasurer and chair of its Finance and Audit Committee. Prior to coming to NTID, Smith worked as manager of Student Application Systems at the Rochester City School District and in Information Technology at Eastman Kodak Company.

His previous work experiences, a bachelor's degree in Economic Policy from SUNY Geneseo, and a master's degree in Management Systems from Clarkson University, have prepared him well for his role at NTID.

"My job at NTID is the perfect match for my personal and professional interests,"

explains Smith. "With my involvement in the local Deaf community and my previous experience in operations and IT, the position here couldn't have been a better fit," he says.

Smith wears many hats at NTID. He directs the college's IT operations; plans and manages new construction, renovations and maintenance projects for all NTID facilities; and oversees the Dyer Arts Center.

"I like having the ability to bounce back and forth between IT and building operations," he says.

Since joining NTID in 2010, he has managed more than \$10 million in construction projects.

"I love the variety of my job," he says.

For many years Smith spent his free time coaching his three sons' travel soccer teams, playing soccer on adult leagues and flying planes for recreation. But today, he prefers a little less rigorous activity and likes golf, target shooting and spending time with his two grandchildren.



SUE WEISLE

Q: WHO IS YOUR FAVORITE PROFESSOR?

"My favorite professor is **Gary Behm**. He was my professor for my
Manufacturing Processes class. He's
a great professor because he made
me confident that Manufacturing
Engineering Technology is the
right major for me. He also really
cares about his students and makes
sure that we are all prepared for
the future. Everyone should take
his classes."

"My favorite professor is **Keith Mousley**. He is a wonderful teacher who is terrific in the classroom.

He has a wonderful sense of humor.

He always works with students to make sure that we understand math clearly. He is always willing to work one-to-one with students before a test or to help us understand a problem and how to solve it. That's why he is my favorite professor!"

"My favorite professor is Marcus Holmes. He cares about his students and is our mentor. He gives us courage and guidance to make our work and our lives better. He has an open mind to learn from students as we learn from him in class or outside of class. Marcus Holmes has a big heart that touches students' hearts to expand our passion for engineering."



NAME
Darrin Wilbur
HOMETOWN
Londonderry,
New Hampshire
MAJOR
Mechanical

Engineering

Technology



Caitlin Kight

HOMETOWN

Corsicana, Texas

MAJOR

Design and Imaging

Technology



NAME
Cortney Sawyer

HOMETOWN
Liberty, New York

MAJOR
Computer
Aided Drafting
Technology

"My favorite professor is Michael Skyer because he helps me become better at reading and writing papers. He's not just great in English class, but also outside of class. If you see him in the office, he'll be up to talk about anything with you!"

"Paula Grcevic is my favorite professor because she's a very talented artist. She taught me and my class a lot about drawing and painting. My skills are developing. She helped me learn what my weakness and strengths are in my art work. I know that she is a strict teacher, but she's a professional and helps her students to improve our art skills."

"Mellissa Youngman is my favorite accounting professor because her lectures are very clear and easy to understand. She is cool with me and other students."



NAME
Connor Draughn
HOMETOWN
Franklinton,
North Carolina

MAJOR Hospitality and Service Management



NAME Samantha Abert

HOMETOWN Emmaus, Pennsylvania

MAJOR
Design and
Imaging
Technology



NAME
John Huang
HOMETOWN
Brooklyn,
New York
MAJOR
Finance/

Accounting

$R \cdot I \cdot T$

Rochester Institute of Technology

National Technical Institute for the Deaf Lyndon Baines Johnson Hall 52 Lomb Memorial Drive Rochester, NY 14623-5604

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You Can't Stop The Beat Deaf and hearing actors took the stage in a high-energy production of the musical HAIRSPRAY in May. Shown here, from left to right, are Joseph Ausanio (Corny Collins, sign language); Danica Zielinski (Tracy Turnblad, sign language); Jessica Van Giesen (Tracy Turnblad, singer); Dakota Meyer (Link Larkin, sign language); and Ben Liebrand (Corny Collins, singer).