

Imagine

Fall/Winter 2020 Vol. 1, No. 2

Dear friends of the University Libraries,

As we are soon to conclude 2020, it is an understatement to say this year was unusual. During the first few months the world began grappling with a global pandemic and Virginia Tech transitioned to all virtual learning. Our library experts met the challenge of serving our Hokies' learning, teaching, and research needs because we have a strong foundation in providing our services to wherever our faculty and students are. When it was time to open our facilities this fall, we were ready to resume select in-person services in accordance with university's health and safety guidelines.

In this magazine, you will find stories about many ways the University Libraries meets the needs of our community and makes a difference beyond our campuses. From participating in COVID-19 data analysis for a White House Call to Action to 3D printing personal protective equipment for our region's healthcare professionals, experts across the library have collaborated with university colleagues and contributed to projects, events, and research during these unprecedented times.

I encourage you to read the story about Hokies@ Home, a project collecting and preserving the extraordinary experiences of members of the Hokie Nation during the COVID-19 global pandemic. The story includes a way for Hokies to submit their own stories, photos, and videos. This collection will be an invaluable resource for future researchers and students to learn about our collective experiences.

This year has been full of challenges for all of us. We have met those challenges and have grown from our experiences. As we look to 2021, I wish all of you a happy and safe holiday season and new year.

All the best,

Tyler Walters, Ph.D. Dean, University Libraries

Tryla O. Walter

Virginia Tech

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Digital versions of Imagine magazine are available online at lib.vt.edu/magazine

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Photos: Construction tips by Scott Fralin (top right), Burruss honors healthcare workers by Ryan Young (bottom right). Front cover by Trevor Finney.

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PRINTING PROTECTION

for Southwest Virginia Healthcare Professionals

By Elise Monsour Puckett



Max Ofsa in the 3D Design Studio. Photo by Trevor Finney.

UNIVERSITY LIBRARIES AT VIRGINIA TECH participated in a university-wide project to create personal protective equipment (PPE) for healthcare workers in Southwest Virginia during the COVID-19 pandemic.

Max Ofsa, 3D Design Studio manager, led the University Libraries' involvement and worked with 3D printing teams to produce PPE using the library's 3D printers.

In March, a university-wide task force divided into teams to carry out 10 projects in rapid science and production, working together to design and create ventilator components and personal protective equipment. The University Libraries assisted with five of the 10 projects.

The collaborative group united Virginia Tech faculty in subjects like product design, fabrication, materials science, biosciences, virology, and sterilization. These experts are from colleges and institutes across the university including College of Engineering, the College of Science, the Virginia Tech Carilion (VTC) School of Medicine, the

Fralin Biomedical Research Institute at VTC, the School of Architecture + Design, and the Edward Via College of Osteopathic Medicine.

Mechanical engineering professor Alex Leonessa, director of the Terrestrial Robotic Engineering and Controls Laboratory, and Liam Chapin, of the Field and Space Experimental Robotics (FASER) Laboratory, led a team headed by mechanical engineering professor Erik Komendera to organize the mass production of the face shields. The team rapidly prototyped designs and ran 15 styles by Carilion Clinic and LewisGale Hospital staff before finalizing the face shield.

The group worked out modifications for some of the PPE items, and Ofsa offered his expertise on the design

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It feels good to be a part of such an important project. The University Libraries has the tools to help tackle more PPE challenges that may lie ahead.

Max Ofsa

portion of the project, specifically face shield design, alongside engineering faculty and students. Ofsa also 3D scanned components of machines for retrofitting/reverse engineering and worked with Linsey Marr, professor of civil and environmental engineering, on scanning testing apparatuses from the Aerosol Lab so they could have more capacity to test mask effectiveness.

"The University Libraries responded very quickly when we asked to scan a manikin that we wanted to use for testing masks. We only had two manikins and wanted the option to be able to make more of them, and make them a little larger, to expand our testing capacity," explained Marr. "We gave the University Libraries a manikin head to scan, and they returned it the next day along with files of the object. The head was pretty small, almost child-size, so now we can make a bigger adult-size one for testing."

After Virginia's stay-at-home directive and Virginia Tech's move to essential operations closed Newman Library in the spring, Ofsa and Jonathan Bradley, head of studios and innovative technologies, sprang into action. "We quickly pulled the 3D and resin printers from the building so we would have the at-home capacity and resources to

3D print and safely contribute parts for printing face shields," explained Bradley.

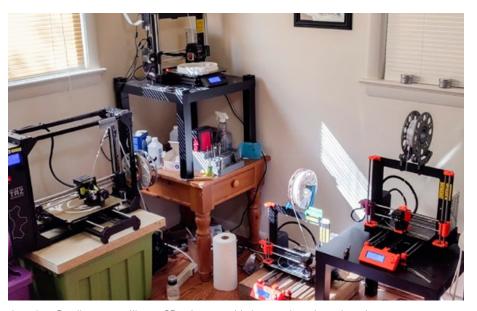
"We worked around the clock with about 16 printers," said Ofsa. "We both printed from home, along with some of our library student fellows, Sarah Loomis and Matt Winn, to produce the frames for the face shields." The University Libraries collaborated with Kaelum Hasler from Rendyr, an emerging desktop robotics company, who is producing the clear, laser-cut pieces for the front of the shield. Ofsa also tested more advanced pieces on the resin machines.

The university-wide task force along with research groups teamed up to design, produce, and test the critical PPE and ventilator components. Prototypes were created, the face shield design was finalized and passed infection-control review, and the team ramped up for production. From April through June production was full speed ahead producing around 2,500 face shields of which the University Libraries produced 752, accounting for 30% of the final total.

"It feels good to be a part of such an important project," said Ofsa. "The University Libraries has the tools to help tackle more PPE challenges that may lie ahead."



Face shields printed with University Libraries 3D printers. Photo by Jonathan Bradley.



Jonathan Bradley set up library 3D printers at his home when the university transitioned to all virtual teaching and learning. Photo by Jonathan Bradley.

THE LAND SPEAKS VIRTUALLY

By Elise Monsour Puckett

WHEN THE PANDEMIC FORCED museums around the world to temporarily close physical exhibits, the University Libraries pivoted to hosting online exhibitions in place of physical ones.

After the initial design planning stage of a recent exhibit, The Land Speaks: The Monacan Nation and Politics of Memory, Scott Fralin, exhibits program manager and

learning environments librarian, constructed the physical exhibit by hand. Then came the COVID-19 pandemic.

On a normal day at Newman Library, Fralin can be found tinkering. With a yellow number-two pencil tucked behind one ear, sleeves rolled up, and a cup of strong coffee in hand, Fralin is the man behind the extraordinary exhibits at the University Libraries.

Fralin has an office that is the envy of many. Strategically organized yet creatively messy, this maker-space holds treasures, from tools, to spare parts, to prototypes, to playful contraptions — ingredients that build the University Libraries' unique exhibits.

With "The Land Speaks," Fralin's biggest challenge was switching to a digital, rather than physical, exhibit.

"The tools were different, and it's much harder to create a single experience for all users," said Fralin. "With an inperson exhibit, every visitor sees the same things arranged in the same way. But when you create a digital exhibit, there is no way to ensure everyone gets the same experience or even sees the exhibit in the same format due to differences in browsers and devices."

"The Land Speaks" exhibit is a collaboration between Fralin and faculty members in the College of Liberal Arts and Human Sciences. Desirée Poets and Audrey Reeves, assistant professors of political science, joined Jessica Taylor, an assistant professor of history, in teaching a class, "The Politics

of Memory," under the aegis of the doctoral program ASPECT (Alliance for Social, Political, Ethical, and Cultural Thought).

The exhibit shares the Monacan Indian Nation's story. This federally recognized tribe includes more than 2,300 members and has a continuous, thousand-year-old history and presence in Amherst County in central Virginia.

Students in "The Politics of Memory" class encountered a number of challenges while working on the exhibit.

"The students had to learn how to navigate archaeological and historical literature unfamiliar to them, museum exhibit design, and different kinds of sources, from oral history to old photographs and even plant remains from thousands of years ago," said Taylor.

I think the project is so rich in the value it brings as a learning tool because it intersects with so many areas ...

Melissa Faircloth

"The course was a great way for us to learn from one another," said Reeves. "A political science student, for example, would be especially sensitive to the political importance of drawing attention to the stories and political campaigns of marginalized groups, as a challenge to attempt to erase or silence these groups.

"Fantastic history students were instrumental in identifying precise historical details and expressive artifacts," Reeves added. "Finally, we were fortunate to have someone with a fine arts background, as artistic sensitivity is also important for designing visual exhibits that should communicate not only facts but also emotions and beauty."

Rufus Elliott '07, the first member of the Monacan Indian Nation to graduate from Virginia Tech, worked as the exhibit's tribal consultant.

"It is extremely important that institutions of higher learning take the time to have a collaborative approach when exploring the history of the Indigenous people of Virginia," said Elliott, "and Dr. Taylor and her team did exactly that."

The exhibit team had been working with state archaeologist Tom Klatka to feature real-life Monacan Indian artifacts on loan from the Virginia Department of Historical Resources and a 3D scanning interactive component. Artifacts recovered from archaeological sites included beautiful fragments of pots handmade by Indigenous women.

"More than words, objects connect us to their place of origin and in this case, they deepen our understanding of why respecting archaeological sites is crucial to respecting the dead and their living descendants," said Taylor. "Nothing replaces seeing objects in person, but we are so grateful to Scott Fralin for creating a gorgeous site and adding those elements in virtually."

"I especially appreciated the digital models of housing and burial mounds for those visual learners," said Melissa Faircloth, an enrolled member of the Coharie Tribe of Eastern North Carolina and director of Virginia Tech's American Indian and Indigenous Community Center. "I think the project is so rich in the value it brings as a learning tool because it intersects with so many areas, from history to art, American Indian studies, and culture, just to name a few."

"Southwest Virginia has a long and dizzying diverse human history, with thousands of archaeological sites and dozens of descendant communities to prove it," Taylor added. "The exhibit examines just one piece, the Monacans, to show how over hundreds of years this Indian nation thrived and survived colonialism and racism. It also provides context for their successful pursuit of federal recognition, and the problem that started our exhibit: the fight to save their 17th-century capital of Rassawek from a water station supporting real estate development."

"We know that Native people had their land stolen, but we don't often think about the place we sit at this very moment as stolen," said Taylor. "By focusing on this area, we are asking people to think about their own small role in colonialism. The process continues elsewhere, and many sites important to Native people across North America are currently under threat."

Fralin admits that before working on this exhibit, he had only limited knowledge of the Monacan Indian Nation. "My hope is that this online exhibit will help more people become aware of the Monacan Indian Nation, learn about their past in our region, and become aware of their current struggles trying to save their historic capital, Rassawek, from development," he said.

The campaign to save Rassawek is ongoing, even while the Monacan Indian Nation deals with the COVID-19 pandemic.

"I think what is so amazing about the virtual exhibit — aside from the amount of detail, context, and history — is how relevant the medium is to our current situation," said Faircloth. "This is beautifully done, and it's sure to be an amazing teaching tool as professors deliver online content."



Photos and images provided by the online exhibit.



VISIT THE EXHIBIT exhibits.lib.vt.edu

Land Acknowledgment: We acknowledge the Tutelo/Monacan people, who are the traditional custodians of the land on which we work and live, and recognize their continuing connection to the land, water, and air that Virginia Tech consumes. We pay respect to the Tutelo/Monacan Nations, and to their elders past, present, and emerging.



AWHOLE NEW LEVEL of fun and creativity awaited campers for the seventh annual Maker Camp week, which transitioned into a virtual Maker Challenge Week in August.

Elementary to high school-aged campers stretched their imaginations as they engaged in building, design, motion, science, art, and iteration. The Virginia Tech Maker Camp at the University Libraries is a collaboration with the Institute for Creativity, Arts, and Technology (ICAT), which houses the Center for Educational Networks and Impacts (CENI), providing resources and a culture of creativity throughout the region's school systems and museums.

The COVID-19 pandemic arrived during the camp's planning stages. So, the team quickly shifted to a virtual camp called Maker Challenge Week.

Area families welcomed an innovative camp for their children while physical distancing at home.



Campers sent photos of their creations for posting on the Maker Challenge Week web page.

"We wanted to create a digital experience where participants could step in and out at any time and use found materials in their homes," said Kelsey Hammer, digital literacy and multimedia production librarian. "This would make sure that everyone could participate in a way that best suited their needs and was eco-friendly."

The Maker Camp team built an interactive website to announce a new challenge each of the five days in coordination with the University Libraries' Facebook, Twitter, and Instagram pages. The website's online guide shared examples of materials that could be used and provided experiences and information about the core concepts of Maker Camp - design, iteration, and engineering.

There were several differences between Maker Camp and this year's virtual Maker Challenge Week. Typically, Maker Camp is available to 25 middle school-aged participants who register and pay for the camp. This year, Maker Challenge Week was open to unlimited participants of all ages for free, which increased its community reach.

"Participants weren't in groups and they weren't in person, but that didn't mean they couldn't engage and have fun," said Amanda MacDonald, undergraduate research services librarian. "We tried our best to write challenges in a way that any participant could find materials at home and build."

"Maker Camp is unique because it aims to keep the idea of 'possibility' open," said Max Ofsa, 3D Design Studio manager. "There is a certain quality of wonder in art and creation that is suppressed as a person grows older and as realistic expectations become understood."



Ofsa said as people grow, they do not lose a capacity for being creative, but rather feel they need permission to pursue creative outlets.

"Somewhere in the early to late teen years, our learning switches and has the side effect of diminishing the confidence of our abilities," said Ofsa. "Reintroducing play as a teaching method gives permission to the learner to build confidence in their own skills and abilities."

Learning through experience and play are important ways to educate.

"Play is the best way for people of all ages to learn, especially soft skills like collaboration," said Sara Sweeney Bear, Fusion Studio manager. "I can honestly trace this value back to volunteering for Maker Camp as a Virginia Tech graduate student in education. The creative mess of Maker Camp felt like home to me, it's been the best part of my summers, and has inspired the work I do in the University Libraries with college students."

Maker Camp typically covers concepts like coding, circuitry, and 3D printing. This year, the team decided against including those hard-to-access

technologies and instead implemented a self-guided approach to fostering natural curiosity and creating with common materials.

"It's always a challenge to deliver educational experiences online, especially when a lot of folks were harried by the abrupt switch to online education in the spring," Bear said. "Although our challenges and the instructional content would all be online, participants were mainly interacting with their physical environment."

Throughout the week, participants submitted photos and short videos of their creations. As camp came to an end, Hammer made a fun video showcasing the campers' creative works. Hammer said, "The amazing creations and imaginations of people of all ages were awe inspiring!"

The team plans to continue to offer this at-home virtual version even as Maker Camp returns in-person.

"Building something from your imagination, an idea, is good for the soul," said MacDonald. "This year may have looked and functioned differently, but I think we still created an event with the heart of Maker Camp."

composed of faculty from ICAT
and University Libraries:

Scott Fralin, exhibits program manager
and co-director of Maker Camp

Sara Sweeney Bear, Fusion
Studio manager and learning
space assessment coordinator
and co-director of Maker Camp

Max Ofsa, 3D Design Studio manager
and co-director of Maker Camp

Kelsey Hammer, digital literacy and
multimedia production librarian

The Maker Camp team is

Amanda MacDonald, undergraduate research services librarian

Phyllis Newbill, outreach and engagement coordinator, CENI

Planting seeds of beauty in the new

VIRTUAL SCULPTURE GARDENI

By Elise Monsour Puckett

ROLLING HILLS dotted with illuminated Virginia dogwoods and a towering archway set the scene for the University Libraries' new Virtual Sculpture Garden. Funded by an Institute for Creativity, Arts, and Technology (ICAT) rapid response grant and in collaboration with the Moss Arts Center, the Virtual Sculpture Garden takes viewers to a place where beauty and design come together to keep the arts community connected during a time of physical distancing.

Principle investigator and University Libraries' Creative Services Coordinator Trevor Finney envisioned this oasis for the last few years. Before coming to Virginia Tech, Finney worked as a 3D modeler for virtual world companies and has relied heavily on the design skills honed during his time in the University Libraries to inform the design of the Virtual Sculpture Garden environment.

"Working on the library communications team has offered me insights into how I can craft critical messaging that surrounds the project and will help in the coming months as we begin our broader outreach efforts," said Finney. "I am fortunate to be working in a place with the people and the resources necessary to bring an idea like this to fruition."

The Virtual Sculpture Garden was created by four faculty members, two student workers, and a graduate assistant: Trevor Finney, creative services coordinator and principal investigator, University Libraries; Jonathan Bradley, head, studios and innovative technologies, University Libraries; Renee Alarid, associate director, creative services, Moss Arts Center; Alice Rogers, manager, media design studios, University Libraries; Giang Vu Binh Nguyen, studio student fellow, University Libraries; Dylan Craft, studio student fellow, University Libraries; and Alex Krasner, Virtual Environments Studio graduate student, University Libraries.

Visitors can access the garden through a web browser or virtual reality (VR) headset and explore its digital 3D artworks. The stylized landscape pulls inspiration from Virginia and features trees and plants native to the area. Visitors take a stroll along a self-guided landscape through nature while gaining insight into the works of art and the artists behind them.

For the critically immersive element of sound, team member Alice Rogers recorded on her banjo an original composition that is soft, wandering, and charming. A small juried









A playful world

This early concept illustration of an illuminated dogwood helped the team explore how they could inspire visitors and spark their imaginations.

gallery at the welcome center will feature artwork that fits the theme "Connection from a Distance." This space will also be used to welcome Virginia Tech Science Festival students and community members to the exhibit and teach them about 3D art.

Submissions are open to the entire Virginia Tech and New River Valley communities. After some simple checks for an artwork's adherence to the guidelines and VT Principles of Community, the art is placed in the VR environment. As the team receives more sculptures, the virtual environment will expand automatically with new hills, ponds, and trees. This automation will allow the garden to be open, collaborative, and an everexpanding virtual exhibit for years to come.

As a student fellow, Dylan Craft helped create the realistic and self-expansive landscape. "As a library student fellow, I was able to contribute and gain great experience on a larger-scale group project that will be shown to the public and added to my portfolio," Craft said.

Finney said this is an incredible opportunity for young and novice artists to showcase their work in a virtual space.

"There is something really special about seeing your artwork in a gallery space among other artists' creations," said Finney. "For me, it totally changes the experience of seeing it. It's more real, more complete. It gives me a moment to reflect on the piece, what I learned, and how I want to try to be better."

Student fellow Giang Vu Binh Nguyen is proud to be a part of this project. "I think

the special thing about the Virtual Sculpture Garden is that it allows people to show their work to the public and is also a place to connect people together," said Nguyen.

Works submitted to the garden do not need to be a masterpiece or complicated. "They don't need a sculpting studio, clay, or casts," said Finney. "If they have access to a computer, they are ready to get started." On the website, the team provides a list of freely available tools to try like TinkerCad, SculptGL, 3D Slash, and A-Painter for hard surface modeling, sculpting, block modeling, and VR painting.

"One of the things that excites me most about this project is how much potential it has to be explored and expanded," said Finney. "It's in the earliest stages now and we are so excited to keep working on it, keep building partnerships, and keep finding ways for the garden to interact with other areas of the library. We're already talking about ways to bring in more components of digital authorship. Perhaps in the future, sculptures can be created to feature music, poems, and even motion-captured dance."

The University Libraries makes emerging technology resources and expertise available to everyone, opening doors to explore and create things that people may not have even imagined yet, like the Virtual Sculpture Garden.

"This project is a fusion of everything I love," said Finney. "We tell our undergraduate students that the library is somewhere you can go to learn through play, which is a fabulous philosophy and something I am grateful to have also benefited from."



introduce basic concepts of 3D artwor to visitors, such as this simple shapes robot.



digital pumpkin carving encourages visitors to try out free tools



VISIT THE GARDEN vr-garden.lib.vt.edu

With special permission, Jonathan Bradley climbs onto the 611. Photo by Kelsey Hammer, Fall 2019.

ALL **ABOARD!**

University Libraries learns emerging technology in order to help others

By Elise Monsour Puckett

THICK BLACK SMOKE puffed from the 611 locomotive as it chugged down the tracks away from the Virginia Museum of Transportation. The museum's famous 611 train was set to depart the museum and head to Pennsylvania to be featured in a once-in-a-lifetime steam train extravaganza called Steam Revolution at the Strasburg Railroad.

Before the train departed, life-like photos needed to be taken to allow museum patrons to view the train while it was away. University Libraries' Jonathan Bradley, head of studios and innovative technologies, and Kelsey Hammer, digital literacy and multimedia production librarian, had just the ticket.

Bradley and Hammer traveled to the Virginia Museum of Transportation in Roanoke and brought all the bells and whistles with the Media Design Studio's 360 camera to capture the 611 train, known as an engineering powerhouse of steam, technology, and near mechanical perfection.

The University Libraries' Media Design Studio faculty and staff are experts in emerging technology. When new media equipment is available, they are the first to get it. The team researches and trains on each new device, performs testing capabilities, and pushes boundaries. The University Libraries then brings this emerging technology to faculty, students, and the community to be used for media projects including video and audio.

"This fits within Virginia Tech's motto Ut Prosim (that I may serve), to try to help the surrounding community, who often look to Virginia Tech for help with emerging technologies," said Bradley.

Before getting to work, they were given a tour of the museum where they learned about each exhibit and what makes each collection unique. Bradley and Hammer then worked to recreate that experience for the viewer.

"We worked hard to choose where to put the camera in the outdoor exhibits so that viewers could really feel how huge the trains are," said Hammer. "That's a big part of what makes the museum fun and educational!"

The Norfolk & Western Class J 611 could pull 15 cars at 110 mph across level terrain. Only 14 engines of this kind were ever built. The Virginia Museum of Transportation's 611, with its massive and powerful locomotive, jet black paint, red stripe, and gold numerals, is the only 611 train still in existence today. It was built in 1950, cost \$251,544, and weighs 494,000 pounds with wheels as tall as the average man.

Bradley and Hammer used the Insta360 Pro 2 camera, which can be checked out from the studio by faculty and students. It's a cinema-grade 360 camera with 6 high-definition cameras and fisheye lenses arranged in a circular pattern around the outside of the device. It takes six simultaneous videos or images, and records gyroscope and accelerometer data into a file. The software then "stitches" the images together into a photo sphere that can be uploaded to social media or added into a virtual reality experience.

"I think this project is a great teaching tool about the library and digital literacy. It's a great example of creation and scholarship, both in how we used the library's technology and how we considered audience, narrative, and patron needs throughout our process, also how we troubleshoot on the ground and in post-work to make our vision possible," said Hammer.

"Virginia has a wonderful history, including so much work at Virginia Tech, in pushing the boundaries of how we move and transport through planes, trains, automobiles, and more," said Hammer. "I feel this project represents what the library does best and what we continue to strive to do for Hokies and the community."

A **Photo Sphere** is an image stitched together from six photos or videos that become a 360 degree experience when viewed through a virtual reality headset.

In the below example, the sides represent what's behind you!







CHALLENGE ACCEPTED

Undergraduate student data teams respond to White House Call to Action

By Ann Brown











Jonathan Briganti



Grant Kawecki



Chrissi Taylor Anne M. Brown



Loveish Sarolia



Mitch Dolby



Somya Jain

VIRGINIA TECH undergraduate students are getting a taste of real-world data analysis that makes a difference as the globe grappled with the COVID-19 pandemic.

The White House Office of Science and Technology announced a call to action for data scholars across the country to use their expertise in artificial intelligence and data mining to help COVID-19 researchers keep up with the ongoing emerging research surrounding the pandemic.

University Libraries at Virginia Tech faculty members Anne M. Brown and Jonathan Briganti challenged their undergraduate data students in the library's DataBridge program and the Bevan & Brown Lab to jump in and create tools and look for patterns and trends in the research data using machine learning and molecular modeling.

The White House Office of Science and Technology call to action said the purpose is "to develop new text and data mining techniques that can help the science community answer high-priority scientific questions related to COVID-19."

Brown and Briganti tapped graduate student Daniel Chen, a Ph.D. student in genetics, bioinformatics, and computational biology, working under Brown, to lead the undergraduate students in working remotely yet collaboratively on this challenge. Students engaged in this project range from first-year students to seniors and are from the departments of Biochemistry, Biological Sciences, Computational Modeling and Data Analytics, and Geography.

One team of students explored the use of molecular modeling in application to understanding the biology and druggability of proteins associated with COVID-19. They searched the Protein Data Bank for all protein structures associated with COVID-19 and annotated a database of potential structures for future experiments. The team then optimized a protocol to scan drug targets against hundreds of known drug molecules.

The other team did text-data mining of literature sources, popular media, and other outlets to connect research questions they have generated to the coronavirus pandemic. Most of the team's work involved natural language processing of published texts. Their research questions and tasks include looking at the simultaneous presence of two chronic diseases or conditions and risk factors for COVID-19, and best practices and challenges in medical care to prevent the spread. The team members also used natural language processing to look at the changes

PDB Entry - 6LU7 from the Protein Data Bank



Hopefully, they take this experience and skillset with them in their careers and can be the changemakers the world needs.

Anne M. Brown

in sentiment in published news articles, the state of the economy, and how quarantine measures are affecting air quality.

Brown said this work was about bringing what students have learned from all of their academic experiences to bear on a global challenge and seeing how their knowledge and teamwork can make a difference.

"Our first outcomes and purpose were really studentbased - how can our students take what they are learning in their classes, in their research experiences in our group, and apply it to something happening in realtime," said Brown. "Students discussed their results across discipline boundaries, which is important for developing transdisciplinary collaboration skills for the future."

Collaboration was key while working remotely during the quarantine. "The students were learning how to work in a collaborative environment where data and code can be shared across everyone in the team," said Chen. "In some sense, the quarantine measures enforced these collaboration techniques since we could no longer hold in-person office hours. The work was all open and public, and the skills they were using for this work are the same set of skills employed in other open-source projects, big and small, as well as companies."

Chen said the mechanics of the work is of the greatest value to the data students.

"Working openly, and using GitHub as a focal point for project management, and working asynchronously with data and code updates were the biggest skills the students were learning that will carry on with them as this project continues and for their future careers," said Chen.

Brown said that the White House call to action was a siren song for their team. They couldn't pass up the opportunity.

"We saw the opportunity to use the White House call to action and all of the publicly available data as both a way to engage students in experiential learning while remote, while also working on something extremely relevant," said Brown. "Hopefully, they take this experience and skillset with them in their careers and can be the changemakers the world needs."

Collaboration creates Spanish-language COVID-19 resources

By Ann Brown



The service gathers existing resources that are strictly in Spanish such as the above graphic from the Centers for Disease Control and Prevention (CDC) into helpful guides as seen in the below example.

VIRGINIA TECH LIBRARIAN Ana Corral and University of Virginia librarian Hanni Nabahe saw a need for providing COVID-19 resources for Spanish-speaking communities. In the spring, they began the project Apoyo e información en tiempos de COVID (Support and Information in

the time of COVID).

Prior to COVID-19, Corral and Nabahe had met through the Research Interest Match, a resource that connects early career librarians and residents with others looking to collaborate. They bonded over their recent move to Virginia and their passion for serving marginalized communities; however, when the pandemic hit, Nabahe suggested they create a series of COVID-19 guides in Spanish.

"As we know, this situation caused by the pandemic is not going to be resolved overnight, and we are more than likely looking at dealing with this at least through the end of the year," said Corral. "By creating sister library guides at our universities, we hope to provide information and resources that are up-to-date, relevant, and in one location to demonstrate how academic libraries support their Spanish-speaking communities."

The Blacksburg and Charlottesville guides were updated weekly during the summer and bi-weekly during the fall. The project has grown to include two more university librarians, Alexandra Flores from the College of William & Mary and Sergio Chaparro from Virginia Commonwealth University.

"To avoid duplication with other useful guides, we are gathering resources that are strictly in Spanish and invite the community to reproduce and or adapt it as needed," said Nabahe.

"Both Hanni and I have received positive feedback from community members and groups and professional organizations," said Corral. "I have also received emails thanking me for the information, so that is wonderful to read and see that this information is needed in this format and is being used."

The University Libraries at Virginia Tech, a founding member of the Association of College and Research Libraries' Diversity Alliance for Academic Librarianship residency program, welcomed Ana Corral as its second resident last fall. The University of Virginia Library is also a member of the Diversity Alliance for Academic Librarianship residency program and Nabahe is its current resident.

"For the two of us, we consider ourselves a part of the community that we are reaching out to," said Corral. "We are passionate about improving the relationships between our universities and the Spanish-speaking communities that surround them and growing and engaging those relationships."



GeoSpatial LibGuides help researchers map COVID-19

By Jessica Aiwuyor, Association of Research Libraries

We help

them gain

experience

technology

that first

working

with the

working

with the

Shane Coleman

data.

and

Dallas

-louston

RESEARCH LIBRARIES CONTINUE

to expand a variety of services and resources to meet the changing needs of patrons during the COVID-19 pandemic. In mid-March, data experts in the University Libraries launched a LibGuide of "Geospatial Data Services: Mapping the Coronavirus."

Brooks, geospatial data consultant, and Shane Coleman, data curation manager for the libraries,

developed the LibGuide after they helped a graduate student in science technology studies with mapping the spread of COVID-19 in New York. The student was interested in mapping the possible relationship between poverty levels in that region and the spread of the virus. Coleman and Brooks were able to help the student locate viral spread data at the county level and suggested approaches for how that data could be linked to socioeconomic data from the US Census at the censustract level.

Before this project, Brooks was receiving requests for COVID-19related data. He took it upon himself to create a LibGuide that included many primary sources so people would have easier access to the data.

"The graduate student was working on a class project, mapping COVID-19 in New York City. We explained to the student that geospatial data is typically organized by a large location and focuses

more on how the Census organizes it than the geospatial community," said Coleman. "We walked her through how to approach it from a data-availability perspective. At that time, data was distributed on state websites and other places at a county level."

Brooks's and Coleman's efforts to find data on COVID-19 viral spread for this consultation led them to collect and categorize maps, dashboards, data sets,

> and other resources around mapping the coronavirus for researchers at Virginia Tech and elsewhere. The LibGuide was made publicly available in late March 2020.

> Their geospatial data site includes interactive maps and dashboards that showcase previously mapped cases of COVID-19, coronavirus mapping tutorials, and tips that help users map their data with open-source software. The site also includes data resources and databases featuring links to national and international resources.

Brooks helps library patrons find geospatial data,

like old physical maps or Census or geospatial data including certain types of imagery. As a landgrant university in Virginia, one of Virginia Tech's roles is to help Virginia Geographic Information Network (VGIN), a state-run group responsible for generating certain imagery data sets of which VT is a distributor.

Coronavirus COVID-19 global cases by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University.

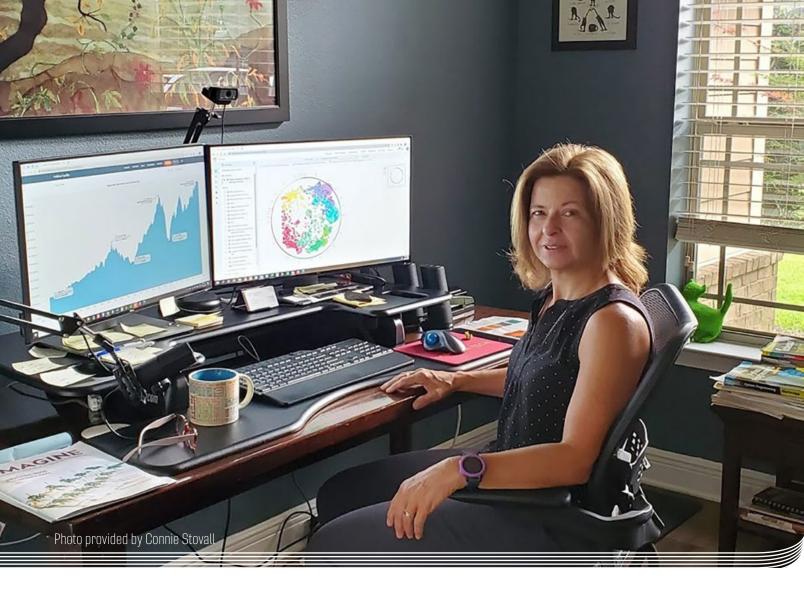
Havana

Toronto

"There are additional geospatial support services available at Virginia Tech that are more advanced. So, we're the first line of defense," said Coleman. "There's one service at the university that requires funding, and students become collaborators on projects, and then there is also faculty support. We are here as a library service for users who are unfamiliar with the technology or some of the introductory processing or the geospatial field. We help them gain that first experience working with the technology and working with the data. We help library patrons better understand how we bring out the spatial components of a data set, whether it be a simple visualization or trying to extract more in-depth information. It's a free service, and we're able to do a fair amount."



SEE THE SERVICE bit.ly/geoservice



Librarian investigates university and industry links to grow Virginia Tech's societal impact

By Elise Monsour Puckett



"The work of LINK + LICENSE + LAUNCH is complex and multifaceted. I enjoy bringing strategic insight to their efforts, by, for example, arming the team with data, models, market realities, technical insight, and more."

Connie Stovall



TICK, TACK, CLICK is the sound of librarian Connie Stovall's computer keys as she investigates and analyzes data from her home office. Hair neatly tucked behind her ear and blue eyes magnified behind her vintage-rimmed glasses, Stovall concentrates on her new role as assistant director of strategic research and industry intelligence analyst with the University Libraries at Virginia Tech investigating potential connections between the university and industry partners.

Some may say Stovall's skillset, education, and training are somewhat unusual. She is a University Libraries librarian and holds degrees in the humanities, business, and social sciences. That combination of knowledge has helped her shape and execute a new role at Virginia Tech supporting efforts by LINK + LICENSE + LAUNCH.

LINK + LICENSE + LAUNCH was founded a little over two years ago to help industry partnerships grow and flourish and provide the pathway and connections for discoveries made at Virginia Tech to deliver economic and human impact. In other words, their team ensures that breakthroughs break through.

Stovall's position in the University Libraries started out as a few side projects after a conversation between University Libraries Dean Tyler Walters and Brandy Salmon, associate vice president for innovation and partnerships and managing director for the new Innovation Campus. Stovall's work and expertise quickly evolved as she developed a transformational role as an industry intelligence analyst.

"This particular role allows me to utilize a wider set of my skills and provide data-driven analysis for the team. The work of LINK + LICENSE + LAUNCH is complex and multifaceted. It takes a full range of skills, from soft skills to technical competencies. I enjoy bringing strategic insight to their efforts, by, for example, arming the team with data, models, market realities, technical insight, and more. It helps

this team operate as a strategic consultancy within Virginia Tech," said Stovall.

Stovall's vast experience with academic resources and tools can be traced back to her librarian career path. But now she moves beyond pointing to or teaching information resources, and instead, finds and presents insights.

"Outside of medical and corporate libraries, the vast majority of librarians spend a great deal of time evaluating and sourcing information for others and teaching patrons how to use resources," said Stovall. "What we haven't done as much until more recent years is take the additional step to synthesize that information or perform data analysis and provide insight to those involved in building partnerships and very few have been fully embedded in tech transfer and business development units."

Stovall uses extensions of library resources to compile, analyze, and communicate data-driven analysis for LINK + LICENSE + LAUNCH team members and other campus administrators. She also incorporates data analysis tools like Tableau, VosViewer, or In-Spire to enhance analytical communications.

"With tools like In-Spire, a textual visualization tool, we can ingest scholarly abstracts, news, and reports from companies and national labs and patents into one place and analyze the text to understand where Virginia Tech fits in regarding a particular research area," explained Stovall. "We can use a tool like Scival to help us understand more specifically Virginia Tech's role and strengths in big growth areas like 5G, autonomous vehicles, cybersecurity, or artificial intelligence (AI), and who the other major players are outside Virginia Tech. These tools can help us better understand market needs in those areas, as well."



This kind of competitive intelligence and strategic research helps Virginia Tech better position and market its strengths in those areas.

66 -

Connie Stovall



"It is so important to me to help shine more light on the broad range of services and capabilities of academic librarians," said Stovall. "Our profession suffers from a bit of a stereotype when it comes to our roles, and I want to help convey the transformative roles and services developing in our field."

Stovall's work has provided campus partners the information they need to move their missions forward.

"Connie's work was very helpful in informing our conversations at the Commonwealth Cyber Initiative (CCI)," said Sarah Hayes, CCI portfolio director, Office of the Executive Director. "As we build toward strategic programs and partnerships, we have leaned on Connie to help us understand leading models, gain a sense of what other sorts of partnerships companies are building toward, and staying abreast of trends. Doing our homework has helped us kick start our partnership discussions and create terrific momentum for CCI in building a 5G testbed."

LINK + LICENSE + LAUNCH supports all aspects of corporate partnerships and consists of three components that uniquely complement each other. LINK, The Center for Advancing Industry Partnerships, focuses on supporting, developing, and maintaining strategic partnerships between Virginia Tech researchers and industry. LICENSE, The Center for Technology Commercialization, works in concert with Virginia Tech Intellectual Properties to provide a path to market for Virginia Tech inventors, including technology

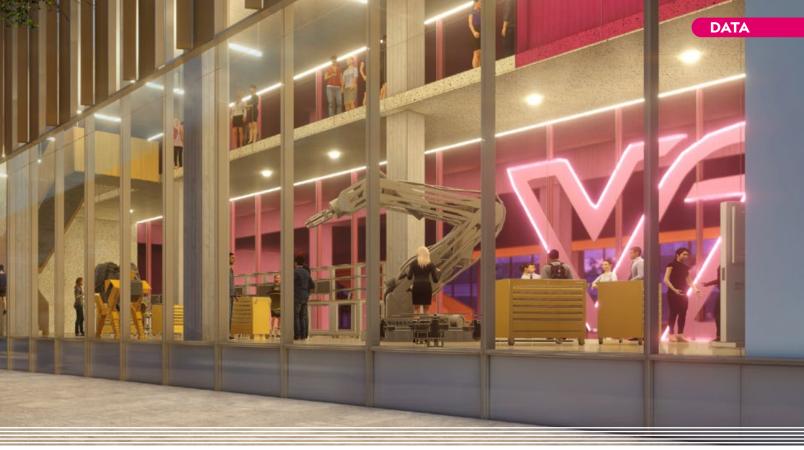
and market assessment, and navigation through the patenting and license process. LAUNCH, The Center for New Ventures, supports start-ups for those inventors.

"There are so many reasons I love working with the LINK + LICENSE + LAUNCH team," said Stovall. "They are a positive, service-oriented group intent on making a difference. While my role is really a small one in the scheme of things, I like knowing that I'm supporting their goals and, in so doing, I am not just impacting Virginia Tech but the goals of the commonwealth, particularly with innovation, job creation, and developing tech-talent pipelines.

Recently, with LICENSE & LAUNCH, Stovall is helping to analyze technology and corresponding markets and creating processes and insight for invention disclosure assessments. Her role includes searching patent databases for prior art, interviewing Virginia Tech's inventors, identifying outside experts to interview, and assessing markets and customers to better understand applications and prospective partners.

Goals, success, and the Innovation Campus

Stovall's work is collaborative and her reach is far. "I've worked with others across campus to compile and analyze what's happening across the country and globally in areas like 5G or quantum research centers and helped others understand the competitive landscape in those areas," said Stovall. "This kind of competitive intelligence and strategic



Virginia Tech's Innovation Campus will anchor a 65-acre innovation district that JBG SMITH is developing in Potomac Yard.

research helps Virginia Tech better position and market its strengths in those areas."

Stovall's collaborations with strategic partners aid in accomplishing her goals while also helping other Virginia Tech departments.

"Working with Connie has been great," said Debbie Carlier, director of strategic initiatives and engagement, research, and graduate studies, College of Engineering. "Her analysis helped me to understand more deeply the interdisciplinary nature of quantum research and determine that Virginia Tech with its QIST (quantum information science and technology) strengths in both basic and applied research areas could be a leader in this field.

"The QIST collaborative effort between the College of Engineering and College of Science began more than a year ago because faculty and leadership could see the opportunity we had to bridge basic and applied research work to help meet the workforce demands predicted by industry experts to explode within the next five to 10 years. Mining for good information on research topics can be a daunting task. Connie's work can help you get to the information you need for your research and educational initiative."

Stovall has built invaluable partnerships throughout Virginia Tech and beyond.

"Connie's support has been incredibly helpful - from her work on the CCI Southwest Virginia node application to informing us on the scope of quantum information science and technology research occurring in the state. As we plan researcher workshops, we will revisit the resources Connie provided to ensure that we harness the full capability in the Commonwealth," said Gretchen Mathews, director, Commonwealth Cyber Initiative Southwest Virginia, and professor, Department of Mathematics.

"One of my goals is to help enhance Virginia Tech's reputation," said Stovall. "Catalyzing industry partnerships and growing the economy for the commonwealth is key to that."

These important library services help deliver on the goals of Virginia Tech's new Innovation Campus and are available now to anyone who will be working there. Stovall has already provided services related to the Innovation Campus and is working with Kristie Caddick, the Innovation Campus project manager, researching strategic growth areas.

University Libraries strives to help Virginia Tech make an economic and human impact. Many academic librarians are already perfectly suited to providing competitive intelligence and analysis to help campus leaders and researchers plan more strategically. Stovall has paved the way for others in the field.

Sifting through a growing civic haystack

Mellon Foundation grant supports development of a plan for using artificial intelligence to plumb the National Archives

By Paula Byron

THE NATIONAL ARCHIVES AND RECORDS ADMINISTRATION,

the official recordkeeper of the United States, provides digital access to more than 110 million digital records, a number that continues to grow exponentially.

"The National Archives is expected to host as many as 13 billion records within the next few years," said Sylvester Johnson, director of the Virginia Tech Center for Humanities. "So if you want to tackle a specific topic — to find the proverbial needle in the haystack — your ability to search those records in a meaningful way is becoming harder and harder. The needle you're seeking hasn't increased in size, yet the haystack is millions of times larger than it used to be."

The Andrew W. Mellon Foundation has awarded Virginia Tech a planning grant to work with the National Archives and a number of universities nationwide to understand the opportunity for using artificial intelligence to search digital records.

"The Mellon Foundation is making it possible for us to understand how we can enable researchers to continue studying archives when particular sources are buried among billions of other digital records," said Bill Ingram, assistant dean for archives and technology services in University Libraries at Virginia Tech, who will serve as principal investigator for the grant. "Citizens should be able to easily access and find governmental information they need to be informed about government actions and policy. An informed citizenry is essential to maintaining democracy. We are excited that Virginia Tech can pursue such an important opportunity."

The planning grant will make possible a two-day workshop in which Virginia Tech librarians, archivists, and humanities faculty researchers will join with deep subject experts in the fields of digital libraries, machine learning, archives, information retrieval, document analysis, natural language processing, computational linguistics, and deep learning. Together, the scholars will explore the application of artificial intelligence and machine learning to help ensure public and scholarly access to the large-scale collection of government records at the National Archives.

"The University Libraries at Virginia Tech has spent years developing new ways for technology to support scholarly communication," said Ingram. "As digital technology advances, this has become even more urgent. And collaborating with the National Archives will provide citizens new methods of search and discovery within the large collection of governmental documents housed in the archives."

Representing the National Archives on the leadership project team will be Pamela Wright, who, as chief innovation officer, is responsible for formulating and implementing the agency's strategic direction for providing online public access to its holdings.

"The National Archives is eager to collaborate with Virginia Tech and scholars across the country to explore ways that emerging technologies could improve digital access to our records," said Wright.

Johnson believes the timing is right for testing the promise of those technologies in ensuring access to the nation's holdings.

"We need a more sophisticated ability to search those records, as humans literally cannot look at billions of records," said Johnson, who is leading another Center for Humanities project recently funded by the Mellon Foundation. "We envision this process will allow us to understand at a technical level and more broadly how artificial intelligence can help solve this problem."

A key outcome of the planning workshop will be the design of a subsequent pilot project aimed at enhancing access to National Archive collections, including the creation of new tools, techniques, and practices.

"Understanding the business of our government is foundational to democracy," Johnson said. "Our ultimate aim is to ensure that scholars and members of the public alike can use these records. We want our university to have an impact beyond the boundaries of our campus, and this workshop is one important way we can accomplish that."

Understanding
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and members of the public
alike can use these records.

Sylvester Johnson

DATA



Tyler Walters

UNIVERSITY LIBRARIES at Virginia Tech Dean Tyler Walters was elected to the Association of Research Libraries (ARL) 2020-21 Board of Directors during its Fall 2020 Association Meeting.

While on the eight-member Board of Directors, Walters joins research library deans from the University of Delaware, University of Louisville, Temple University, University of Colorado Boulder, The University of British Columbia, Northwestern University, and UCLA in guiding, advising, and leading the organization with ARL's executive director and staff.

"While it's a recognition of one's record of leadership and honor to serve," said Walters, "it's primarily a working appointment where one applies both tactical and strategic actions for the betterment of the member research libraries and the association itself."

Founded in 1932, ARL is a nonprofit organization of 125 research libraries in Canada and the U.S. whose mission is to advance research, learning, and scholarly communication. ARL is a leadership organization that has concentrated on change issues related to organizational transformation, public policy, and inclusion, diversity, and equity. Virginia Tech has been a member of ARL since 1976.

elected to Association of Research Libraries Board of Directors

Walters brings his experiences and leadership surrounding data and information policy to ARL's public policy work. Throughout his professional career, he has served on working groups, organization boards, and committees dedicated to promoting and creating open technologies, and making research, data, and other scholarly outputs available to the public.

His latest endeavor, leading the merger of international nonprofits DuraSpace and LYRASIS, continued his professional influence in the areas of open data, open source software, and open scholarship to benefit future advances in the sciences and humanities.

"Being based in Washington, D.C., an important part of ARL's portfolio is to influence public policy on matters related to data and information," said Walters. "I have worked with agencies such as the National Science Foundation and the Department of Commerce National Technical Information Service as well as the Association of American Universities and the Association of Public and Land-grant Universities. These experiences will help ARL contribute to these policy discussions and their outcomes."

systainable SCHOLARSHIP VIRTUAL FORUM















ON OCT. 2, Virginia Tech Dean of University Libraries Tyler Walters and deans from research libraries across Virginia discussed issues surrounding bundled journal packages during the Sustainable Scholarship Virtual Forum.

More than 300 academic faculty, librarians, and higher education administrators tuned in to the panel presentation to hear the latest about upcoming negotiations with Elsevier, the largest STEM scholarly publisher. The libraries are negotiating with Elsevier as a consortium to ensure that our universities and college communities continue to have access to the resources they need to research, teach, and learn while we continue to be good stewards of state funds.

The forum recording and transcript are available for download from VTechWorks, Virginia Tech's scholarly repository. For the latest information about negotiations with Elsevier, visit lib.vt.edu/oa-big-deal.



The panelists included:

Carrie Cooper, dean of university libraries, William & Mary

Stuart Frazer, interim university librarian, Old Dominion University

Teresa L. Knott, interim dean of libraries and university librarian, Virginia Commonwealth University

Bethany Nowviskie, dean of libraries, James Madison University

John Unsworth, dean of libraries and university librarian, University of Virginia

Tyler Walters, dean of university libraries, Virginia Tech

John Zenelis, dean of libraries and university librarian, George Mason University

Moderator:

Brandon Butler, director of information policy, University of Virginia



THE HOKIES@HOME PROJECT collects and preserves Hokies' experiences during COVID19.

The University Libraries' Special Collections and University Archives is collecting and preserving the extraordinary experiences of members of the Hokie Nation during the COVID-19 global pandemic.

Leaders of the Hokies@Home: Documenting COVID-19 at Virginia Tech project are collecting oral histories, audio recordings, written stories, diary and journal entries, photographs, videos, art, and other documentation for inclusion in its publicly available digital collections.

"We're particularly interested in the documentation of experiences as they relate to Virginia Tech and how individual and community-university experiences were affected by the pandemic," said Anthony Wright de Hernandez, University Libraries' community collections archivist. "If you are a member of the Virginia Tech community and you have a story to tell, this project is about you."

Digital materials can be submitted through a donation form. The group wants to hear all Virginia Tech voices and will be providing submission options in multiple languages. Currently, the project's informational page and donation form are available in both English and Spanish.

Archivists want to hear from university faculty, staff, and wage employees; prospective, undergraduate, graduate, and doctoral students; alumni; parents and family of Virginia Tech students; university contractors; and members of local communities connected to Virginia Tech.

"We also want to hear from all Virginia Tech locations including Blacksburg, Richmond, the Greater D.C. area,



Learning about history from primary sources of personal experiences truly brings extraordinary times alive for future generations.

Aaron Purcell

Hampton Roads, Roanoke, Abingdon, Reynolds Homestead, Agricultural Research Extension Centers, the Steger Center for International Scholarship, study abroad sites, and any other locations with a connection to the university," said Aaron Purcell, director of University Libraries' Special Collections and University Archives. "It's important to collect all of these experiences and make them digitally available and searchable for future generations."

As part of the Hokies@Home collection, the project will include all official digital content from

Virginia Tech related to COVID-19, including news articles, public announcements, websites, social media, emails, and recordings of public town hall events. But project leaders stress that a key part of this collection will be crowdsourced personal experiences from Hokies, near and far.

"Learning about history from primary sources of personal experiences truly brings extraordinary times alive for future generations. It will be personally relatable for future Hokies," said Purcell. "Preserving the university's official documents and communications along with Hokies' personal experiences will give a clear picture of the effects this international pandemic had on all our lives and our university. It's very important for future generations to understand and learn from it."

A diverse collection



Randall Stith shared how he cheered up his "Hokie friends and colleagues," by "doing lighthearted parodies of Broadway songs."



Other submissions include news articles such as this Collegiate Times article from March 31, 2020.

Share your own story!

guides.lib.vt.edu/HokiesatHome



Photo in phone shows Doris Tinsley's graduation video in which she and her friend virtually celebrated their graduation together during the COVID-19 pandemic.

celebrates volunteers and more than 200,000 World War II document transcriptions BY ELISE MONSOUR PUCKETT

VOLUNTEERS EXCHANGED SMILES and virtual high fives in lieu of handshakes and hugs at the much anticipated online VE Day celebration in May.

Edward Gitre, an assistant professor in the Department of History in the Virginia Tech College of Liberal Arts and Human Sciences, teamed up with University Libraries experts Sarah Mease, Corinne Guimont, and Joe Forte to host a VE Day virtual celebration in collaboration with Zooniverse. This event celebrated the completion of a crowdsourcing drive to transcribe handwritten survey responses from World War II soldiers as part of The American Soldier project.

Victory in Europe Day, also known as VE Day, celebrates the Allies' formal acceptance of Nazi Germany's unconditional surrender in World War II on May 8, 1945.

The ultimate purpose of the project, funded by a National Endowment for the Humanities grant, is to become a part of a searchable site enabling researchers, students, and the public to easily find documents related to their interests.

"Our online VE Day event marks an important milestone in this multiyear, multi-institutional digital project," said Gitre. "We set an ambitious goal in our grant proposal that we'd complete the transcription drive in two years. And we did it, thanks to the dedication and volunteerism of thousands of contributors who hail from different corners of the United States and even overseas."

The online milestone celebration took place on May 8, 2020, on the 75th anniversary of VE Day. The event celebrated the completion of The American Soldier project's 65,000 transcriptions of uncensored reflections on war and military service and recognized the thousands of dedicated volunteers who made this possible. The one-of-a-kind records were transcribed in triplicate over two years, bringing the number of transcriptions to more than 190,000 pages.

Originally scheduled to be held in the Newman Library Athenaeum, this 75th anniversary commemorative event moved entirely online. In March, an unexpected surge of traffic hit Zooniverse as teleworking became the norm. The project accelerated as volunteers invested more time in transcribing to meet the project's ambitious goals. Although the transition to an online-only celebration was challenging, it ultimately provided attendees with multiple levels of interaction.

"There are challenges all the time," said Gitre. "But I do try to see them as moments for creative intervention and possibility."

The VE Day virtual celebration program consisted of interviews, student readings of transcribed documents, and short messages from project stakeholders, historians, humanities advocates, and dedicated Zooniverse transcribers and community members. Participants discussed the project, its importance, and the value of crowdsourcing for the humanities.

Forte, University Libraries Athenaeum coordinator and digital humanities specialist, spearheaded content creation for the virtual celebration.

"Preparation for VE Day included my engaging with many folks on this especially collaborative project, and being



Each man in the assembled group completed the questionnaire form anonymously. Photo courtesy of Ed Gitre from the archives of The American Soldier Project.

An Ambitions Goal

records transcribed (65,000 originals transcribed in triplicate)

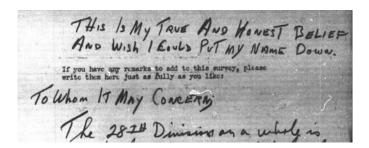
contributors from across the country

100% completion of the collection

able to ask them, 'What does The American Soldier mean to you?'," said Forte. "My favorite group was a trio of extremely prolific citizen transcribers, with whom Dr. Gitre and I had the pleasure of speaking. Each of them typed out thousands of responses from servicemen. It was very touching to hear about their motivations and the ways in which they felt touched by the candid and personal nature of what they read."

Transcribing these unexplored documents, which described the soldiers' hardships, was challenging. No two stories were the same. Some revealed the true grit of wartime, while others exposed the loyal heart of a soldier. These fascinating, almost 80-year-old first-person narratives, handwritten in cursive, brought the soldiers' accounts to the transcribers in an intimate way. The soldiers cried, pleaded, sacrificed, confessed, and wrote about their military pride and accomplishments.

"You never know what you're going to encounter in these World War II sources when you read them. Each has the unique stamp of the personality of the soldier who wrote it," said Gitre. "Our dedicated volunteers and moderators realized that as they transcribed as many as 10,000 documents each."



Years of hard work

Gitre hatched the idea for the project in the reading room of the National Archives and Records Administration in College Park, Maryland.

"I glimpsed the possibilities for these rare sources in April 2009. I knew they were unique," said Gitre. "I also knew, even back then, that the public and scholars would be interested and would benefit if they were made accessible."

Only after arriving at Virginia Tech in 2014 could Gitre turn a feeling and idea into a reality. "What has certainly helped to fuel my passion are the responses I've encountered as the project took shape, from students, first and foremost, but also from colleagues in history and computer science, and from digital humanists, funding agencies, and the public itself, which has been a special source of inspiration," said Gitre.

Several years ago, University Libraries' Virginia Tech Publishing hosted the first of several transcribe-a-thons. Newman Library provided a space for transcribers to learn how to use the platform, collaborate on transcriptions, and discuss what they found in the original documents.

Three additional University Libraries employees joined Mease, Forte, and Guimont in becoming involved in the project, including Marc Brodsky, public services archivist; Nathaniel Porter, social science data consultant and data education coordinator; and Michael Stamper, data visualization designer and consultant for the arts.

Other major Virginia Tech contributors to The American Soldier project include Kurt Luther, the initiative's technical director and an associate professor of computer science in the College of Engineering; Nai-Ching Wang, a project developer who earned his doctorate from the Department of Computer Science in 2018; Michael Hughes, social science consultant and a professor in the Department of Sociology; and Jessica Brabble, a master's student in the Department of History.

"This is a truly interdisciplinary project connecting historians, computer scientists, librarians, and archivists," said Guimont, University Libraries' digital scholarship coordinator. "It highlights the multiple ways the library can and does support digital humanities research and projects."

The American Soldier team is gearing up to move into the next phase, which is to clean and organize the data gathered from the transcriptions as well as other Army survey data. Then they will develop and launch the free, open access, searchable, user interface for scholars and the public, slated for a spring 2021 release.

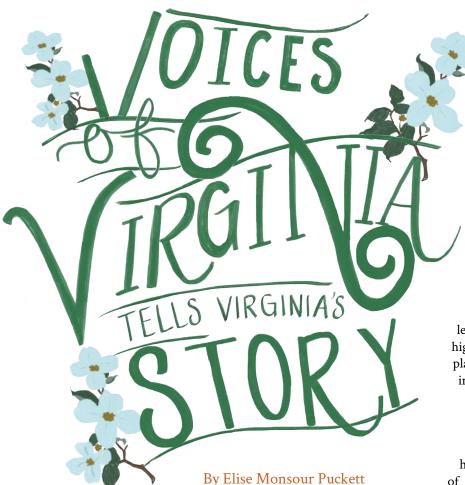
"That is going to make such a huge amount of information accessible," said Mease. "There are tens of thousands of documents that will be made searchable for research. That's a great resource for students at Virginia Tech and elsewhere."



Ed Gitre (left) and Joe Forte (right) discuss the project from their homes during the Virtual VE Day Celebration.



Check out the videos from the virtual celebration! bit.ly/libveday



THE UNIVERSITY LIBRARIES' Open Education Faculty Initiative Grant program recently released Voices of Virginia: An Auditory Primary Source Reader in VTechWorks, Virginia Tech's online repository.

Voices of Virginia is a freely available collection of firstperson stories of Virginians who witnessed and changed U.S. history, as told by Virginians and recorded over the past 70 years. This pilot project was designed by Jessica Taylor, assistant professor in the College of Liberal Arts and Human Sciences Department of History with the help of Emily Stewart, history graduate student. The University Libraries' Open Education Initiative Faculty grant funded the project.

Virginians from all different backgrounds have brought attention to and chipped away at racial oppression and economic and gender inequality. Fighting to create a more inclusive commonwealth, Virginians found ways around segregationist policies and demanded better access to public institutions. Inside these stories, readers hear firstperson accounts of strategies employed in an effort to make a better Virginia.

Taylor and Stewart went to work compiling voices for the collection. "Archivists and historians from over 20

institutions took the time to find and donate selections of oral histories," said Taylor. "It's designed to be a supplement to the U.S. history textbook, and we also aligned it to the Virginia Standards of Learning with lesson plans so that public middle school and high school teachers will find it useful." The lesson plans were designed by Virginia Tech students in the Social Studies Education class taught by Professor David Hicks.

Voices of Virginia pulls together oral histories from across decades and archives in an all-audio source companion for Virginia's high school and college students. One-third of the collection features stories about race in Virginia history. The complete album contains oral histories from eyewitnesses to American history from the Civil War to the present. By telling the larger national story with narratives from across the commonwealth, Voices of Virginia grounds students in how history guides and is guided by everyday people and their experiences.

"We tried to bring together a few different democratizing forces in academia: open access work, which makes knowledge readily available to more people; oral history, which allows people of all walks of life to tell their own stories; and place-

"Now you see, the company paid in scrip. You didn't spend that scrip money nowhere but in the company store." ... "John L. Lewis made them do away with the scrip and start paying the miners with silver dollars."

Lucille Whitaker remembers the struggle for miners to unionize in Dante, Virginia. From "They would kill another one."



Teacher Celestine Diggs Porter talks about the challenges of integration. From "Do all the children bring ice picks to school?"

"But they made one serious mistake, which I will have to hold them responsible for. They made students do the integration. They should have had teachers first."

based education, which engages students in the place where they live so that they can be good citizens," said Taylor.

The collection includes more than 60 first-person stories of Virginians of color including Black, Native American, and others with distinct racial identities.

"These stories about segregation and violence are very old and often repeated. They should not surprise anyone but they do," said Taylor. "In oral history like in written history, people justify, diminish, and lie all the time. We've also chosen to include the stories from or about people who looked the other way and declined to risk their status or privilege for justice, because a lot of us need to learn how to respond to those voices."

Several of the interviews had not been listened to in a long time, so Taylor and Stewart had some cleaning up to do. "It was fun. Some came in weird formats, like microcassettes. In others, you could hear the cluck of someone's chickens on their porch or a 1960s vintage car horn in the background," said Taylor.

These stories are very personal and connect place, history, and peoples' experiences in Virginia. "Listening to them is a bit like overhearing front porch stories of older relatives as they reflect on their life experiences but contextualized in history and in locations close to home for Virginians," said Anita Walz, administrator of the Open Education Faculty Initiative Grant. "The recordings are all as different as the people telling their stories - personalities, accents, and dispositions. There is singing and piano playing, social conflict, injustice, fear, family stories and everyday life realities, and laughter."

The people who were interviewed were present for iconic moments, not even realizing that they were about to become witnesses to history. Taylor's advice for those who are watching today's events unfold is, "Show up, so that you can tell an oral historian about it later. Witnessing and retelling keeps these moments with us."

For the open access component of the project, Taylor sought the help of Anita Walz, assistant director of open education and scholarly communications librarian for the University Libraries at Virginia Tech.

Walz assists researchers, teachers, and students in navigating copyright and open licensing in service of teaching and learning. "I have worked with many people developing openly licensed resources and publishing in novel formats, so partnering on this innovative project was a really good fit," said Walz.

"My goals are always to amplify others' interesting work and to make information freely available and accessible to broader audiences through the Open Education Initiative," said Walz. "The public good argument for such open educational resources (OER) is a strong motivator."

All parts of the collection are now free, downloadable, accessible by smartphone, and accompanied by a transcript. "Many students are already stretched thin by financial obligations, especially right now, and making free online resources available on multiple platforms can make a dent," said Taylor.

"It is a really special collection," said Walz. "If you like to listen to other peoples' stories from other historical periods, this collection is for you. If you want to learn about Virginia history, listen, read the background history, and discuss the questions. For high school teachers, this is a wonderful collection of stories that relate to Virginia realities and are aligned with Virginia Standards. We hope that this collection contributes to enlivening Virginia history for students, teachers, and the general public."





Above photo by Thomas J O'Halloran, "African American school children entering the Mary E. Branch School at S. Main Street and Griffin Boulevard, Farmville, Prince Edward County, Virginia. Farmville Virginia, 1963. Sept. 16."



Photo by Trevor Finney

BRAVING THE DEPTHS of the complex internet and social media worlds can be challenging. Some might even say daunting. Users must dodge threats of online harassment, breaches in privacy and security, disinformation or misinformation, and an overwhelming volume of digital clutter and notifications.

Enter librarian Julia Feerrar to the rescue. Feerrar serves as the University Libraries' head of digital literacy initiatives and is also the liaison librarian for the College of Natural Resources and Environment.

Digital literacy is a set of knowledge, skills, and attitudes that people use to engage with their digital lives. "I think about engaging with digital life as being able to make informed decisions, including about how we learn, create, and interact with each other online," said Feerrar.

Feerrar teaches workshops and provides consultations on using information research strategies, developing a professional online presence, and evaluating information.

She leads a small team that focuses on digital literacy initiatives and creating ways to teach people about digital literacy. The team plans events, teaches classes and workshops, and creates online resources.

One of the major challenges around digital literacy is defining it. "Digital literacy can mean different things to different people," said Feerrar. "People tend to equate it with the ability to use technology, such as sending an email, exporting a file, or typing into a search box. While those are certainly key digital skills, digital literacy is about much more than that. Digital literacy includes critically consuming information, media creation, social interaction, and online identity.

"How does my tone change when I email different audiences? What are my rights as a creator of digital media? Can I critically evaluate the information I find in a search engine? Those are great digital literacy questions," said Feerrar.

Often there is not one right answer. "For example, I might feel very comfortable sharing a lot of personal information about myself online. Meanwhile, my colleague might not and could have a whole range of reasons for that decision," said Feerrar. "When I teach, I try to emphasize different options and help students develop the tools they need to make decisions about what works for them. I know this can be frustrating sometimes, though, because we often crave having a clear, right answer."

Because these different associations shape how people understand digital literacy, one of Feerrar's first projects was to lead the creation of a digital literacy framework for Virginia Tech. "Our framework takes a pretty holistic view of digital

I think that digital literacy education can go a long way in giving people strategies to navigate the

complexities

of the digital

Julia Feerrar

world.

literacy, acknowledging its many pieces and layers," said Feerrar. "This framework has been a really useful tool for starting conversations about digital literacy as well as for guiding the development of some of our programs in the Library." Feerrar is a leader in digital literacy, and her digital literacy framework has received national attention from other universities interested in learning more about its development or about the University Libraries' digital literacy initiatives as a whole.

During her time at the University Libraries, Feerrar has also led the creation of a digital literacy toolkit, digital wellness curriculum, and a digital literacy student fellows program. She was also recently invited to be an affiliated faculty member with the Media Education Lab for the 2020-21 academic year. The Media Education Lab at the University of Rhode Island improves digital and media literacy education through research, community engagement, and professional development. As an affiliated faculty member, Feerrar will have opportunities to lead webinars, contribute to collaborative projects, and join a learning community of other educators.

The COVID-19 pandemic has impacted her work. At the beginning of the outbreak, Feerrar volunteered to help faculty move their courses online and attended the Technology-enhanced Learning and Online Strategies (TLOS) Continuity Partner training. Since then, her classes, workshops, and consults with faculty and students have moved online, and her team had to postpone plans for a fun digital literacy spring carnival which they plan to reschedule in the future.

In a lot of ways, the COVID-19 pandemic highlights the importance of digital literacy. "We're constantly evaluating the information we have about this virus and making choices based on that information," said Feerrar. "And as many of us learn and work online, we're trying to figure out how to make that work for us."

Feerrar wants people to know that "Digital literacy affects us all. There are faculty and staff in the library here to work with you and there are lots of ways to get started, either on your own or by engaging with us.

"I think that digital literacy education can go a long way in giving people strategies to navigate the complexities of the digital world and to benefit from the best it has to offer," said Feerrar. "At its best, the internet makes learning, creating, and connecting possible in so many exciting ways. I want people to have access to those possibilities and live their best digital lives."

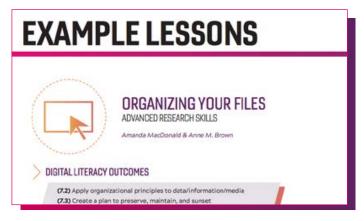




THE FRAMEWORK, first released in 2018, is designed to help guide digital literacy efforts and the recently released TOOLKIT expands on that work by providing instructors with a practical use quide.

The framework and toolkit have been used at other universities including the University of California, Berkeley; Belmont University; and Johns Hopkins University and was featured in University Business Magazine.

It was also included in the textbook "Library Screen Scene: Film and Media Literacy Education in Librarianship," by Renee Hobbs.



You can find both the framework and toolkit at: lib.vt.edu/research-teaching/digital-literacy

Meet the rest of the digital literacy team!



Kirsten Dean is liaison to First-Year Experiences and teaches about fact-checking



Katlyn Griffin is liaison to English and teaches about research strategies



Kelsey Hammer creates learning obiects like the new digital literacy toolkit



Dezire Morris helps coordinate events and assists with research



Myriam Alazar is a student fellow and junior business information technology



Julia O'Reilly is a student fellow and sophomore in public relations

Digital literacy team photos provided by the individuals

FACULTY & STAFF

We are proud of all of our accomplished faculty and staff at the University Libraries. Here, we highlight some of the latest news about our library employees.



Robert Sebek

receives 2020 President's

Award for Excellence

By Laurie Stacy

THE PRESIDENT'S AWARD for Excellence, established in 1990 by President James D. McComas, is an annual recognition of full-time staff and administrative and professional faculty for their outstanding contributions and consistently excellent performance.

University Libraries' Robert Sebek was one of twentyseven employees with a collective 450 years of service who were nominated for the award in 2020. These employees were recognized during a virtual ceremony June 4, where President Tim Sands announced this year's winners. Each of the five recipients receives a letter of commendation from the president, a certificate, and a \$2,000 pre-tax award.

"Our nominees and winners exemplify the dedication to service and spirit of community that supports Virginia Tech's mission across the commonwealth and beyond," Sands said. "The value of their work is especially evident now, as they maintain our essential operations and ensure a healthy and safe campus environment. We greatly appreciate their leadership and the example they set for all of us."

Robert Sebek, collections technology specialist in University Libraries, manages the sophisticated technical aspects of the library with ease. He is patient and willing to help anyone who needs it. Sebek is a past Staff Senate president and a strong advocate for members of the university community and has worked hard to make a difference at Virginia Tech.

Tamara Kennelly, archivist in University Libraries, wrote in a letter of nomination, "Robert's commitment to the faculty, staff, students, and community is to be commended. He was instrumental in advocating for Virginia Tech to change the minimum wage starting pay for full-time staff. He also has advocated for affordable housing in Blacksburg and affordable childcare."

Sebek has been with the University Libraries since 1981 and served as Staff Senate president from 2017 to 2019.

ANDI OGIER

appointed University Libraries' assistant dean and director of data services

By Ann Brown



ANDI OGIER has recently been appointed University Libraries' assistant dean and director of data services. She now reports to the dean of University Libraries and guides strategic actions to improve the library's embedded role in dataintensive research and affiliated research policies. She is also re-setting the strategy for library-wide metadata strategies.

"In service to advancing university-based research, our data-related programs have emerged as one of the top priorities for the library," said University Libraries Dean Tyler Walters. "Elevating these concerns to assistant deanlevel leadership communicates their strategic importance within the library, across the university, and to other universities nationally and internationally."

Ogier is planning to spend the next few years focused on assessing the impact the library's data services area has on Virginia Tech's research enterprise.

"We're planning to ramp up and assess our data sharing infrastructure," said Ogier. "In a world where viruses like the coronavirus are running rampant throughout populations, making sure that research done on diseases like COVID-19 is well-curated and easily shared is vital for our efforts to combat the virus. The research and policy work currently being done in the public health sphere is absolutely vital to this effort, but navigating the restrictions and rules on sharing the data that underlie these research and policies is extremely time intensive."

In her new role, Ogier's goal is to develop expertise and services within the library that can help researchers quickly and easily find the information they need so that their research and data can be used to make a difference.

"We will help researchers prep their data so that it's useful to other researchers, clinicians, and policy makers, while ensuring that any personal or private information is kept secure," said Ogier. "We want researchers to understand that

sharing their data isn't all-or-nothing; there are layers to these decisions that we can help them navigate."

Ogier has been with the University Libraries at Virginia Tech since 2008 when she was hired as a serials specialist. She worked on serials and electronic resource management while earning her master of library and information science. The summer before she finished her graduate degree, she took a short leave from the library and worked as an intern in the Scientific Data Consulting Group at the University of Virginia.

After she earned her degree, she began a position as the data science and informatics librarian in research and informatics at Virginia Tech, which later became the director of data services.

"There was quite a bit of demand and I was quickly overwhelmed as the data science and informatics librarian," said Ogier. "So the library created a data services team with three people in the summer of 2014. It has grown to nearly 20 data consultants today, not including our student employees. Currently, the services our team offers covers everything I was trying to put into place as a data science and informatics librarian, and I've tried to stay true to that original vision."

She sees her position and team as data collaborators for researchers across campus, so Virginia Tech research has the greatest societal impact as possible.

"I think there are many connections that we, the University Libraries, can make across campus that will make research at Virginia Tech more efficient for researchers," said Ogier. "Researchers, whether faculty or students, should be spending their time innovating and solving the world's big problems - our job is to provide data services that make their jobs easier."



PATRICK TOMLIN has recently been appointed University Libraries' assistant dean and director of learning environments. Reporting to the Dean of University Libraries, his areas of responsibility include building management, capital outlay planning and renovations, exhibits, special events, studios and innovative technologies, user services, the art and architecture library, the northern Virginia resource center, and the future Innovation Campus library.

"Patrick has been transformational in leading the library's learning environments area, which as expanded via the founding of the creation studios, taking on oversight of two branch libraries, and being engaged in the Innovation Campus library planning," said Walters. "It is important strategically that we continue positioning the library as a leader of creativity and innovation support within our university."

Tomlin began working in the University Libraries at Virginia Tech in 2008 as head of the art and architecture library in the College of Architecture and Urban Planning in Cowgill Hall. In 2015, he became director of learning environments. His interest in the evolution of libraries as learning environments emerged gradually during his time at Virginia Tech.

"How might libraries facilitate, and even shape, new forms of learning, individually and across disciplines? In what ways do we contribute to student wellbeing and success? These are questions that motivate me and that are embodied in the sense of place generated by libraries," said Tomlin. "Of course, many of us are working remotely these days, but for me, that distance has thrown into high relief just how important libraries are as hubs of learning, collaboration, and experimentation in ways that cannot be meaningfully replicated in an online environment.

"We are increasingly seeing that the need for equitable access to innovative, technology-enriched, and user-centered library spaces has never been more important," said Tomlin. "Being able to create and support such spaces is exciting."

Tomlin said he will be working toward growing the library as a participatory and smart space, one that can respond to or be activated by users based on their immediate needs. To do this, he will be leading conversations with community and campus partners about those needs.

"Access to information, to emerging technologies, and to research expertise must be adaptive and inclusive," said Tomlin. "We will continue to see the pace of development accelerate around technologies associated with data science and visualization, immersive environments, 3D printing, intelligent infrastructure and artificial intelligence. Our studios and other place-based services will continue to evolve to keep pace with these developments."

The University Libraries is the perfect place for this to happen, due to its central location in the university's Creativity and Innovation District.

"Sitting at the intersection of academic disciplines, the library is uniquely positioned to advance the transdisciplinary initiatives of the university's Creativity and Innovation District and Destination Area," said Tomlin. "It's been exciting to see the University Libraries increasingly recognized as a steward and curator of content and as an active contributor to teaching and learning across campus, and to scholarship in all its diverse forms. I am fortunate to have an incredible team who brings their passion and creativity to bear on our spaces and services everyday, from creating exhibits to nurturing student experiential learning opportunities in our studios."



Tamara Kennelly honored with emerita status

By Mark Owczarski

Tamara Kennelly, associate professor in the Special Collections and University Archives Department of the University Libraries at Virginia Tech, has been conferred the title of associate professor emerita by the Virginia Tech Board of Visitors.

A member of the Virginia Tech community since 1993, Kennelly made significant contributions by building Special Collections and University Archives to better document the history of the university. Kennelly expanded collection efforts to better document the undocumented and underdocumented communities, individuals, and events that are part of university history. She led a team of volunteers in an effort to collect, organize, and provide access to the April 16, 2007 Condolence Archives Collection, a signature collection of unique material.

Kennelly also collected and created extensive oral collections from communities of color, including the Brush Mountain Oral History Project, and led the Kentland Slave Cemetery Marker Project to illuminate the relationship between the site's complex history and residents in the nearby Wake Forest community. She wrote groundbreaking pieces on historical topics, including the history of the desegregation experience of Irving Linwood Peddrew III, the first African American undergraduate student at Virginia Tech.

Her work has been recognized with multiple awards including the 2015 University Libraries Diversity Award, a documenting diversity grant from the Office of Multicultural Affairs from 2000 to 2002, and the Award for Outstanding Service from the Women's Center in 2000.

Kennelly received her bachelor's degree and master's degree from the University Illinois, a Master of Fine Arts degree from the University of Iowa, and a Master of Library and Information Science degree from the University of Kentucky.



Bruce Obenhaus honored with emeritus status

By Mark Owczarski

Bruce Obenhaus, assistant professor and former head of reference and circulation at University Libraries at Virginia Tech, has been conferred the title assistant professor emeritus by the Virginia Tech Board of Visitors.

A member of the Virginia Tech community since 1985, Obenhaus worked in many areas of the library, including reference, circulation, federal and Virginia government document depositories, maps, microforms, interlibrary loan, and special collections.

An advocate for open access to government data, Obenhaus chaired or co-chaired major committees in national academic associations, including co-chairing the national conference Maps and Geographic Information Collections in Transition at the Library of Congress. He authored or co-authored several journal articles, presentations, and series with a focus of connecting scholars to knowledge.

Obenhaus supported research in the area of geographic information systems, both through guiding researchers to available information, and through co-chairing the annual Virginia Tech GIS Symposium for 11 years. He also frequently shared his extensive knowledge in cartography.

During his career at Virginia Tech, Obenhaus coordinated several major university events, including the annual Virginia Tech Authors' Day and the Visible Scholarship collaboration with the College of Liberal Arts and Human Sciences. He received the University Libraries Faculty Award for Excellence in 2005 and the Virginia Tech Geospatial Leadership Award in 2014.

Obenhaus received his bachelor's degree from Rutgers University and Master of Science in library science from the University of Tennessee.

The emerita/emeritus title may be conferred on retired professors, associate professors, and administrative officers who are specially recommended to the board by Virginia Tech President Tim Sands in recognition of exemplary service to the university. Nominated individuals who are approved by the board receive a copy of the resolution and a certificate of appreciation.





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