

SPECTRUM

FLORIDA STATE UNIVERSITY COLLEGE OF ARTS & SCIENCES

Summer 2021





From the Dean

not stop FSU. From administrators to faculty, from staff members to students, the entire community pulled together.

On-site COVID testing efforts dominated the summer and fall, giving way to the stand-up vaccine sites in the spring. These have been exceptionally successful in helping curb the presence of COVID-19 on campus, and are the result of spectacular planning and operational excellence, along with heart-warming volunteerism by health care specialists, retired faculty and staff, and student volunteers. As of this writing, nearly 20,000 vaccines have been administered to our faculty, staff, students, and community members ages 16 and older as part of FSU's involvement in the State of Florida's strategic vaccine efforts.

Welcome to the Summer 2021 edition of Spectrum magazine, the alumni publication of Florida State's College of Arts and Sciences. With the close of this academic year and the approach of what we hope will be a return to a more familiar environment this fall, this is a time for reflection — on the unprecedented challenges, the life-changing experiences, and the hard-won triumphs of the pandemic.

As we have continued to adhere to CDC safety guidelines, this spring saw the reawakening of some of FSU's most cherished traditions. Students showed great resilience while navigating a condensed semester of face-to-face, hybrid, and online courses, and were celebrated in late April, at the university's first in-person commencement since 2019. Eleven ceremonies, more than double the usual number, spanned two weekends, and nearly 2,000 Arts and Sciences graduate and undergraduate students marked completion of their programs. It was a pleasure to participate, and I am proud to welcome our graduates as alumni.

The delivery of a comprehensive university education takes commitment and stamina from all corners of campus, and while the pandemic got in the way during 2020-21, it did

We are in the midst of a season of change at FSU, with faculty and staff ramping up in readiness for a normal fall semester. FSU is also bidding farewell to its 15th president, two-time alumnus John Thrasher, whose gracious approach has been marked by a keen wit, fierce advocacy, and stellar leadership. We will miss him tremendously, but remain hopeful that, in retirement, he and his wife, Jean, will not drift far from the FSU family. We look forward, with anticipation, to the arrival of our 16th president, Richard McCullough, former Harvard vice provost for research, later this summer.

This year, as always, I am humbled by the tenacity, creativity, and compassion of our Arts and Sciences family, and I hope you will enjoy and draw inspiration from the stories assembled here. Stay in touch and remember you always have a home at Florida State.

A handwritten signature in black ink that reads "Sam Huckaba". The signature is fluid and cursive.

Sam Huckaba
Dean, College of Arts & Sciences

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Real estate, real gifts

Are you looking for a way to give back to Florida State University without touching your bank account? A generous gift of real estate helps FSU fund outstanding research and student success for years to come.

Making a gift of real estate also helps you. Perhaps the tax advantages of giving real estate to FSU fit into your long-term philanthropic plans, but you want to continue living in your personal residence for your lifetime. By establishing a retained life estate gift, you can transfer your personal residence or farm to the FSU Foundation but maintain the right to occupy — or rent out — the property for the rest of your life.

You continue to pay real estate taxes, maintenance fees and insurance on the

residence. And while the FSU Foundation would not take possession of the residence until after your lifetime, since your gift cannot be revoked, you qualify for a federal income tax charitable deduction for a portion of your home's value.

Through the gift agreement you create, which is reviewed by the appropriate dean or vice president, the eventual sale of your property will fund the academic program or programs you wish to support. You may also consider creating a named endowment or providing a department or program with spendable operating funds.

For more information, or to make a gift, contact Nancy Smilowitz, the college's assistant dean for development, at 850.294.1034 or nsmilowitz@fsu.edu.

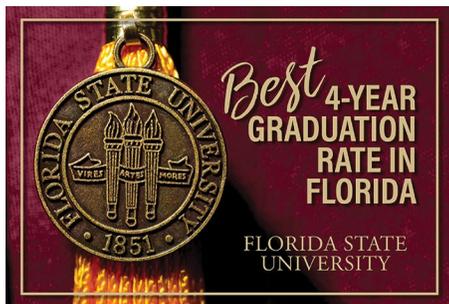


On the cover

As seen from the Longmire Building's south entrance, the historic and peaceful Mina Jo Powell Alumni Green beckons students, faculty, and alumni alike to emerge from the isolation of the pandemic and rejoin the thriving Florida State community. In 1950, this lawn hosted the last of nearly 50 years of commencement ceremonies. Today, it remains a gathering place and serene setting for special occasions. Photo by McKenzie Harris. Photo editing by Tom Morgan.

Nole Notes

The top news from
around the college



FSU scores top four-year graduation rate in state of Florida

Florida State now has the best four-year graduation rate of any public university in Florida, according to data that will be part of the State University System's 2021 Accountability Plan.

FSU's four-year graduation rate is 74 percent, placing it first in the State University System of Florida and in the top 10 nationally among public universities. More significantly, it's the highest four-year graduation rate in the State University System's history. In addition, FSU posted a six-year graduation rate of 84 percent — also a university record.

Graduation rates have steadily risen in recent years as a result of careful and strategic investments in areas such as academic advising, tutoring and academic coaching. Most notably, in its strategic approach to student success, Florida State has virtually erased graduation rate gaps between all categories of underrepresented and traditional student populations.

Arts and Sciences announces new interdisciplinary data science program

The FSU Interdisciplinary Data Science Master's Degree Program, or IDS, leverages FSU's strengths in computer science, mathematics, scientific computing, and statistics to prepare students for contemporary careers in data science, one of the fastest growing fields in the United States. IDS will welcome its first students in Fall 2021.

"The FSU IDS program is innovative and timely, and it will help address the nation's demand for data science practitioners," said Dean Sam Huckaba. "Those involved with building the curriculum have done an outstanding job identifying essential material that will help provide graduates with analytical tools and necessary skills."

The new program will be delivered exclusively at FSU's Tallahassee campus. Students will complete a series of core courses providing a solid starting point in mathematics, machine learning, statistics, and data ethics, along with electives that support a specific major area of study — computer science, mathematics, scientific computing or statistics. Nineteen faculty members from across the program's major disciplines will guide students through coursework and major selections that meet their individual needs and goals.

"The data science market is projected to be worth \$103 billion by 2023, and the U.S. Bureau of Labor Statistics projects jobs for computer and information research scientists, and data scientists will experience 14 percent growth through 2028," said Gordon Erlebacher, interim IDS program director and professor of scientific computing. "Learning how to responsibly collect, analyze, and apply data to a variety of fields will be key to success for FSU students now and into the future."

Learn more at datascience.fsu.edu.



Jorge Piekarewicz



Gary Taylor

Nuclear astrophysicist, Shakespeare scholar named Lawton Professors

Two acclaimed FSU faculty members, one a nuclear astrophysicist and the other a scholar of Shakespeare, have been given the highest honor that the faculty bestow upon their own — they have each been named a Robert O. Lawton Distinguished Professor.

Professor of Physics Jorge Piekarewicz and Professor of English Gary Taylor have been selected to receive the honor for 2021-22. Both professors are from the College of Arts and Sciences, representing the breadth and strength of FSU's largest and most academically diverse college. Piekarewicz and Taylor will be honored at events throughout the year and will give commencement addresses at a future graduation ceremony.

"My dream is to do research and pass that to the students," Piekarewicz said. "During my time here I've enjoyed my research tremendously and have been embracing preparing the next generation for the future. They're going to be the next scientists."

Piekarewicz came to FSU in 1990 as an assistant scientist and rose through the ranks of the Physics department, becoming a full professor in 2005. He has authored more than 155 publications and been cited more than 6,500 times. He has served as a member of the Department of Energy/National Science Foundation Nuclear Science Advisory and is a fellow of the American Physical Society.

Taylor arrived at FSU in 2005 and has led a major transformation of the English department. He developed the History of Text Technologies, an internationally recognized interdisciplinary doctoral program that links technological innovation to verbal and visual creativity, from tattoos and cave paintings to smartphones. As chair of the English department, Taylor oversees an academic unit in which nearly every undergraduate takes at least one course.

Both Piekarewicz and Taylor said they were honored to be counted among their colleagues who had previously received the Lawton designation and marveled at how their selection tells the story of a university being a place to study all types of questions.

"I think it's fantastic because it encapsulates what working at a university means, that a physics and an English professor can get together and talk about our research under one roof," Piekarewicz said. "That's exceptional to me."

For more information about the Robert O. Lawton Distinguished Professor Award and a list of past recipients, visit provost.fsu.edu.

FSU researchers find exposure to microplastics may alter cellular function

Pollution from miniscule pieces of plastic, or microplastics, has been a growing concern for scientists, public health advocates and environmentalists as these nondegradable items have increasingly made their way into waterways and even the air we breathe.

Now, a team of FSU researchers is looking at what inhalation and ingestion of these particles can do to humans on the cellular level. Researchers found that exposure to microplastics for only a few days caused human lung cells to slow down their metabolism and growth, change shapes, and decluster so that gaps exist in what is typically a solid sheet of cells. The findings raise questions about the long-term effects of microplastics on human health, particularly for those who already have respiratory conditions.



Qing-Xiang "Amy" Sang (front, center) with members of the FSU research team examining the impact of microplastics on cellular health. Photo by FSU Photography Services.

Their research is published in *Chemical Research in Toxicology*.

"Plastics are very useful materials for daily life — they're indispensable," said FSU professor of chemistry and biochemistry Qing-Xiang "Amy" Sang. "But as humans we want to live healthy lives, so we need to think of ways to minimize the potential adverse effects of plastics."

Sang and her team — research specialist Joan Hare, doctoral students Kerestin Goodman and Timothy Hua, and former FSU graduate student Zahraa Khamis — focused their efforts on polystyrene, a type of plastic commonly used in disposable cutlery, takeout boxes and medical items such as test tubes or petri dishes.

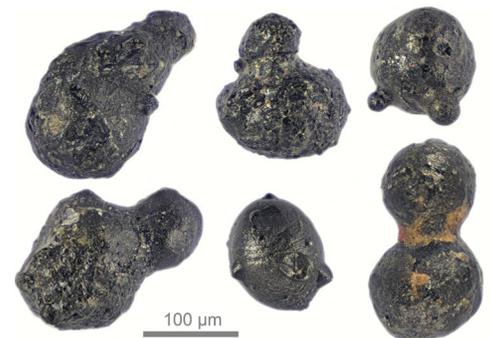
The research team said this study is a first step in understanding the effects of microplastics on human health, but that the findings really underscore previously raised concerns about the effects of microplastics, particularly for individuals with respiratory disorders like lung cancer, asthma, emphysema, pneumonia, fibrosis or chronic obstructive pulmonary disease.

International study discovers ancient meteoritic impact over Antarctica 430,000 years ago

The geological record has long shown evidence of meteorite collisions with Earth, but scientists

had previously only known of two airbursts — large meteorite or comet collisions with the atmosphere that leave no crater behind — because they occurred in the modern era with witnesses. Airbursts resemble large thermonuclear explosions, and scientists note such an event occurring today over populated regions would result in enormous destruction of life and property.

Munir Humayun, a professor in FSU's Department of Earth, Ocean and Atmospheric Science and a researcher at the FSU-headquartered National High Magnetic Field Laboratory, and postdoctoral researcher Shuying Yang were part of an international research team that has found new evidence of a low-altitude meteoritic touchdown event



Particles from an exploding meteor that reached the Antarctic ice sheet 430,000 years ago. (Courtesy Scott Peterson / micrometeorites.com)

Nole Notes

reaching the Antarctic ice sheet 430,000 years ago. The team's findings, published in *Science Advances*, indicate the Antarctic impact was much more hazardous than the Tunguska and Chelyabinsk airburst events that occurred over Russia in 1908 and 2013.

Humayun and Yang analyzed the chemical composition of extra-terrestrial particles, known as condensation spherules, recovered on the summit of Walnumfjellet, within the Sør Rondane Mountains, Queen Maud Land, East Antarctica.

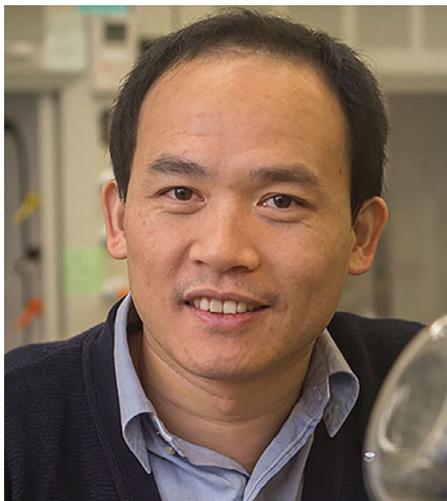
"This study found a set of unique melted meteoritic spherules in Antarctica that have been chemically traced to show a huge airburst that released the equivalent energy of about 100 megatons of TNT age-dated to about 430,000 years ago," Humayun said. "The lateral extent of the fireball would have been about 10 kilometers (6 miles) wide, about half the size of Tallahassee, although destruction would have affected a much larger area."

Researchers from Vrije Universiteit Brussel, the Planetary Science Institute, the Russian Academy of Sciences, the Université Libre de Bruxelles, Belgian Geological Survey, Royal Belgian Institute of Natural Sciences, Case Western Reserve University, Museum für Naturkunde Berlin, Freie Universität Berlin, Florida State University and the National High Magnetic Field Laboratory participated in this study.

Chemistry professor uses old materials to make newer, better solar cells

A Florida State University research team is mixing the old with the new to create a more stable solar cell. Professor of Chemistry Biwu Ma and his team published a new study that shows if you add a layer of ancient organic pigment to a perovskite solar cell, it increases the stability and efficiency of the cell.

The study is published in the journal *Angewandte Chemie*.



Biwu Ma

"Pigments are abundant, low cost and robust," Ma said. "When we combine them with perovskites, we can generate new high performance hybrid systems. It's using the old with the new, and together they produce something really exciting."

Ma's research in new generation solar cell technologies has been focusing on addressing the stability issues and challenges of perovskite solar cells. A perovskite solar cell is a type of photovoltaic cell that includes a perovskite-structured compound, most commonly an organic-inorganic lead or tin halide-based hybrid material, as the light-harvesting layer.

Over the past decade, research on perovskite solar cells has exploded. When they were first reported in 2009, the power conversion efficiency registered at about 4 percent; it is now as high as 25 percent. However, there are drawbacks for commercial viability, such as the material's tendency to degrade quickly. Researchers worldwide have been searching for that perfect formula to make them both stable and highly efficient.

The work is primarily supported by the Air Force Office of Scientific Research. Additional support was provided by the National Science Foundation, the FSU Office of Research, the U.S. Department of Energy and the Korea National Research Foundation.

Researcher awarded \$2.2M NIH grant to study impact of Alzheimer's disease on sleep

Assistant professor of psychology and neuroscience Aaron Wilber has been awarded a \$2.2 million grant from the National Institutes of Health to study sleep-related brain function in Alzheimer's disease, a progressive disorder that affects memory and behavior in millions of Americans.



Aaron Wilber

Wilber will receive the grant, awarded through the NIH's National Institute on Aging, over the course of the next five years.

"One reason Alzheimer's treatments have failed may be because it's difficult to catch the disease before the brain has become too dysfunctional to recover," Wilber said. "This grant is focused on identifying early changes in the brain, and we hope looking earlier in the disease progression will yield new insight into approaches for detecting and treating Alzheimer's disease. We are also looking at later timepoints since more is known about later brain changes in Alzheimer's disease."

Wilber's team — including research scientist Shawn Moseley, graduate students Sarah Danielle Benthem and Alina Stimmell, and co-senior investigator Benjamin Clark from the University of New Mexico — will assess the relationship between spatial learning and memory and the brain's dynamics during sleep. Using mouse models, they will examine these dynamics within and across the hippocampus and parietal cortex, brain regions involved in spatial navigation learning and memory.

According to the NIA, Alzheimer's disease currently ranks as the sixth-leading cause of death in the U.S., and the Alzheimer's Association counts more than 6 million Americans currently living with the disease.

Forty-seven million people worldwide are living with the disease, a number projected to soar to 76 million over the next decade.

English professor receives prestigious Mellon Foundation fellowship

Assistant professor of English Frances Tran will receive a Career Enhancement Fellowship administered by the Institute for Citizens & Scholars and funded by the Andrew W. Mellon Foundation. Her fellowship term is June 1 through Dec. 31, 2021.

Tran, who came to FSU in 2018, earned her doctorate at the Graduate Center of the City University of New York in 2016 and specializes in contemporary Asian American and multiethnic literatures and popular culture. Her research draws on science and speculative fictions to explore the practices and pedagogies they illuminate for critiquing the violence of racialization and social inequity.

Tran was selected as a fellow based on her proposal for a manuscript project, "Sensory Acts: On the Spectacle of Asian Racialization and the Politics of Futurism." She will receive a six-month sabbatical stipend of \$15,000; a research, travel, or publication stipend of \$750; mentoring; and invitation to a professional development retreat.

The Career Enhancement Fellowship seeks to increase the presence of underrepresented



Frances Tran



Sophie McCoy

junior and other faculty members in the humanities, social sciences, and arts by creating career development opportunities for selected fellows with promising research projects.

Ecologist receives \$300K gift for marine research

Sophie McCoy, an assistant professor in the Department of Biological Science, will receive \$300,000 over three years to support her research and graduate students through the newly established Tatelbaum Ocean Research Fund.

The primary focus of McCoy's lab and her research is algae — organisms that produce about half of the world's oxygen, making them indispensable for the survival of humanity and ocean life. But when algae does too well, it can produce suffocating blooms that blanket the ocean's surface as well as its floor.

"What are we doing to the ocean that leads to that? Algae photosynthesize and grow faster with global warming," McCoy said. "There's also a process called ocean acidification — we all know there's a problem with global warming where carbon emissions go into the atmosphere and warm the air, but it turns out these emissions are also very soluble in water. A third of all emissions dissolve in the ocean."

That process is bad for sea life, particularly coral reefs, but most algae love it, McCoy added. Ocean acidification combined with warm temperatures and nutrient outputs from agriculture creates ideal conditions for blue-green cyanobacterial algal blooms to take over the ecosystem.

Researcher receives NASA award to improve tropical cyclone intensity forecasts

Allison Wing, assistant professor of meteorology in the Department of Earth, Ocean and Atmospheric Science, has been selected for a NASA New Investigator (Early Career) Award in Earth science, which supports career development of scientists within six years of receiving their doctoral degrees. The program funds innovative research initiatives and seeks to cultivate diverse scientific leadership in Earth system science.



Allison Wing

"We don't have a complete understanding of tropical cyclone development, and in particular, intensity forecasts require improvement," Wing said. "I've been interested in incorporating space-based remote sensing into my research on tropical cyclone development, and NASA's Earth Science Division emphasizes use of space-based remote sensing to advance scientific knowledge and supports research to improve weather forecasts, especially of extreme weather events."

Tropical cyclones occur over remote ocean areas, making it difficult to observe development before they coalesce into hurricanes and typhoons that impact populated areas.

For full details on these stories and more, visit artsandsciences.fsu.edu/news.



Jasmin Graham's research is helping shape critical smalltooth sawfish conservation efforts.

Courtesy photo

Elasmogal

Alumna Jasmin Graham is a shark-saving superhero bringing new perspectives to marine science

By McKenzie Harris

For many, “shark” conjures images of fearsome predators. In reality, sharks are a large, complex group of elasmobranch fish essential to the vitality of Earth’s oceans. There are more than 1,000 known species of sharks and rays, from behemoths like the whale shark to the palm-sized dwarf lanternshark.

The smalltooth sawfish, the first native marine fish listed under the U.S. Endangered Species Act in 2003, is a particular friend to marine biologist and conservationist Jasmin Graham.

Graham had sea legs as soon as she could walk — fishing is a way of life for the South Carolina native’s family — but learning she could pursue marine science as a career changed everything.

“I’d never seen a scientist who looked like me,” said Graham, who completed her master’s degree in biological science at Florida State and today serves as president and CEO of Minorities in Shark Sciences, an organization elevating underrepresented voices of women of color in the field.

Graham studied ocean acidification, marine mammal stranding, and microplastics as an undergrad before a National Science Foundation-funded research experience cemented her shark fascination. It also inspired her Twitter handle, “@elasmogal.”

For grad school, Graham connected with Dean Grubbs, FSU Coastal and Marine Laboratory’s associate director of research and a member of the U.S. Smalltooth Sawfish Recovery Implementation Team. NSF funded her proposal through the Graduate Research Fellowship Program to study the endangered smalltooth sawfish.

“My project was born of a deficit in the sawfish recovery plan — the identification of critical habitats for large juvenile and adult smalltooth sawfish,” Graham said.

Her project, conducted over three years and drawing on 10 years of Sawfish Recovery Team research, produced the largest existing dataset

on smalltooth sawfish and identified concentration areas and migratory patterns, including areas around Florida’s Boca Grande, Cape Canaveral, and the lower Keys.

“The biggest threat is bycatch, accidental capture during commercial fishing,” she said. “Only one out of every hundred fishing boats has an observer on board collecting data on what is caught.”

By analyzing movement patterns and frequent fishing areas, Graham identified high- and low-risk areas for catching sawfish year-round. Her research will assist in shaping critical policies that maximize sawfish conservation efforts while minimizing economic impacts on fishermen.

Graham is also dedicated to increasing opportunities for people who, like her, couldn’t envision a marine science career. At FSU, she worked with K-12 students through the Office of STEM Teaching Activities’ Saturday-At-The-Sea program, and, last year, joined forces with three other Black women shark scientists to form Minorities in Shark Sciences.

MISS believes diversity in scientists creates diversity in thought, leading to innovation. The group has developed curricula for all ages and has worked with organizations including The Field School in Miami, Oceans Research in South Africa, and Bimini Shark Lab in the

Bahamas to facilitate research and fieldwork opportunities for underrepresented scientists.

In 2021, MISS will host workshops, internships, and a summer program, and will continue its virtual K-12 outreach programming, all free of cost.

“Jasmin’s co-founding of MISS is having a strong effect in increasing diversity of scientists in our field,” Grubbs said.

While continuing her research, Graham works in Sarasota, Fla., at the Mote Marine Laboratory and Aquarium’s Marine Science Laboratory Alliance Center of Excellence. Through the Louis Stokes Alliance for Minority Participation Program, an NSF-funded program supporting students underrepresented in STEM fields, she is currently identifying best practices in recruiting, supporting, and retaining minority students in marine science.

“We hope to broaden pathways to science and help more people feel they belong. Breaking down barriers and improving the science identity of those who are underrepresented is my main goal,” Graham said. “Great conservation work requires everyone has a seat at the table.”

McKenzie Harris is pursuing a master’s in media/communication studies. She earned a bachelor’s in English with a concentration in editing, writing and media in 2020.



Jasmin Graham (center) and fellow MISS co-founder Amani Webber-Schultz (left) conduct a session during MISS’ summer workshops at The Field School in Miami. Photo courtesy The Field School.

News Maker

Alumnus Ryan Benk helps create one of America's most popular morning news programs

By Tom Morgan



Courtesy photo by Lilly Quiroz.

Ryan Benk came to Florida State University because he wanted to learn how to tell stories. He did and has since found tremendous career success, just not in the medium he would have guessed before his time in Tallahassee.

Today, he helps bring NPR news to 60 million people across various platforms each week as a producer of its flagship show, "Morning Edition."

Benk, who graduated with a bachelor's degree in English literature and minor in film studies, earned his first internship in public radio while still a student and was electrified by the non-profit's demanding and special mission.

Mission critical

"NPR's work is a public service, not only to report the news and give the public information, but to do so for everyone and for free," Benk said. "It's a guaranteed service that every person has, not just Americans."

More than 1,000 employees at NPR, not including 1,069 public radio stations, produce shows that cover local, national and global news. The organization, which celebrated its 50th anniversary in May 2021, also makes subject-based shows and segments covering science, business, politics, culture, and music. And NPR's digital platforms generate a worldwide audience rivaling those tuning in via radio.

"Morning Edition" alone is a massive undertaking with a staff of about 50 people working around the clock, Benk said.

"To pull together a two-hour weekday show, the staff works in rotating shifts. Some work overnight, some hold normal day shifts, and others work everything in between. As a producer, my schedule is based on what's needed," he said.

"Morning Edition" includes reporting from correspondents around the world, across the nation, and just down the street from its Washington, D.C., headquarters. For Benk, the show's work covering governance at home and abroad is

especially important because governments and regimes have the power to rapidly transform lives.

New home

Benk's father and much of his extended family fled Nicaragua in the 1980s, looking to rebuild their lives in the U.S., and escape a brutal and devastating revolution and counter-revolution that ultimately killed tens of thousands, cost billions in damage, and halted civil liberties in the Central American nation.

"They ran for their lives, but also for the freedom to have public beliefs about politics and things of that nature. What I'm doing is an extension of the freedom they sought," Benk said. "My dad did not just leave for himself, but for his future children to have a chance at a better life. It's not lost on me that I get to do this job because this country has a free press and individual rights."

Much of Benk's family would eventually settle in Miami, where he was born. When it came time to choose a university, FSU was just close enough to home and had excellent programs for an aspiring writer. It was at FSU where he first discovered a passion for news.

Training ground

Benk started his career as an intern with WFSU Public Media, a collection of public broadcasting stations operated by the university serving most of north Florida. That includes NPR-affiliate radio stations, a PBS-affiliated television station and the Florida Channel, the state government's equivalent to C-SPAN — the collection of which forms an incredible training

ground for journalism and other communications-based careers.

"We are complicated and do a lot on any given day," said WFSU Program Director Tom Flanigan, "so we have an internship program where we train students into full-fledged reporters in our operation as quickly as possible. We want them to have the same experiences as the staff so, when they leave, they're prepared to work anywhere."

Many FSU students who are accepted into WFSU internships are English and communications majors because strong writing skills are essential to the work. While the program has several student success stories, Benk stood out quickly because of his approach to journalism.

"His enthusiasm and relentless curiosity were driving forces for his success," Flanigan said. "He would gather as much information as possible and ask his questions until they were answered. Not many interns could go into an interview with a Senate president and hold their own."

Benk said his education, combined with experiential training at WFSU, has been life-changing. It's also led to lifelong connections with mentors who gave him his start and continue to support his career development.

"FSU is so much more than just classrooms. The entire community embodies a type of spirit dedicated to learning. I learned from the curriculum, sure, but also from experiences I could have only found there," Benk said. <

FSU is so much more than just classrooms. The entire community embodies a type of spirit dedicated to learning. I learned from the curriculum, sure, but also from experiences I could have only found there."

— Ryan Benk, FSU alumnus

Advocacy in **Action**

Attorney and
Grad Made Good
Neil St. John
Rambana guides
immigrants on the
path to citizenship

By Rodney Campbell

When the time came for Neil St. John Rambana to choose where he would attend college, he wasn't just seeking a good education. He was also looking for a lifestyle change.

Rambana's family, originally from Jamaica, moved to Homestead, Fla., when he was 12. After attending middle and high school in south Florida, Rambana wanted to get back to his comfort zone: He needed an environment more like his hometown of Kingston.

Friends were choosing Florida State, and he found the idea intriguing. Rambana made the decision to relocate to Tallahassee in 1987 and immediately knew it was the place for him. Towering trees, friendly people, and a laid-back way of life were what he needed. It felt like home.



"Coming to Tallahassee was interesting," Rambana said. "It had all the vestiges of Kingston. It was comforting. It was more tranquil than south Florida."

Rambana, now a successful immigration lawyer in Tallahassee, earned several degrees from FSU, including a dual bachelor's in English literature and political science with a minor in public administration. He also has a master's in international affairs.

"My idea was to study political science when I started at Florida State to prepare for law school," said Rambana, who was honored by the FSU Alumni Association this year as one of three 2021 Grads Made Good, an awards program honoring alumni who have made outstanding contributions in their community or chosen field. "Studying English helped improve my reading and writing. I really enjoyed it. It instilled in me the discipline necessary for law school."

Inspired by his mother's career as a legal assistant, he went on to earn a law degree from Nova Southeastern University in Fort Lauderdale, Fla. After graduation, he convinced his wife, Elizabeth Ricci, whom he met in law school, that they should settle in Tallahassee.

The couple's area of specialty was the suggestion of Ricci's father, who himself spent three decades working in immigration law. On his advice, the pair opened a practice in Tallahassee. Starting their careers by owning a small business was risky, especially in an area where immigration law wasn't a hot-button issue.

"We knew it wasn't going to be like Orlando, Miami and Atlanta," Rambana said. "We would need to pound the pavement. We had to put in the time and go to places like south Georgia and Pensacola to let people know we were there to help."

Rambana, who has served as the keynote speaker at several naturalization ceremonies, sees his job as a mission to help people in need.

"One of most rewarding things for me is that it's not like family law where you're helping people going through divorce," he said. "In this field, you're reuniting and keeping families together."

Rambana & Ricci, P.L.L.C. also helps foreign-born researchers at universities, including FSU, and private employers through EB-2 National Interest Waivers. These self-sponsored green cards are for individuals with advanced degrees and high achievement in their professions. The team has secured entry for exceptional candidates from a range of fields, including science, arts, business, education and athletics.

Ricci estimates half of their firm's business comes from assisting people who need National Interest Waivers. About 30 percent of these clients go on to work at FSU.

Beyond their legal work, Rambana and Ricci are active in almost a dozen non-profit organizations and boards. He serves as treasurer of the Tallahassee/St. Maarten Foundation, which helps students move from that island community to attend college. The foundation provides financial assistance and helps young people acclimate to life in the U.S.

"It's our obligation to help," he said. "We want to give back to the community. It's a win-win for us to let people know how we can help make this a better country. People with expertise in economics, physics, whatever it may be, bring those talents here. It makes us a stronger and more competitive nation."

Rambana maintains a presence on campus. He has twice been named part of Seminole 100, which recognizes the 100 fastest-growing FSU alumni-owned or alumni-led businesses, and he often speaks to immigration law classes at FSU's Public Interest Law Center.

Darby Kerrigan Scott directs the Immigration and Farmworker Project in the Public Interest Law Center. She was one of Rambana's connections who nominated him for the alumni association award.

"His unwavering commitment to sharing his time and expertise in the immigration field has benefitted countless FSU Law students, our clients, the immigration community and me tremendously," she said. <



Opposite: Neil St. John Rambana on the steps of the U.S. Supreme Court in Washington, D.C. Left: Rambana and his wife, Elizabeth Ricci, and their daughters, Belén and Paloma. Photos courtesy the Rambana-Ricci family.



Jessica Hensley's background in statistics and sports helped her nab a golden opportunity with the U.S. Olympic and Paralympic Committee.



Jessica Hensley



Hensley checks out medals and torches from prior Olympics at USOPC's Colorado Springs, Colo., headquarters.



Jessica Hensley



Hensley celebrates earning her master's in statistics from Florida State in 2018. Photos courtesy Jessica Hensley.

Head in the Game

FSU alumna Jessica Hensley uses statistical skills to help Olympic athletes excel

By Amy Robinson

As the eyes of the world turn to Tokyo for the Olympic Games this summer, the hard work of Florida State University alumna Jessica Hensley will take center stage. The former collegiate athlete is not competing in the games, but conducting key statistical analysis for Team USA in her role as a data analyst for the United States Olympic and Paralympic Committee.

Hensley's passions for both mathematics and sport make the job an undeniably perfect fit. Now, she's helping Olympians achieve their gold medal dreams and inspiring others to find their ideal careers.

Star student

Before earning a master's in statistics from Florida State, Hensley completed her undergraduate degree in mathematics at Emory & Henry College in Virginia. There, she captained the varsity swim team and served as president of the mathematics club, parlaying her swimming affinity into various undergraduate research projects, including using linear regression models to calculate optimal elbow angles to improve stroke efficiency for female sprint freestylers.

When she wasn't in the water competing or presenting at national conferences, Hensley spent her summers interning out of state and developing her statistical expertise.

"During my undergraduate degree, I completed three statistics and data analytics-focused internships at Elder Research, Charlotte Hornets and ESPN. Each helped mold my interests and eventually uncover my passion for sports analytics," Hensley said.

As a statistics and information intern at ESPN headquarters in Connecticut, Hensley was responsible for ensuring the accuracy of live game data for MLB and WNBA games, and managing historical database information for the network's popular Football Power Index and Basketball Power Index rankings.

When Hensley decided to attend graduate school to gain a deeper understanding of statistics and computer science, and to try her hand at becoming a teaching assistant, the Vero Beach native found a new home at FSU.

"It was the collaboration that occurred in the statistics building conference room, from professors and classmates to underclassmen, where I truly learned the most and made lifelong friends. Anyone could ask for help and everyone would pitch in to solve problems," Hensley said.

Golden opportunity

Before completing her graduate degree, Hensley interviewed with the U.S. Olympic and Paralympic Committee for a sport performance analyst position, but had to pass on the opportunity when she learned they needed the job filled immediately. Then, a few weeks before graduating in 2018, the USOPC contacted Hensley to inform her she'd been recommended for a new opening on the team, as a data analyst.

"A few weeks later, I was living in Colorado Springs and working my dream job," Hensley said.

Statistics department chair Xufeng Niu said Hensley's success exemplifies the high demand for graduates with statistics and data analytics backgrounds.

"Statistics has wide applications in many fields, including government, industry and sports," Niu said. "The training Jessica received from our program provided her statistical skills and experience in big data analysis and management, which are essential for making data-driven decisions for the U.S. Olympic Committee."

Team USA

Hensley hit the ground running at USOPC in January 2019, and her work ranged from creating statistical models predicting performance trajectories and medal probabilities for Olympic athletes, to creating data visualizations on everything from strength and conditioning to finance. Hensley recently helped create financial reports documenting and valuing, for the first time, the benefits the USOPC provides to athletes and National Governing Bodies.

"It was amazing to see so much hard work put out into the world and make a difference in communicating how we allocate resources to our athletes both directly and indirectly," she said.

Hensley beams with pride talking about memories she's already made at USOPC, including an unforgettable moment during the FIFA Women's World Cup in 2019.

"It was the semifinal game, USA vs. England, and the entire sixth floor was crowded around the small TV in our department's area, watching together. We made popcorn and everyone was cheering Team USA to victory. In this moment, I felt so much Olympic spirit and for the first time it really sunk in that I was a part of Team USA," she said.

Hensley is taking that team spirit to Tokyo this summer, where she will spend five weeks assisting Team USA as its Olympians and Paralympians take on the world's best athletes.

"We are very proud of Jessica's outstanding achievements," Niu said. "Her success will greatly motivate more women to study statistics and work in the data science field." <



In early 2020, "FSU Weather" relocated from its longtime home in the basement of the James Jay Love Building into a brand-new studio in the newly constructed FSU Earth, Ocean, and Atmospheric Science building.

Weathercasters from the 2020-21 season of "FSU Weather." Courtesy photo by Zach Soldo.

Future Forecasters

The students of "FSU Weather" are ready for their close-up

By Amy Robinson

Turn on your TV in Tallahassee any weekday around 6 p.m. and you'll likely see meteorology students from Florida State University's Department of Earth, Ocean and Atmospheric Science hard at work in front of the greenscreen. The "FSU Weather" show, which broadcasts live on 4FSU and also streams on YouTube, gives students interested in broadcast meteorology a chance to put their on-air skills to the test. For students who dream of forecasting for major TV markets or national organizations, the experience is invaluable.

TV debut

When FSU's cable channel 4FSU first premiered in Spring 1996, the student weathercasts were the first segments specifically produced for the channel. Students would prerecord two-and-a-half minute forecasts, which were inserted between the channel's other preproduced programs. Associate professor of meteorology Jon Ahlquist, who has been with the department since 1981, remembers how it all began.

"We literally drove a videotape across town late in the afternoon each Monday through Friday with the weathercasts for that evening," Ahlquist recalled.

A fiber-optic cable was later installed between campus and the FSU Broadcast Center, eliminating the drive and opening up the possibility for live broadcasts. In 1999, the university's communications department launched a new show called "FSU Live," which included brief live segments from the weather studio during its four-year run.

"Live TV was such better training than the short, prerecorded weathercasts, so I talked with my students to see whether we could produce our own half-hour show," Ahlquist said. "They produced and recorded two practice 30-minute shows to convince themselves it could be done."

With their ability to produce proven, students charged ahead, and "FSU Weather," as it's known today, was born.

The student-produced program first aired in November 2002 and has been broadcasting every Monday through Friday since, aside from a brief hiatus during the pandemic. As meteorologists around the world innovated and found ways to deliver forecasts from home during lockdown, so did the students of "FSU Weather."

"When the pandemic closed campus and temporarily ceased the production of the show, some students continued to

post short, homemade weathercasts to the "FSU Weather" Facebook page. Two students even set up greenscreens in their homes," Ahlquist said.

Camera ready

Each year, the warm glow of the studio lights at "FSU Weather" attracts talented students from across the country. The resulting team is a brilliant patchwork of distinct personalities and experience levels, with a variety of career aspirations. Junior environmental science major Lindsey Parmett plans to work in marine conservation and developed an "Environmental Updates" segment for the show that spotlights a different issue each week. Parmett is one of several students in the program with career goals outside broadcast meteorology who fell in love with being part of the show.

"My favorite part of 'FSU Weather' is the people," Parmett said. "Everyone is so happy and excited when they come into the studio; it makes the broadcasting experience so much fun! You can be having the worst day, and that completely disappears the moment you step into the studio because it is such a positive environment."

Others, like senior meteorology student Evan Thomason, have already landed jobs in the field. In October, Thomason's adviser notified him about a job opening for a weekend meteorologist at Tallahassee's WTXL-ABC 27. By December, he was making his on-air debut.

"I honestly had the time of my life," Thomason said. "It was so much fun and helped me fully realize this is exactly what I want my career to be."

Just before graduation, Thomason signed a three-year contract for a TV job in Idaho Falls, Idaho. He said "FSU Weather" gave him the confidence to pursue his dreams.

"I really found myself through 'FSU Weather.' I originally didn't think broadcasting was for



Mike Farrar
@MikeFarrar_Wx

Great to see your leadership @JakeCarstens. For the incoming class #FSU25, the FSU alumni mafia are everywhere and we will always be here for you. #GoNoles !!!@northflamsnwa @FSU_EOAS @FSUWeatherSTEM @FSUWeather #FloridaState #FSU

Jake Carstens @JakeCarstens · Feb 19

A warm welcome to #FSU25! 🌞

For anyone interested in the Meteorology program, some good follows are @FSUWeather, @northflamsnwa, and @FSU_EOAS.

I've been here for 6+ years and all 3 degrees, so if you want to learn more about the major, don't hesitate to reach out. 🌩️



8:09 PM · Feb 19, 2021 · Twitter for iPhone

me since I was very shy growing up. Thanks to the fun adventures and times I had with 'FSU Weather' and then WTXL, I am fully able to show my personality to the world," Thomason said.

Seminoles forever

Students in the program credit "FSU Weather" not only with helping improve poise and communications skills, but also connecting them to an impressive network of meteorology alumni across the country. Meteorology junior Jonathan Marcus has rubbed elbows with some of his favorite forecasters who also happen to be fellow 'Noles.

"Because of this program, I have been able to have personal conversations with individuals such as NBC New York's Janice Huff, The Weather Channel's Tevin Wooten, and the University of Georgia's Dr. J. Marshall Shepherd, among others," Marcus said.

"These networking opportunities are invaluable and stretch across airwaves and into various sectors of the field of meteorology." <

Intersectional Analysis

Sam McLoughlin explores demographic and political elements shaping America's modern religious landscape

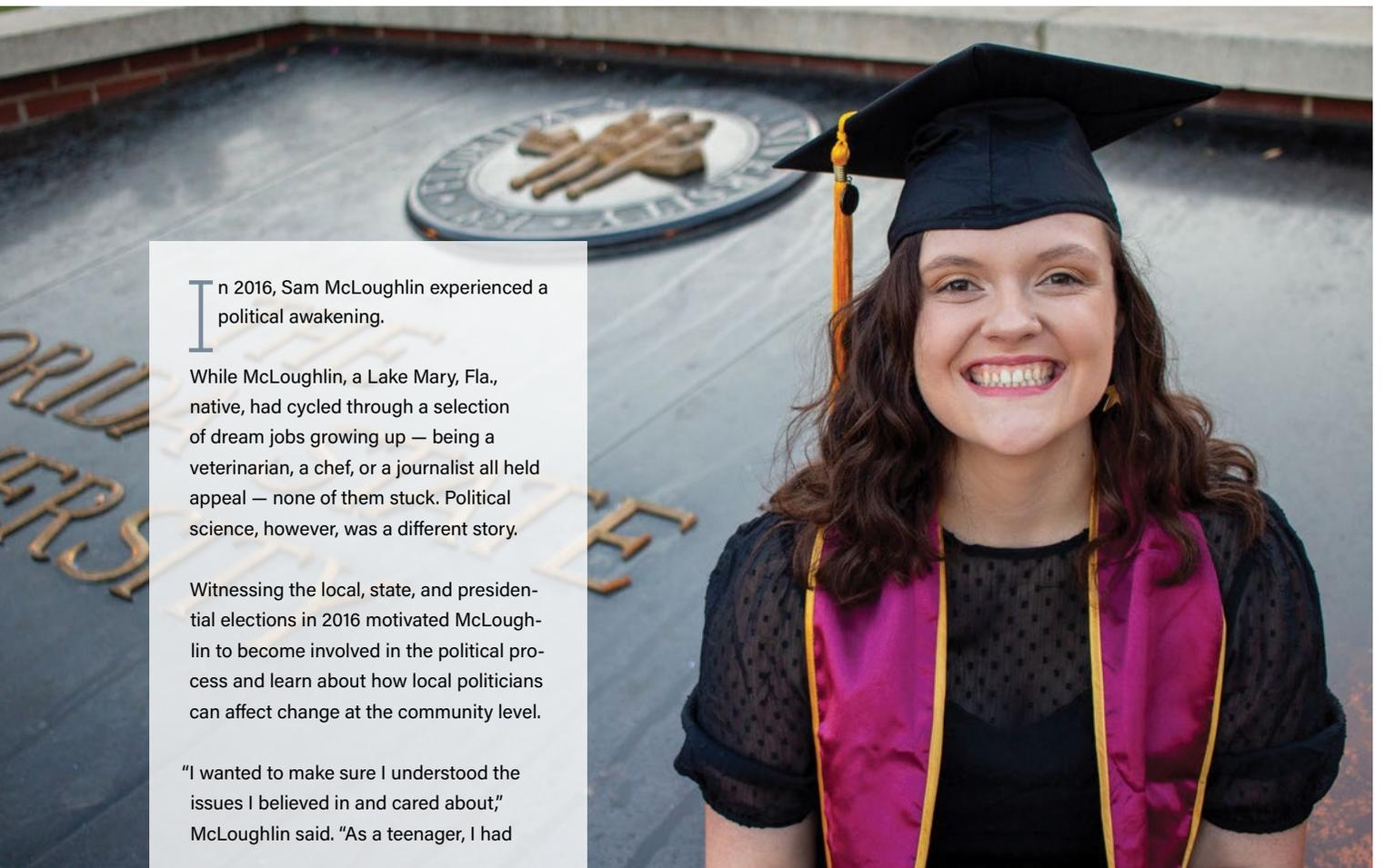
By Taylor Anderson

In 2016, Sam McLoughlin experienced a political awakening.

While McLoughlin, a Lake Mary, Fla., native, had cycled through a selection of dream jobs growing up — being a veterinarian, a chef, or a journalist all held appeal — none of them stuck. Political science, however, was a different story.

Witnessing the local, state, and presidential elections in 2016 motivated McLoughlin to become involved in the political process and learn about how local politicians can affect change at the community level.

"I wanted to make sure I understood the issues I believed in and cared about," McLoughlin said. "As a teenager, I had



Sam McLoughlin. Courtesy photo.

accepted my parents' beliefs without taking the time to understand politics for myself, and I wanted to change that."

Florida State was McLoughlin's top college choice, since it would put her in contact with other students determined to make a difference and in proximity to Florida's state capitol, but there was still a decision to make on how she would begin her studies, thanks to an invitation from FSU Admissions.

FSU's Seminole Pathways program provides an option for first-time-in-college freshmen to spend their first semester or first full year at one of FSU's study abroad centers through FSU International Programs, to take their first year of classes at FSU Panama City, or to study at a local accredited college before joining the main campus in Tallahassee. McLoughlin elected to begin her Seminole experience with a fall semester abroad at FSU's London Study Centre, and that decision shaped her future research focus.

"Going abroad sounded amazing, but it wasn't what I had originally planned for my first semester away from home," McLoughlin said, "One course on British youth culture sparked my interest in the intersections of religion, sexuality, gender, and race, and how politics can influence these subjects."

During her first semester in Tallahassee, McLoughlin realized her planned political science degree was missing something. While she enjoyed learning about the psychological forces that shape an individual's beliefs, she realized researching and studying the evolution of such beliefs was of more interest to her as a career than one working in politics. McLoughlin also needed to pick up a minor to supplement her degree. In Spring 2019, she enrolled in "Religion in the U.S.," taught by then-adjunct professor Dan Wells from the FSU Department of Religion.

"The course stood out to me," McLoughlin said. "I enjoyed the course and the literature exploring American history, politics and religion. The connection I made with the subject, and Professor

Wells, is why I chose to continue an education in religion."

McLoughlin's current research focuses on the racial and gendered aspects of American conservatism from the 1950s to the present day and its relationship with contemporary Christianity. The refinement in topic resulted from time McLoughlin spent with assistant professor of religion Laura McTighe.

"Sam's work will bring fresh eyes to a tangle of questions surrounding American religion and politics, especially how the religious worlds created by American conservatives have shaped, and been shaped by, gender, race, and sexuality in American society writ large," McTighe said. "It is research that we need now more than ever."

McLoughlin spends much of her time researching and writing about individuals with opposing views, and mentors like McTighe have emphasized the importance and value of ethical collaboration. When dealing with more nuanced topics like white supremacy or movements of deep-rooted activism, McLoughlin leans on her political science background to ensure that her work objectively assesses the motivations and values held by the individuals and groups she studies.

"It can be easy to dismiss the opinions of people who see things differently than you. It has always felt more rewarding to push myself in their direction and read the literature to try and understand their beliefs," McLoughlin said.

Looking to broaden her study of religion, McLoughlin became a member of FSU's religion club, Students Organized for Religious and Cultural Exploration. After participating in SORCE's annual undergraduate symposium, McLoughlin was introduced to associate professor of religion and SORCE faculty adviser, Joseph Hellweg, who became an avid supporter and sparked McLoughlin's passion for research.

"Sam offers compelling insights into our world. She is always mindful of the relationship of her academic work to the moral, political, and social issues of our time," Hellweg said. "She is the kind of student who will make this world a more compassionate place."

While political science is still a key area of interest, McLoughlin has decided to make American conservatism her primary research focus for her master's degree — she will join the Department of Religion's American Religious History graduate program this fall.

"I chose to stay in Tallahassee because I already love FSU and its faculty and resources," McLoughlin said. "Florida State is also one of the only schools in the U.S. to provide funding for a religion graduate degree program."

McLoughlin plans to pursue a career in academia following her master's degree. <

Taylor Anderson is pursuing a bachelor's in media/communication studies with a minor in art history. She plans to graduate in Fall 2021.

Sam offers compelling insights into our world. She is always mindful of the relationship of her academic work to the moral, political, and social issues of our time. She is the kind of student who will make this world a more compassionate place."

— Joseph Hellweg, Associate Professor of Religion



Past and present members of the Florida State University Unconquered Scholars Program. Courtesy photo by Corey Wheeler.

Forever Family

*Unconquered Scholars Program
supports formerly at-risk students
in pursuit of an FSU degree*

By Hannah Fulk

“When I was battling homelessness, I felt like Atlas, the ancient Greek Titan, carrying the world on his shoulders, as I tried to hold myself and my family together,” said Isaac Parfait.

Thanks to the Florida State University Unconquered Scholars Program and his own determination to succeed, Parfait, a 2020 alumnus of the Program in Interdisciplinary Humanities, now works in Chicago for Three Point Media, a digital production firm for state and national political ads.

Homelessness and housing insecurity have become increasingly visible challenges for students in Florida and across the U.S. — both are driven by decreases in affordable housing and increase the chance students will leave academia before completing a degree. For students who have been in foster care during their lifetimes, the risk is even higher.

In 2012, Pam MacDill, then a 25-year faculty veteran in FSU's College of Social Work, realized no one had truly identified the needs of homeless students on FSU's campus. She enlisted then-Dean of Undergraduate Studies Karen Laughlin and then-Vice President of Student Affairs Mary Coburn to build a unique program for students coming to FSU from nontraditional college backgrounds, and FSU's Unconquered Scholars Program was born.

Nearly a decade since its founding, the program has blossomed into a lively campus support system for former at-risk students, offering college life coaching, academic advising, and tutoring services for students who have experienced foster care, homelessness, relative care or have been wards of the state. The program currently serves 129 active members.

"In Unconquered Scholars, there are people who actively understand your situation, express empathy towards you, and help you through it," Parfait said. "Being homeless felt like I was player two in my own life. Now I feel more naturally happy and 'in my element' as I put myself first. I finally feel like player one."

The program's dedication to identifying and addressing student needs is led by Center for Academic Retention and Enhancement program director Lisa Jackson and Unconquered Scholars program coordinator Caitlin Cates, both of whom work closely with students to navigate their unique situations and prioritize needs.

"Our focus has always been about honoring and amplifying student voices," Jackson said.

Ensuring representation of program participants' first-person perspective is at the heart of Unconquered Scholars' Student Advisory Board, where students provide insight into the program's academic and skills workshops, volunteer opportunities, and social events. Cates serves on the board, and she and Jackson use information gained to guide program offerings and advocate for the scholars in the wider FSU community.

"Unconquered Scholars has allowed me to flourish in an environment where I felt so small. This program has given me a voice to say what is easy, hard and uncomfortable," said psychology and criminology double major Anya Campbell. "I currently serve on the board and voice my opinions on issues our students face as well as problems in need of solutions."

One such issue is FSU's annual Family Weekend, during which Seminoles welcome parents, siblings, and extended families to campus for a packed slate of events and a home football game. Through the Student Advisory Board, Unconquered Scholars leaders learned the weekend was a painful time for students because of their lack of a "forever family." The solution was to start a new tradition — Unconquered Scholars now spend the weekend at Disney World.

"This was another initiative where we asked ourselves, 'How can we find a positive alternative, so these students are not negatively impacted by something that was not intended to impact them negatively' but certainly does," Jackson said.

Like many programs on campus, Unconquered Scholars shifted to a virtual setting due to the COVID-19 pandemic. The program initially struggled to provide the full experience to the 2020 student cohort and maintain a sense of connectedness for geographically separated scholars, but Jackson and Cates innovated to deliver warmly held traditions in a socially distanced environment.

For this year's introductory social mixer, organizers sent pizza to every potential Unconquered Scholar's doorstep across the state of Florida and held a Zoom dinner so students could make connections and learn about the program.

"COVID has not stopped us. If anything, it gave us more creative freedom on what we can do within our program," Campbell said. "COVID has shown us just how resilient we can be."

Whether in person or in the virtual environment, FSU is committed to meeting the unique needs of Unconquered Scholars so they experience the long-term professional and personal benefits associated with educational attainment.

"Unconquered Scholars is more than a support program for underprivileged youth. It is a campus family that connects individuals with similar backgrounds and provides them with services to help them envision a better version of themselves," Parfait said. <

Hannah Fulk is pursuing a bachelor's in public relations and interdisciplinary social sciences and plans to graduate in Spring 2022.



The scholars mark graduation with a group photo (far left), and visit Disney World during FSU's Family Weekend (center). Courtesy photos by Lisa Jackson. Left: Isaac Parfait. Courtesy photo.



Professor of biological science Kenneth Taylor (left) and doctoral candidate Hamidreza Rahmani (right).

Scientific Curiosity

Hamidreza Rahmani's biophysics research may pave the way for new heart treatments

By Hannah Fulk

What can a water bug tell us about the human heart? The answer could one day save your life.

Physics doctoral candidate and interdisciplinary researcher Hamidreza Rahmani is analyzing flight muscle contractions of a Thai giant water bug, *Lethocerus indicus*, because of its similarities to human heart muscles. Like a mammal's heart, the roach-like bug's flight muscle beats rhythmically, and Rahmani's distinct research may lead to new treatments for diseases such as cardiomyopathy, which make it harder for the heart to pump blood to the rest of the body.

"I've always been fascinated with life science because your results can affect human lives in a direct way," he said. "It's why I switched to biophysics for my graduate study and started research in cryogenic electron microscopy."

Several years into his program, Rahmani has already made a name for himself in the physics community. He has contributed to five physics research publications, was a finalist in FSU's 3-Minute Thesis Competition in 2018, earned the College of Arts and Sciences' Richard L. Wilder Endowed Fellowship in 2019, received the American Heart Association Predoctoral Fellowship in January 2020, and was among just 31 students nationwide to win Biophysical Society Student Research Achievement Awards in 2020.

Rahmani's interests are wide and varied, and desire for understanding is singular, said Jorge Piekarewicz, Robert O. Lawton Distinguished Professor of Physics and a member of Rahmani's dissertation committee.

"Hamid is a truly unique student," Piekarewicz said. "His pursuit of knowledge is his most salient academic characteristic, and his determination towards unfettered discovery will produce an outstanding dissertation."

That drive is rooted in Rahmani's childhood in Takestan, Iran, where he cultivated a curiosity about his place in the universe through astronomy and dreamed of one day becoming a physi-

cian. As a result, his undergraduate work at the University of Tehran focused on astrophysics.

Rahmani was an undergraduate during an intense period of civil unrest. The university was a center for opposition to the contested 2008 Iranian elections, and his college experience included tear gas and pepper spray. Despite the political chaos, Rahmani thrived — he founded and became editor-in-chief of the campus publications, "Physics Morning," and "Invariant," joined astronomy and amateur astrophotography groups, and played music, basketball, and volleyball with friends.

While Rahmani worked to get the most out of his physics studies, he was stymied by a lack

of interdisciplinary opportunities. Under Iran's education system, high school students choose academic tracks in math, biology or human sciences, which they then carry into university, and it's not easy to change disciplines later.

Since enrolling in 2013, he has done research at the National High Magnetic Field Laboratory, the world's largest and highest-powered magnet lab, and conducts his current research at FSU's Institute of Molecular Biophysics.

Kenneth Taylor, Rahmani's doctoral adviser and a professor in the Department of Biological Science, considers Rahmani's ability to push through research challenges and avoid dwelling on setbacks truly noteworthy.

"He has a good way of seeing what's needed in his experimental work to strengthen the research story," Taylor said. "If there's something he needs to learn to further his research, he will find a way to learn it."

[Hamid] has a good way of seeing what's needed in his experimental work...If there's something he needs to learn to further his research, he will find a way to learn it...[He] has a persistence that sets him apart."

— Kenneth Taylor, Professor of Biological Science

"When I was an undergraduate student, I realized I enjoyed astronomy more as a hobby, not for research. Working in biophysics research now feels like a small turn toward my childhood dream," he said. "The academic environment in the U.S. is definitely more efficient, open and cooperative. A lot of things are completely new, but that means I get to learn new things every day."

Rahmani chose Florida State for his graduate degree because of its outstanding research opportunities and emphasis on interdisciplinary work.

In addition to excelling in his current position at the Institute of Molecular Biophysics, Rahmani teaches introductory physics courses to undergrads. Upon completion of his dissertation, Rahmani plans to combine his love for both fields as an independent researcher and professor at a university in the U.S., a career move Taylor enthusiastically supports.

"While Hamid is extremely smart, success in academia doesn't necessarily depend on how smart you are," Taylor said. "Hamidreza has a persistence that sets him apart." <

Hannah Fulk is pursuing a bachelor's in public relations and interdisciplinary social sciences and plans to graduate in Spring 2022.



365 days in

As the pandemic passes the one-year mark, FSU continues to lead in the fight against COVID-19

By Amy Robinson



When the sun rose over the Donald L. Tucker Civic Center in Tallahassee April 17, the air crackled with anticipation. For the first time in over a year, Florida State University was hosting in-person commencement ceremonies.

Graduates began arriving with their families bright and early, proudly donning hard-earned caps and gowns. Facemasks, a new addition to standard commencement regalia, did little to hide the excitement on the faces of the Class of 2021.

The crowd was a more intimate group than in a typical year, with commencement being structured into a series of smaller ceremonies to allow for social distancing, but there was no shortage of Seminole spirit inside the Tuck. In a video message, then-Student Body President Jonathan Levin congratulated his fellow graduates on overcoming the unforeseen challenges the of the past year.

"The Class of 2021 is beyond resilient," Levin said. "Students from across the globe, but especially here at FSU, redefined what it means to be unconquered."

Change of plans

When COVID-19 was first declared a global pandemic by the World Health Organization in March 2020, several FSU researchers were already far from home on research trips. Marcos Colón, a documentary filmmaker and postdoctoral scholar with the Department of Modern Languages and Linguistics, had just arrived in Peru to continue work on a film about environmental crises in the region when the country suddenly went into lockdown.



Left: FSU President John Thrasher and Vance Carlton Wiggins II at 2021 spring commencement. Top: Students in Strozier Library. Photos by FSU Photography Services. Above: Marcos Colón, courtesy photo.



Latricia Simmons, RN, assistant director of Clinical Operations at University Health Services draws up a dose of COVID-19 vaccine. Photos this spread by FSU Photography Services.

"I had to escape in a cargo ship loaded with four tons of food transiting the Amazon River from Peru to Brazil," Colón said.

When he was finally able to make it to Brazil, Colón spent days awaiting a flight.

"The U.S. Embassy sent an airplane but not everyone was able to get on, so we'd have to wait for another one. Even though it took me about 20 days to get back to America, I know people who waited there for six months," Colón said.

Although he was forced to cancel the remainder of his trip, including plans to interview Pope Francis for the documentary, what Colón witnessed aboard ship alerted him to food insecurities in the region — a problem worsened by the pandemic.

"I started to document every stop, and that opened up a new line of research for me," Colón said. "I went to the Amazon to finish one film and I came back with two."

Dominic Woelki, a postdoctoral scholar in the Department of Earth, Ocean and Atmospheric Science, was on a sea expedition that departed South Africa in early March. When the pandemic was declared, the crew aborted its mission and sailed all the way from the Southern Ocean, near Antarctica, to Germany.

"I was supposed to be on the research vessel for around six weeks, but ended up being away from my pregnant wife for five months," Woelki said.

After months at sea, travel restrictions prevented Woelki from returning to the U.S. Finally, after a stay in Germany and a short trip through Turkey, he made it back home in July 2020.

"I was frustrated because there was a good chance I was going to miss the birth of my first child. In the end everything went fine, but it took a lot of work and risks," Woelki said.

The Class of 2021 is beyond resilient. Students from across the globe, but especially here at FSU, redefined what it means to be unconquered."

*— Jonathan Levin,
Former Student Body
President*

Vaccine nation

Since COVID-19 was first identified, scientists around the world raced to develop a vaccine, and three vaccines were approved for emergency use this winter and early spring by the U.S. Food and Drug Administration.

In January, through a partnership with the Florida Department of Health in Leon County, Florida State began administering a first round of vaccines to faculty, staff and students meeting state eligibility requirements. Fewer than three months after the first shot was given at the Tucker Center, FSU is now vaccinating Floridians ages 16 and up as part of the state's strategic vaccination effort.

In addition to FSU's early role supporting testing through a partnership with Tallahassee Memorial Hospital, the university's researchers have dug in to learn more about the virus and generate data that could help refine future vaccines and ultimately lead to a cure.

"We still don't have a miracle drug to cure COVID-19, but monoclonal antibodies are effective in controlling infection and reducing disease severity," said Qian Yin, assistant professor in the Department of Biological Science.

Yin, who leads a research group focusing on understanding how the immune system recognizes and reacts to viruses and bacteria, attributes the rapid development of the COVID-19 vaccines to years of hard work and collaboration in academe and industry to study viruses and test new vaccination strategies.

"With several vaccines already in use across the world, there is finally a hope to return to normal," Yin said.

#StayHealthyFSU

On Feb. 25, with vaccinations well underway, university officials announced plans to host in-person commencement in April for Spring 2021 graduates. Alumni from the Class of 2020 were also invited back to campus for an in-person ceremony in May after last year's commencements were held in an entirely virtual format.

FSU Provost and Executive Vice President for Academic Affairs Sally McRorie and Vice President for Student Affairs Amy Hecht released a letter to students the same day detailing the university's plan to offer a mix of in-person, hybrid, flex,

and online courses for the summer semester, and to resume a face-to-face format for courses designed for in-person delivery by fall.

"While we're hopeful we'll be able to return to pre-pandemic normalcy soon, it is critical that you continue to take seriously your responsibility to help mitigate the spread of COVID-19," the letter read. "We must continue to adhere to the health and safety protocols set by the CDC and state and local health officials."

With a new semester on the horizon, Colón is among the faculty members eager to return to the classroom and discuss with his students some of the profound lessons learned on his travels abroad at the dawn of the pandemic.

"I am very excited about this semester — to be able to share my experience, my journey," Colón said. "To be able to see my colleagues and students face-to-face and to interact with the FSU community is what I'm looking forward to more than anything." <

Visit news.fsu.edu/coronavirus for FSU COVID-19 updates. Kathleen Haughney and Amy Farnum-Patronis, contributors.

From left: Annie Blanchard, Liz Orraca, Robert Szot, Caroline Hamon, Jordyn Dees, and Gabe Pfeuffer-Ferguson were among 6,000 Fall 2020 FSU freshmen.





Robbin Peoples

Photo courtesy Steve Corbett



Micah Weisman

Photo courtesy Alannah Franklin

Ready. Set. Graduate!

Arts and Sciences student affairs professionals help FSU students finish strong

By Taylor Anderson



Amy Soans

Courtesy photo



Cassy Alexander

Courtesy photo

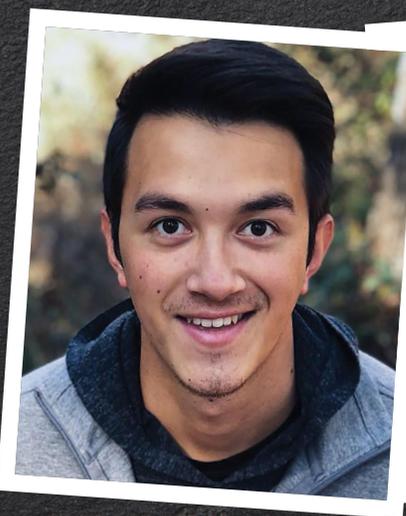
Kirstin Soper was instantly captivated by Florida State University's one-of-a-kind campus and its overwhelming sense of community. Her first impression was one shared by many incoming freshmen: a feeling she had just found her new home.

The four years students spend earning their undergraduate degrees can be an adjustment, filled with both triumph and tears, and shifting areas of study as students follow new-found interests. Sometimes that means extending their time at FSU to accommodate additional majors or even pursue dual bachelor's degrees.

Soper, who came into FSU having earned her associate's degree in high school, quickly declared a major in psychology. In the midst of her coursework, however, she realized she truly enjoyed writing papers and began considering a second major, in English.

"I was on track to graduate in two years but due to the COVID-19 pandemic, I suddenly had the time to assess if I was truly ready to graduate on that accelerated timeline. Ultimately, I decided to double major in English and extend my time at FSU," Soper said.

Thanks to the wide range of resources that FSU has to offer and meetings with her advisers, Soper carved out her ideal



Eric Jones

Photo courtesy Jazmin Murillo



Shellie Camp

Photo courtesy J. Parks Camp

path to academic success. Now slated to graduate in Spring 2022, she has her sights set on attending graduate school.

Stepping up

For some students, facing the final steps of one's undergraduate career can be intimidating, especially for those who thrived in high school but had a difficult time adjusting to college life and have battled for each inch of progress.

The Student Affairs office in the College of Arts and Sciences is a lifeline for students who need extra guidance and support as they complete major requirements and march toward graduation. There, students are aided by compassionate and caring professionals who are fully invested in helping Seminoles finish strong.

Amy Soans, assistant dean of student affairs, has the main mission to support and guide students through their graduate college experience and to help them deal with unforeseen circumstances.

"No two students are the same," Soans said. "There's so much joy in being part of their individual stories and seeing them through to the finish line."

While each member of the Student Affairs office has their own specialty, the emphasis on collaboration means the team often works together to address students' unique challenges.

Keeping track

Academic program specialists Micah Weisman and Eric Jones are strong advocates for planning ahead. When students enroll at FSU, they are given an academic map that charts the courses needed to achieve a degree in their specific major. Weisman and Jones keep students on track by making sure they have satisfied both general education and specific college requirements.

"Navigating the requirements can be a bit of a puzzle, but a larger part of my job is letting students know they are not alone in the pro-

cess," Weisman said. "Our office understands situations may come up and alter your journey, so we will do everything we can to help you stay organized and get your degree."

Jones appreciates being a source of stress relief for students and boosting their confidence so they look forward to the momentous event that is graduation.

"Our Student Affairs office provides a variety of services so students have a clear image of what's ahead of them," Jones said. "Having been through the graduation process myself, I know what students need to achieve stress-free success."

Finding support

The beginning and end of a student's academic journey can be stressful, but some students feel pressure the whole way through. With the common goal of helping students in crisis reach graduation, assistant directors Shellie Camp, Cassy Alexander, and Robbin Peoples offer academic support to those enduring hardship by reviewing undergraduate requests for course drops and withdrawals, major changes, and readmission into the university.

"Some students step away from FSU for a few semesters and some step away for 30 years," Camp said. "My job is to make sure students in both cases are able to assess the requirements needed to graduate and walk across the stage."

For Christopher Sanders, the path to graduation was unlike many others. After struggling to maintain a healthy work-life balance, Sanders was academically dismissed from FSU in the spring of his senior year.

"Having to leave FSU prepared me to accept and love myself, even when I have to quit," he said. "It also forced me to have extra compassion for those who may be going through their own quiet crises."

With the support of assistant director Robbin Peoples and a scholarship from the Manatee Community Foundation funding his continued

education, Sanders returned to FSU after a five-year break and graduated in Fall 2020 with a bachelor's in history and interdisciplinary social sciences. He is now the technology enrichment teacher at Visible Men's Academy in Bradenton, Fla.

"My favorite part is to see a student who despite experiencing challenges or setbacks, did not give up," Peoples said. "To see their hard work pay off is so rewarding, especially knowing we play a small role in helping them get there." <

Taylor Anderson is pursuing a bachelor's in media/communication studies with a minor in art history. She plans to graduate in Fall 2021.

Christopher Sanders

Photo courtesy George Jonathan



Kirstin Soper

Courtesy photo



Florida State's chief legislative affairs officer Clay Ingram.

Legislative Champion

Alumnus Clay Ingram returns to campus as FSU's chief lobbyist

By Tom Morgan

Photo by FSU Photography Services. Opposite: Photo courtesy Florida State Heritage & University Archives.

Like many Florida State alumni, Clay Ingram first became a Seminole standing next to his mailbox, reading a letter. The difference, however, was Ingram's letter arrived when he was a junior in high school. And it came from Bobby Bowden.

At the height of one of college sports' greatest dynasties — 1990's 'Noles football — the legendary coach saw Ingram's game tape. The rest is history: Ingram chose FSU and, as long snapper, helped the team win its second national championship of the decade in 1999.

After more than 20 years, Ingram is back on campus, this time as a different kind of champion. As FSU's chief legislative affairs officer, the primary lobbyist advocating for the university to state lawmakers, Ingram has a new title, but the role is a continuation of his lifelong, off-the-field passion for politics and public service.

Public servant

"I was interested in current events, even as a kid. I wanted to affect things I saw on the news," Ingram said. "As I got older, I realized I could do that by getting involved in the political process, and that desire to effect change grew stronger."

After short stints as a high school teacher and football coach, Ingram turned to politics, where he served his hometown of Pensacola from 2010 to 2018 in the Florida House of Representatives. As a committee chair, he oversaw state road, bridge, and business infrastructure plans, and veteran-focused projects on behalf of Pensacola's immense military community.

"I miss getting calls from exasperated constituents and being able to help," Ingram said. "It was incredibly rewarding to help a single mother get child support or help someone having a technical problem get their driver's license."

Following his House term, Ingram became CEO of Volunteer Florida, a state agency that administers national service programs, such as AmeriCorps, and coordinates volunteers and donations before and after disasters.

University advocate

Ingram joined FSU's Office of Governmental Relations in 2020, assuming the chief lobbyist role from Kathy Mears, who moved downtown to serve as chief of staff to the Florida Senate president. In addition to advocating for FSU, Ingram is a conduit connecting legislators and staff, both providing and receiving information.

"A good lobbyist can be an incredible resource regarding institutional knowledge or subject-matter expertise, giving you their perspective and the antithesis. I've tried to embrace that, to be an honest broker of information while being a passionate advocate," he said.

Ingram helps Florida's government make informed decisions when writing laws and policies, and formulating its \$92 billion-plus annual budget. Some decisions have a massive impact on FSU, and an outsized effect on the College of Arts and Sciences, the largest and most academically diverse on campus, said Dean Sam Huckaba.

"It's not a given we'll get the funding we desire from the Legislature. FSU has to make the case every single year, and that makes Clay's role necessary and very important," Huckaba said.

State investment

When lawmakers invest in FSU, it can lead to economic growth and paradigm-shifting scientific achievement. State lawmakers played a key role in persuading the National Science Foundation to award the National High Magnetic Field Laboratory to a three-institution partnership including FSU, the University of Florida, and Los Alamos National Laboratory in 1990.

Scientists at the FSU-headquartered MagLab use high magnetic fields to study everything from cancer cells to lithium batteries in innovative ways, and its ranks include Arts and Sciences and FAMU-FSU College of Engineering professors, as well as full-time, world-class researchers and staff.

The lab also hosts about 1,800 scientists from dozens of countries annually as it's the only



Clay Ingram and the 1999 'Noles in action.

facility of its kind in the U.S. and the largest, highest-powered magnet laboratory in the world.

"Findings at the lab now result in a steady stream of about 450 refereed publications annually with Florida State on the byline," said MagLab Director Greg Boebinger, who is also a professor of physics. "Professors and researchers with world-unique skills have come to FSU because they want proximity to the MagLab."

The state government is a supportive stakeholder in the venture, which returns more than \$6.50 in economic activity per \$1 invested by the state, Boebinger said, but the work requires ongoing explanation for lawmakers because of its breadth and complexity.

"It's hugely important we have a lobbyist who can present our stories from across the university and advocate for Florida State," he said. <

Voice your support

FSU alumni, students, and community members can help convey the university's value to lawmakers through the Advocate for Florida State program. This statewide network is vital to FSU's success and allows your voice to be heard during the legislative process.

Learn more and sign up today at advocateforfloridastate.fsu.edu.



Richard Del Rio continues his postdoctoral work remotely during the COVID-19 pandemic. Courtesy photo.

Doctoral **Dynamos**

Postdoctoral scholars contribute to Florida State's research excellence

By McKenzie Harris

Roberta Tatti is essential to the research pursuits in Florida State's interdisciplinary Program in Neuroscience, but she's not a faculty member. Or a staff member. Or a student. Tatti and nearly 250 other researchers at FSU hold a role unlike any other at the university — they are postdoctoral scholars.

The period after earning a doctorate is an exciting time in a scholar's career, and postdoctoral appointments provide essential training while allowing the hosting university to benefit from an individual dedicated purely to research activities. The Carnegie Foundation ranks FSU in its prestigious doctoral research-intensive category, the highest for a graduate-research university, which means FSU's postdocs have unprecedented opportunities to explore their academic fields and to drive research to new heights with their expertise.

"Postdoctoral scholars are the backbone of a research-intensive university," said Debra Fadool, director for the Office of Postdoctoral Affairs, associate dean of the FSU Graduate School, and Distinguished Research Professor in the Department of Biological Science.



Roberta Tatti. Courtesy photo.

"Unlike professors who have many university, teaching, grant writing or research management responsibilities, postdoctoral scholars dedicate almost all of their efforts to conducting research," she said.

Because of this intense commitment to research and postdocs' continual presence in laboratories across departments, they are heavily involved in day-to-day intellectual discussions pertaining to research team strategy, as well as supervising doctoral students and training undergraduate students.

Intensive preparation

Resources and development opportunities are provided to postdoctoral researchers currently training at FSU through the Office of Postdoctoral Affairs, founded in 2015 by the combined efforts of the Office of the Vice President for Research, the Office of the Provost, and the FSU Graduate School. Some of their most notable opportunities include the Fall Postdoctoral Symposium, which features interdisciplinary keynote speakers; guest panelists; the Poster Competition, which allows scholars to share

their research across disciplines through appealing posters; and the Five-Minute Research Competition, which gives researchers five minutes or less to explain the nuances of their work, jointly hosted by the FSU Postdoctoral Association. The Spring Event, geared toward professional development, includes workshops, panels, and potluck from countries represented by the postdoctoral fellows.

Tatti, a native of Italy working in Fadool's laboratory, came to the university through the National Institutes of Health-sponsored Chemosensory Training Program. In addition to conducting research on how the olfactory system can serve as a metabolic sensor, Tatti assists and trains undergraduate and graduate students in the lab and supports Fadool in planning, writing, and submitting grant applications.

"There's so much work going on beyond the published research," Tatti said. "A postdoctoral researcher is someone both faculty and younger students can depend on for anything in the lab, whether it's recording hourly data, guiding student experiments, or anything else the lab needs."

There's so much work going on beyond the published research. A postdoctoral researcher is someone both faculty and younger students can depend on for anything in the lab, whether it's recording hourly data, guiding student experiments, or anything else the lab needs."

– Roberta Tatti
FSU Postdoctoral Research Fellow

Upon the completion of postdoctoral training, many scholars pursue professorship tracks in academia or go on to work as scientists in research, industry, or government, or in other highly technical jobs. Tatti's next steps include training as a chemist to work for the Florida Department of Environmental Protection.

Professional pipeline

The Provost Postdoctoral Fellowship Program, PFPF, is managed through the Office of Postdoctoral Affairs and is designed to diversify the pipeline of STEM faculty into academia. Its intent is to provide specialty postdoctoral training for top underrepresented scholars in the country for a period of two to three years. Although postdoctoral scholars can enter a number of highly technical professions, PFPF's mission is to increase women, disabled persons, veterans, economically disadvantaged individuals, individuals with varied ethnicity, and minority scholars into the faculty workforce.

Beyond their main research, those interested in working as industry scientists might hone their business skills while others interested in pursuing professorships may seek additional training in teaching.

LaTasha Holden, a PFPF Fellow in the inaugural training group, works in the Department of Psychology and is the winner of the 2019 Postdoctoral Poster Competition for interdisciplinary work. She is mentored by associate professor of psychology and developmental psychology area director Sara Hart. By combining cognitive, social, and developmental psychology approaches, Holden's research investigates

the impacts of students who are marginalized or underrepresented in different testing and learning contexts in order to develop strategies that better support students' needs.

This fall, Holden is set to begin a tenure-track position as an assistant professor of psychology at the University of Memphis, where she will focus on cognitive psychology and work in affiliation with that institution's Institute for Intelligent Systems.

"I've worked closely with undergraduate research assistants through psychology's Directed Individualized Studies course. After this course, I recruited my first graduate student collaborator who was funded in part through my PFPF grant," Holden said. "I'm thankful for the personal and professional support I've received from Sara Hart, her lab, and the support within the Department of Psychology and the Florida Center for Reading Research."

Interdisciplinary investigators

Richard Del Rio, another PFPF Fellow, conducts interdisciplinary research across the fields of history and medicine. From his position spanning the Department of History and the Department of Behavioral Science and Social Medicine, Del Rio examines the transformation of the American drug trade and its societal consequences.

His work focuses on compiling a market history detailing the relationship between pricing of proprietary medicine and political development of criminal justice policy in Chicago during the 19th and 20th centuries.



Yana Bebieva. Courtesy photo.

"Reflecting on my upbringing in New York, I came to recognize the policies, rhetoric and imaginings of the U.S. 'War on Drugs' as something that penetrated so many of the institutions and cultural spaces I interacted with," Del Rio said. "To understand this policy regime and how it became so pervasive, I started my search for origins 100 years in the past to examine the drug market before the involvement of criminal justice institutions and to understand how drug war discourse has changed over the years."

Due to the COVID-19 pandemic, many postdocs' research has taken a new route. While he is currently unable to travel to access archives in person, many of Del Rio's days are spent communicating with archivists and determining how to access hundreds of records necessary to his research. He hopes his work will contribute to new harm-reduction policy considerations more inclusive to groups whose positions have historically been excluded from policy decisions.

"My favorite thing about being a postdoctoral scholar at FSU is having the complete freedom to pursue my intellectual curiosity," Del Rio said. "I'm thankful to be able to contribute to the dynamism of this research institution and have my research interests be received enthusiastically and with collegiality."

My favorite thing about being a postdoctoral scholar at FSU is having the complete freedom to pursue my intellectual curiosity."

*– Richard Del Rio,
Provost Postdoctoral Fellowship Program Fellow*



Yana Bebieva and her adviser, FSU Geophysical Fluid Dynamics Institute Director Kevin Speer, conduct a fire experiment. Courtesy photo.

Critical collaborators

Yana Bebieva is a physicist and environmental scientist from Russia working with FSU's Geophysical Fluid Dynamics Institute, the mission of which is promoting study of fluid-dynamical phenomena in Earth's atmosphere, bodies of water, and fluid portions of the planet's interior and applying this knowledge to solving geoscience and environmental problems. Bebieva is a College of Arts and Sciences Dean's Postdoctoral Scholar Fellow, and her scholarship, which focuses on dynamics and thermodynamics of polar oceans and the dynamics of wildfires, is supported in part by the National Science Foundation. The A&S Dean's Postdoctoral Scholar Fellows Program supports more than 30 FSU postdocs with \$1.2 million in annual funding.

"I greatly appreciate how supportive and social FSU's postdoctoral community is," Bebieva said. "The social interactions inspire professional collaborations. We just finished a collaborative experiment at the FAMU-FSU College of Engineering."

At FSU, Bebieva developed and taught two courses in the FSU Honors Program. She also received a Spring 2020 Travel Award and took

third place in the 2020 Five-Minute Research Competition for explaining her fire spread research, which examines wind structure where surface fires spread.

"Postdoctoral fellows play a crucial role in FSU's research enterprise. Our professors and graduate and undergraduate students engaged in research projects could not be as successful and prolific without the indispensable contributions of the postdocs in their groups," said Mark

Riley, dean of the Graduate School and Robert O. Lawton Distinguished Professor of Physics. "The essential part played by these brilliant individuals in the overall vitality of a Research I university simply cannot be overstated." <

McKenzie Harris is pursuing a master's in media/communication studies. She earned a bachelor's in English with a concentration in editing, writing and media in 2020.

LaTasha Holden (center) and fellow honorees during the 2019 Postdoctoral Symposium. Courtesy photo.





FLORIDA STATE UNIVERSITY
COLLEGE OF ARTS & SCIENCES

MagLab director, physics professor named to the National Academy of Sciences

Greg Boebinger, director of the Florida State University-headquartered National High Magnetic Field Laboratory and a professor in the FSU Department of Physics, has been named a member of the National Academy of Sciences, an esteemed designation recognizing his distinguished career in physics.

Boebinger joins eight current and retired FSU faculty as members of a national academy, including physics professor and current MagLab Chief Scientist Laura Greene. Considered one of the highest honors a scientist can receive, the National Academy of Sciences was established under a congressional charter and signed by President Abraham Lincoln in 1863 to provide science and technology expertise to the nation.

Photo courtesy of the National High Magnetic Field Laboratory.



SPECTRUM

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