



RESEARCH

QUARTERLY RESEARCH REPORT
FEBRUARY 2024



“Andrew’s Glacier”

by Todd Anderson, Clemson associate professor
Featured in Art X Climate released by the White House



From the Senior Vice President for Research, Scholarship and Creative Endeavors

Momentum of the past fiscal year has carried into the current year for our research enterprise.

Not only do our metrics remain strong (awards, proposals, etc.), but Clemson is proving a destination for the sharing of great ideas, for innovating, for pursuing big ideas, for coming to build a research program. This fall, for example, we welcomed nearly 70 new professors, associate professors and assistant professors to Clemson, along with nearly 50 postdoctoral research fellows and research professors. These faculty bring fresh new ideas to grow our research portfolio across our footprint, and I am excited to see them build their research programs here at Clemson. A list of our new faculty is available [here](#).



Tanju Karanfil

This fall, we also welcomed three prestigious National Academy members to campus to speak to faculty and students:

- geneticist Anne Stone, a member of the National Academy of Sciences and fellow of the American Association for the Advancement of Science who is heralded for her work to recover ancient DNA that unlocks clues to infectious disease and evolution;
- electrical engineer Kevin Tomsovic, a member of the National Academy of Engineering known for his work with intelligent systems;
- and physicist Arthur Hebard, a member of the National Academy of Sciences noted for his work with superconductivity and quantum materials.

These individuals are at the top of their fields, so having them at Clemson to share their thoughts on where the research is headed is incredibly valuable to our scholars as we look to push the boundaries of science and discovery and elevate Clemson's research enterprise to another level.

Speaking of our scholars, I am continuously amazed at the honors and recognitions they receive for their research, scholarship and creative endeavors. I have included numerous examples of honors and achievements of our faculty and students on [pages 14-20](#).

And, we continue to elevate our research enterprise to new levels:

- Awards topped \$69 million through the first quarter of FY2024, compared to \$42.9 million a year ago ([page 9](#)).
- Competitive expenditures topped \$44 million, up from \$36 million ([pages 6-7](#)).
- And, we have earned numerous high-value awards ([pages 10-12](#)). In fact, we have earned 106 awards valued above \$2 million since 2015, bringing a total of \$631 million to Clemson.



Anne Stone speaks to a packed auditorium at the Watt Family Innovation Center.



From the Senior Vice President for Research, Scholarship and Creative Endeavors

We are doing more than ever before. In FY2023, for example, Clemson managed nearly 2,000 active awards, an increase of 64% from a decade ago. The value of those projects is nearly \$737 million, almost triple the amount managed in FY2014. During the same period, the number of T/TT faculty increased only 12%, while we almost doubled the number of research faculty and post-doctoral associates. This shows the significant change in the research culture at Clemson; faculty are submitting more and higher-value proposals, which also resulted in a significant increase in research faculty. A breakdown of projects and award value is included in the table at right.

There is much good news to share, and we have many inspired faculty members who are elevating Clemson through their research, scholarship and creative endeavors. This report includes [profiles of one faculty member from each college](#) to give you an idea of the breadth of work happening at Clemson. I hope you'll enjoy learning about them, as I have.

Fiscal Year	Active Projects	Award Value	Faculty (tenure/track)	Postdocs & Res. Faculty
2014	1,215	\$257M	875	65
2015	1,186	\$243M	878	77
2016	1,255	\$273M	856	86
2017	1,351	\$311M	910	94
2018	1,345	\$360M	920	91
2019	1,369	\$391M	950	103
2020	1,505	\$413M	953	106
2021	1,522	\$506M	964	113
2022	1,746	\$551M	984	116
2023	1,987	\$737M	976	130

Sincerely,

Tanju Karanfil, Ph.D., PE, BCEE, IWA Fellow

Senior Vice President for Research, Scholarship and Creative Endeavors

Clemson University

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RESEARCH

RESEARCH METRICS

This section covers institutional research productivity with data on proposal submissions, awards and expenditures.

Executive Summary

- Clemson reported total R&D expenditures of \$263 million for 2022 to the National Science Foundation Higher Education Research and Development (HERD) Survey. This is an increase of 11 percent from 2021 and marks the first time Clemson has surpassed \$250 million ([page 5](#)).
- Competitive expenditures topped \$44 million during the first quarter of FY2024, an increase of 22 percent from the first quarter of the previous year ([pages 6-7](#)).
- Proposal submissions reached \$210 million for the first quarter and new targets for the colleges have been set for FY2024 ([page 8](#)).
- Research awards reached \$69 million during the first quarter of FY2024, up 60 percent from the first quarter of the prior year. ([page 9](#)).
- A list of the top awards received during the first quarter is included on [pages 10-12](#).

The tables on the following pages provide details on proposal submissions, awards and expenditures per college/unit. Abbreviations used in the tables are listed below.

CAAC: College of Architecture, Art & Construction

CAH: College of Arts & Humanities

CAFLS & PSA: College of Agriculture, Forestry & Life Sciences and Public Service & Agriculture

CBSHS: College of Behavioral, Social & Health Sciences

CECAS: College of Engineering, Computing & Applied Sciences

COE: College of Education

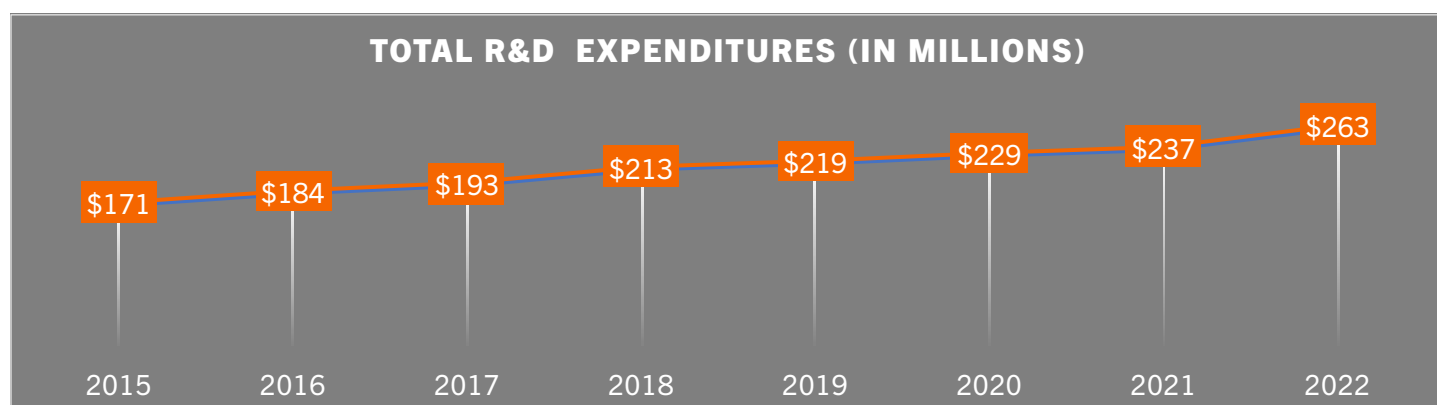
COB: Wilbur O. and Ann Powers College of Business

COS: College of Science

Total R&D Expenditures

Clemson's total R&D expenditures continued to increase in 2022 to \$263 million, as shown in the chart below. This data includes expenditures on all research revenue, including state support, gifts, external research services, competitive awards, and other sources, as reported to the National Science Foundation Higher Education Research and Development (HERD) Survey.

The table below shows various outputs (Ph.D. productivity, licensing revenue, patents, etc.) and the size of the workforce supporting research activity at Clemson.



	2020	2021	2022	2023	2024 First Quarter
NIH R01-Equivalent Awards	1	3	1	6	1
Doctorates Awarded	249	225	242	285	97
STEM Doctorates Awarded	162	159	172	190	59
Disclosures	68	44	50	61	19
Patents	12	15	33	11	3
Licenses/Options	13	13	27	16	1
Licensing Revenue	\$315,578	\$239,074	\$380,286	\$392,162	\$54,700
Start-up Companies (based on licenses/options)	1	1	4	4	1
Supporting Workforce					
Graduate Student Enrollment	5,627	5,538	5,448	6,401	5,872
Sponsored Graduate Research Assistants	637	546	729	926	848
Postdoctoral Fellows	98	106	117	112	130
Research Faculty: Permanent 100% Non-E&G Funded	18	12	2	5	3
Research Faculty: Temporary 100% Non-E&G Funded	54	45	32	28	35

Competitive Expenditures

Competitive expenditures topped \$44.3 million during the first quarter of FY2024, an increase of 22 percent from \$36 million during the first quarter of the previous year. Competitive expenditures include funds only from competitively bid projects, such as federal grant awards.

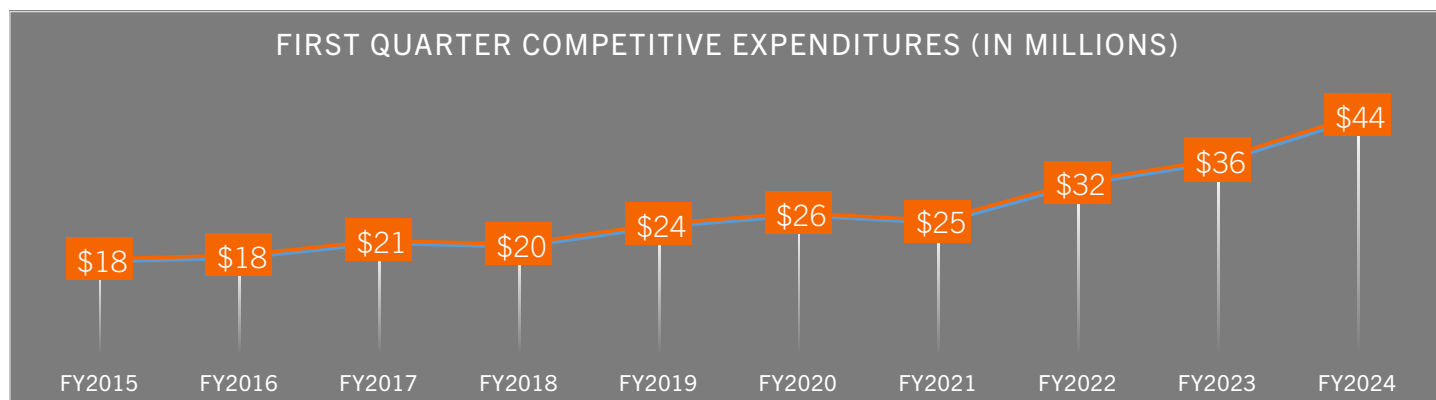
Additional details on expenditures by business unit, innovation cluster, funding source, and per tenure/tenure-track faculty member are included in the table on the next two pages.

The chart on the following page compares competitive expenditure data for the first quarters of the past 10 fiscal years.

Research Expenditures (millions)	2020	2021	2022	2023	2024 First Quarter
By Business Unit	\$105.3	\$114.4	\$141.4	\$160.3	\$44.3M
CAAC	\$1.2	\$1.0	\$1.1	\$1.3	\$0.4
CAH	\$0.4	\$0.1	\$0.2	\$0.6	\$0.3
CAFLS & PSA	\$20.2	\$20.5	\$25.0	\$29.7	\$7.0
COB	\$0.7	\$0.7	\$0.7	\$1.0	\$0.3
CECAS	\$46.4	\$54.4	\$71.7	\$76.0	\$21.6
CBSHS	\$6.7	\$9.0	\$12.0	\$16.7	\$4.6
COE	\$2.4	\$2.3	\$3.8	\$5.6	\$1.7
COS	\$17.3	\$15.9	\$18.5	\$23.1	\$6.6
VP for Res & Interdisc Inst	\$9.5	\$9.6	\$7.0	\$6.2	\$1.3
All Other	\$0.5	\$0.8	\$1.5	\$1.6	\$0.3
By Innovation Cluster	\$105.3	\$114.4	\$141.4	\$160.3	\$44.3M
Advanced Materials	\$13.5	\$14.3	\$18.6	\$21.1	\$7.1
Cyberinfrastructure & Big Data Science	\$4.4	\$5.5	\$8.2	\$7.7	\$2.0
Energy, Trans. & Advanced Manufacturing	\$14.5	\$19.9	\$27.7	\$29.5	\$7.6
Health Innovation	\$27.1	\$27.1	\$26.3	\$30.5	\$8.2
Human Resilience	\$9.7	\$12.7	\$14.8	\$19.1	\$5.2
Sustainable Environments	\$23.9	\$21.3	\$26.8	\$33.7	\$8.9
Other	\$12.1	\$13.6	\$19.6	\$20.2	\$5.3

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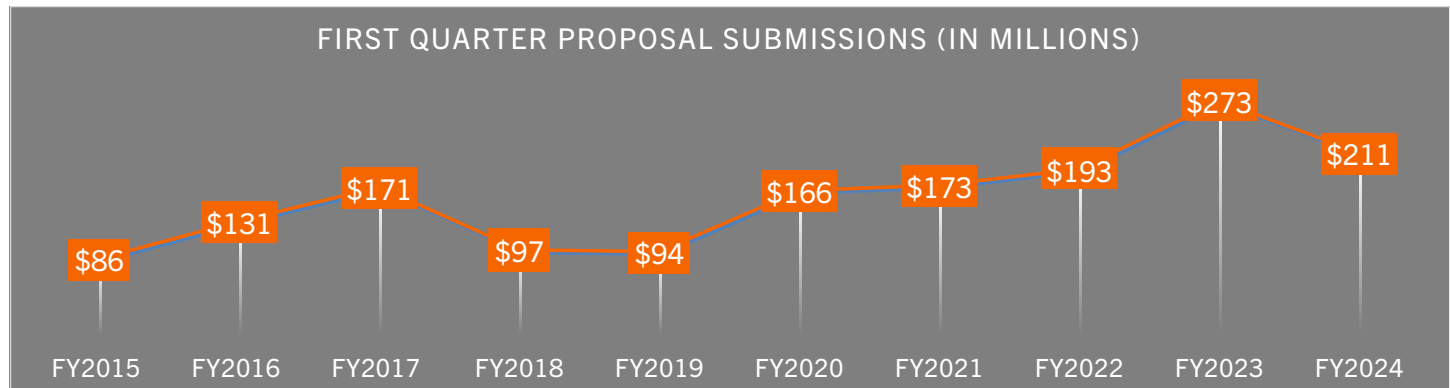
Competitive Expenditures



Research Expenditures (millions)	2020	2021	2022	2023	2024 First Quarter
By Funding Source	\$105.3	\$114.4	\$141.4	\$160.3	\$44.3M
Federal Government	\$85.2	\$95.1	\$125.1	\$141.0	\$39.8
Foundations, Societies, and Associations	\$6.9	\$6.2	\$4.6	\$5.4	\$1.3
Industry/Other	\$5.6	\$4.8	\$4.8	\$5.9	\$1.1
International	\$0.3	\$0.4	\$0.5	\$0.5	\$0.2
Local Government	\$0.5	\$0.8	\$0.9	\$0.7	\$0.1
State Government	\$6.8	\$7.3	\$6.2	\$8.2	\$1.8
Per T/TT Faculty Member					
CAAC	\$20,942	\$18,195	\$21,321	\$26,231	\$7,839
CAC	\$4,218	\$1,113	\$1,864	\$5,507	\$2,740
CAFLS & PSA	\$137,438	\$131,195	\$196,657	\$231,788	\$54,260
COB	\$6,991	\$7,132	\$6,787	\$9,865	\$3,082
CECAS	\$201,553	\$223,843	\$296,203	\$310,088	\$88,343
CBSHS	\$50,495	\$67,202	\$90,220	\$121,581	\$32,828
COE	\$47,742	\$48,805	\$80,058	\$121,114	\$33,333
COS	\$116,020	\$107,258	\$120,778	\$146,445	\$41,396
Clemson average (Total exp/Total T/TT faculty)	\$96,497	\$103,187	\$142,129	\$159,792	\$44,283

Proposal Submissions

Proposal submissions were nearly \$211 million in the first quarter of FY2024. Quarterly data for each year are shown in the graph below. Additional details on the number and value of proposal submissions for each college, as well as college targets for FY2024, are included in the table below.

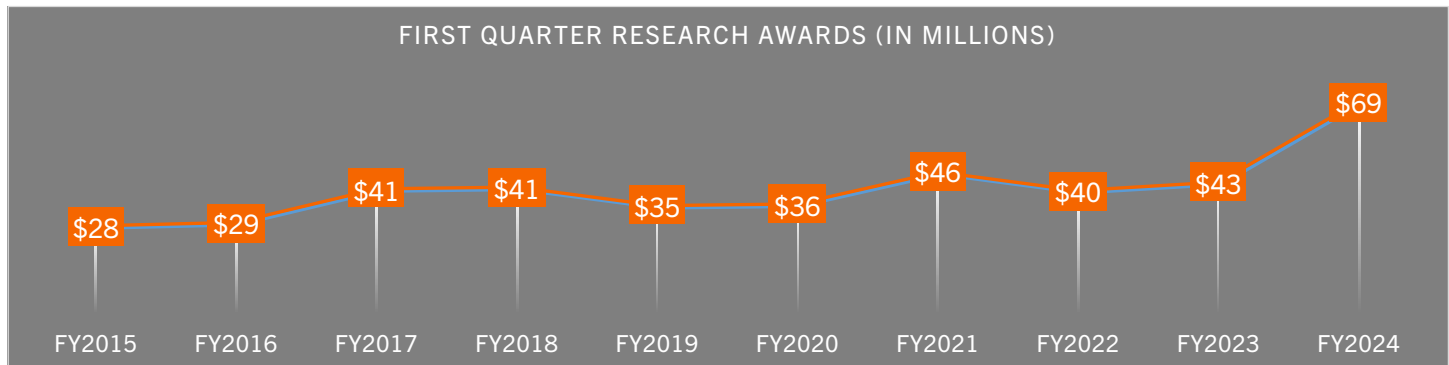


Proposal Submissions	2020	2021	2022	2023	2024 First Quarter	
By Count	1,728	1,581	1,492	1,680	335	
CAAC	60	49	24	20	2	
CAH	16	12	11	7	2	
CAFLS & PSA	509	426	392	451	93	
CBSHS	143	150	151	183	29	
CECAS	672	596	631	684	138	
COE	42	37	43	45	5	
COB	11	14	9	11	1	
COS	219	229	193	259	60	
VP for Res & Interdisc Inst	29	29	23	11	2	
All Other	27	39	15	9	3	
By Value (millions)	\$734	\$762.4	\$896	\$932.8	\$210.6	FY2024 Targets
CAC	\$2.7	\$3.8	\$6.5	\$10.4	\$3.0	\$11.00
CAH	\$3.2	\$1.7	\$1.7	\$3.0	\$0.1	\$3.25
CAFLS & PSA	\$99.3	\$89.7	\$249.9	\$149.6	\$47.4	\$160.00
CBSHS	\$41.1	\$64.3	\$73.1	\$106.5	\$28.3	\$112.00
CECAS	\$405.9	\$342.9	\$380.8	\$426.0	\$87.5	\$450.00
COE	\$18.9	\$22.4	\$32.3	\$34.4	\$6.5	\$36.00
COB	\$2.9	\$4.2	\$4.8	\$6.3	\$0.5	\$6.50
COS	\$129.3	\$175.4	\$127.3	\$169.8	\$32.7	\$180.00
VP for Res & Interdisc Inst	\$19.8	\$22.3	\$11.0	\$6.7	\$1.8	
All Other	\$10.7	\$35.7	\$8.9	\$20.3	\$2.6	

Competitive Research Awards

Research awards reached \$69 million during the first quarter of FY2024, up 60 percent from the first quarter of the prior year. The chart below compares awards received during the first quarter of each year. The table shows awards per college and the number of prestigious young investigator awards earned.

Information on the top awards received is included on [pages 10-12](#).



Research Awards	2020	2021	2022	2023	2024 First Quarter
By College/Unit (millions)	\$118.3	\$162.2	\$157.6	\$282.0	\$69.4
CAAC	\$1.0	\$1.0	\$0.4	\$3.4	\$0.1
CAH	\$0.4	\$0.4	\$0.8	\$2.1	\$0.3
CAFLS & PSA	\$26.5	\$29.9	\$26.9	\$107.4	\$14.7
CBSHS	\$7.7	\$17.4	\$13.7	\$21.0	\$5.0
CECAS	\$48.0	\$75.0	\$76.4	\$102.8	\$31.8
COE	\$2.3	\$5.1	\$5.7	\$10.1	\$2.6
COB	\$1.2	\$0.2	\$0.9	\$1.1	\$0.2
COS	\$14.2	\$25.4	\$17.8	\$24.4	\$11.0
VP for Res & Interdisc Inst	\$14.6	\$5.1	\$6.6	\$7.1	\$0.9
All Other	\$2.6	\$2.6	\$8.3	\$2.6	\$2.7
Young Investigator Awards	10	10	8	8	2
NSF CAREER	6	9	7	6	2
NIH KO1	1	-	-	-	-
Air Force Young Investigator	-	-	-	1	-
Army Young Investigator	1	-	-	-	-
DARPA Young Investigator	1	-	-	-	-
EPA Early Career	-	-	-	-	-
DOE Early Career	-	1	1	-	-
Arnold & Mabel Beckman Foundation	-	-	-	1	-
Dept. of Education Inst. of Educational Sciences	1	-	-	-	-

Top Competitive Awards (First Quarter FY2024)

The Centers for Disease Control and Prevention (CDC) awarded Clemson \$17.5 million to inform and improve disease-outbreak detection and response in South Carolina and beyond.

[The Disease Modeling and Analytics to Inform Outbreak Preparedness, Response, Intervention, Mitigation and Elimination in South Carolina \(DMA-PRIME\)](#) initiative will utilize data-driven approaches to conduct infectious disease forecasting, design decision-support toolkits and enhance methods of communication to public health organizations and decision-makers. The initiative is led by Lior Rennert, associate professor in the public health sciences department and director of the Center for Public Health Modeling and Response.



The \$17.5 million project is led by Lior Rennert (far right).

The initiative is led by Lior Rennert, associate professor in the public health sciences department and director of the Center for Public Health Modeling and Response.

The National Institutes of Health (NIH) awarded \$11 million to advance research on musculoskeletal health. The award is a phase 2 Center of Biomedical Research Excellence grant for the [South Carolina Translational Research Improving Musculoskeletal Health \(SC-TRIMH\)](#) led by Hai Yao, Clemson's associate vice president for biomedical innovation, Ernest R. Norville Endowed Chair in Biomedical Engineering and professor of bioengineering. SC-TRIMH aims to expand the critical mass of funded investigators conducting musculoskeletal research; strengthen innovative scientific cores that support and advance musculoskeletal research; and advance the ongoing development of an independent, sustainable, multidisciplinary thematic program.



Asian longhorned beetle

The U.S. Department of Agriculture (USDA) awarded Clemson \$6.5 million for a program to help eradicate the Asian longhorned beetle. The non-native pest causes extensive loss to ornamental and commercial tree species and forested areas, along with the associate industries that utilize these products or depend on forest-related tourism. The Asian longhorned beetle (ALB) snuck into South Carolina for the first time in 2020 and established a toehold in Lowcountry hardwood trees. The project is led by Steven Long, assistant director for plant industry. A Clemson team has been working to eradicate the pest [for several years](#).

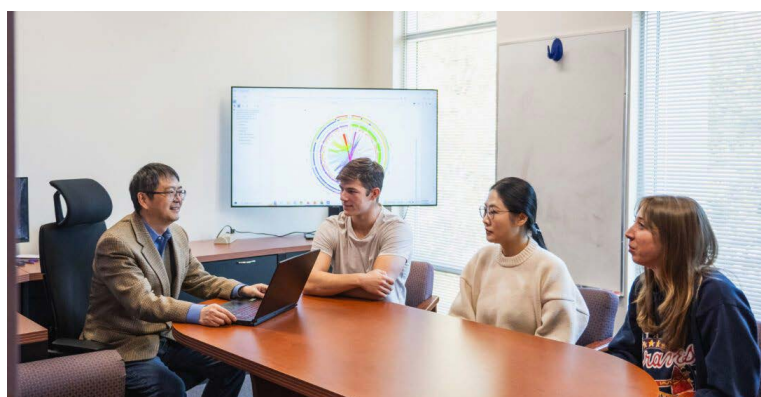
The National Science Foundation (NSF) awarded \$6 million for a project to advance translational research called "STRIDE - Stimulating Translation of Research via Intentional Development and Ecosystem." The project is led by K.C. Wang, professor of Electrical and Computer Engineering and C. Tycho Howle endowed chair. The project seeks to grow the university's research translation support infrastructure in the technology transfer office, colleges, and innovation center; empower faculty and students to pursue research translation and create research translation support entities across the institution; and provide financial and other support to seed translational research projects with high potential for impactful translation.

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Top Competitive Awards (First Quarter FY2024)

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The USDA's National Institute of Food and Agriculture (NIFA) awarded a Clemson-led team \$4.1 million for [research into the nation's most devastating citrus disease](#), an arboreal affliction that costs Florida alone \$1 billion annually. Feng Luo, the Marvin J. Pinson, Jr. '46 Distinguished Professor in the School of Computing, is the principal investigator on the project. With the funding, the team will deepen its research into Huanglongbing (HLB), a bacterial disease that affects citrus trees, leading to misshapen, bitter fruits and eventually killing the tree. It is transmitted by the Asian citrus psyllid insect.



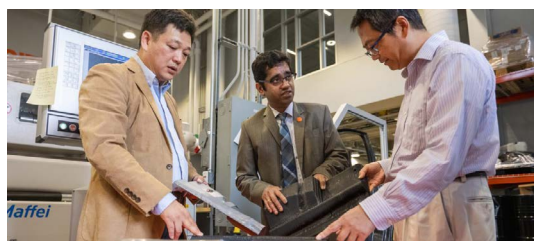
Feng Luo (left) with his team

A Clemson University team will receive \$3.2 million from Leidos Inc. to support an Office of the Director of National Intelligence, Intelligence Advanced Research Projects Activity, program to research advanced textiles. The team is supporting the design, development, and integration of electronic components into Active Smart Textile (AST) fibers, fabrics, and garments. The Clemson team is led by Christine Cole, an emeritus professor in the Department of Materials Science and Engineering who maintains an active research portfolio.



Cole

NIH awarded \$3.2 million for a project to help patients suffering from alcohol-use disorder, which leads to numerous health problems. Alcohol Use Disorder (AUD) is the third leading cause of preventable deaths in U.S. and accounts for more than 10% of U.S. hospital admissions. Treatments often fail to address the underlying cause of the problem, and patients are often at high risk for recurring medical complications. The Clemson team led by Kaileigh Byrne, associate professor of psychology, will work with Prisma Health to improve treatment by providing inpatients with peer coaching and recovery support.



Gang Li, left

NSF awarded Clemson \$3 million to develop a method using artificial intelligence for designing advanced composites and related manufacturing methods, as well as develop new training initiatives and courses to prepare students for work in AI-integrated composite design. The project, "Harnessing AI for Inverse Design Training in Advanced and Sustainable Composites (IDeAS Composites)," is led by Gang Li, professor of mechanical engineering.

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Top Competitive Awards (First Quarter FY2024)

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Jennifer Eaton, a mentor teacher

The U.S. Department of Education awarded Clemson \$2.4 million to [expand its teacher residency program](#) to school districts in the Pee Dee region. According to Laura Eicher, principal investigator for the project and director of the teacher residency program, the program's expansion will help increase the number of diverse, highly trained teachers in rural, underserved districts and make the College of Education's successful residency model available to more students and communities in the state.

The U.S. Department of Energy awarded Clemson \$2.3 million through a collaboration with the University of Florida to support the "Consortium for Nuclear Forensics (CNF)" project. CNF, which is led by the University of Florida, consists of 16 universities and seven national laboratories providing research, development, and human capital needed to create and develop new scientific discoveries, technologies, and capabilities related to nuclear forensics. Clemson's involvement includes Brian Powell, the Fjeld Professor in Nuclear Environmental Engineering and Science; Ken Marcus, the Robert Adger Bowen Professor of Chemistry; and Nicole Martinez, associate professor of environmental engineering and earth sciences.

Earning High-Dollar Awards

106 RESEARCH AWARDS
OF AT LEAST \$2M
WON SINCE 2015

THE TOTAL
VALUE OF THESE
PROJECTS IS **\$631**
MILLION



RESEARCH

RESEARCH NEWS

This section highlights research news from across the university.

Executive Summary

- A Clemson University alumnus and current department chair of the Department of Materials Science and Engineering received three national honors ([page 14](#)).
- A Clemson architecture team received a national award for health facility design ([page 15](#)).
- A previously overlooked stop on the Underground Railroad has been recognized by the National Park Service thanks in part to the scholarship of a Clemson English professor ([page 16](#)).
- Four recent Clemson graduates collected a national award for creating medical technology designed to help nurses monitor babies for urinary tract infections ([page 17](#)).
- A physics and astronomy Ph.D. student earned a rare NASA research grant to investigate the physics of merging black holes ([page 18](#)).
- A marketing professor has been quoted in the media for sharing the marketing lessons learned from the Taylor Swift-Travis Kelce romance ([page 19](#)).
- A Ph.D. student received a fellowship from Hitachi for her work to engineer paper-based packaging enhanced by cellulose nanocrystals taken from the proliferate kudzu plant ([page 20](#)).
- Numerous other examples of faculty and student recognition are included on pages 14-20.

Honors and Achievements

The following pages provide examples of the many ways Clemson faculty members and students are making an impact through their research, scholarship and creative endeavors.

Clemson University's Kyle Brinkman clinches triple global honors in ceramics

A Clemson University alumnus who went on to become a distinguished researcher and chair of Clemson's Department of Materials Science and Engineering continues to leave his mark on the study of ceramics with not one, not two, but three significant accolades.

Kyle Brinkman was recently selected as an academician with the World Academy of Ceramics, was elected fellow of the Royal Society of Chemistry and has received The Navrotsky Award for Experimental Thermodynamics of Solids from The American Ceramic Society.

Brinkman was among 15 candidates from around the globe selected as academicians, or professional members, for this year's Class "Science" by the World Academy of Ceramics.

The title honors internationally renowned contributions to the advancement of ceramics culture, science, technology, industry and art. Selection involves rigorous criteria, including personal contributions to ceramic knowledge, fostering global understanding within the ceramics community and leadership in ceramics education or research.

Brinkman was also elected fellow by The Royal Society of Chemistry. The honor recognizes those who have been in a senior leadership position for more than five years and have made an impact in any field of the chemical sciences.



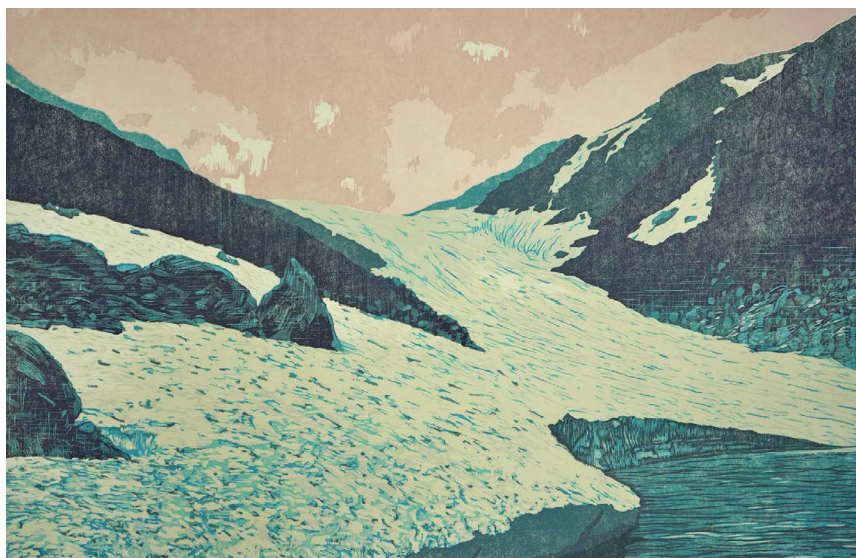
Brinkman

[READ MORE](#)

Clemson artist featured in White House report on climate change

Associate art professor Todd Anderson's woodcut print of Andrews Glacier was featured in the first Art x Climate gallery released by the White House in the Fifth National Climate Assessment. This artwork is part of a larger project that documents the last remaining (and rapidly retreating) glaciers of Rocky Mountain National Park in Colorado. It aims to help future generations understand the environmental challenges faced in the early 21st century.

[READ MORE](#)



Todd Anderson's print of Andrews Glacier

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Honors and Achievements

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Husson wins Founders Award

Scott Husson of Clemson University has been selected to receive the Founders Award from the Separations Division of the American Institute of Chemical Engineers.



Husson

Husson currently serves as the William B. “Bill” Sturgis, ‘57 and Martha Elizabeth “Martha Beth” Blackmon Sturgis Distinguished Professor in Chemical and Biomolecular Engineering at Clemson.

His research group uses synthetic and polymer chemistry to create advanced separation materials to tackle some of society’s grand challenges, including affordable medicine, access to clean water, sustainable energy generation and prevention of nuclear terror.

The Founders Award recognizes sustained leadership, service, research, and educational contributions to the separations community.

Clemson receives national award for health faculty design

The Center for Health Facilities Design and Testing (CHFDT) recently received the 2023 Touchstone Award in the Platinum Category through the Center for Health Design (CHD) for their project, Realizing Improved Patient Care through Human-Centered Design in the Operating Room (RIPCHD.OR). The RIPCHD.OR project was awarded its first Touchstone Award in the Gold Category in 2017. This award recognizes using an evidence-based design (EBD) process to increase value, improve outcomes and engage stakeholders.

[READ MORE](#)

Martinez-Duarte recognized by professional society

Rodrigo Martinez-Duarte, associate professor of mechanical engineering at Clemson University, was honored with the AES Electrophoresis Society Distinguished Service Award at the annual meeting in Reno, Nevada.

The award acknowledges Martinez-Duarte’s comprehensive involvement and pivotal contributions to the society’s success and expansion. He has held several leadership roles in the organization, serving as the president, vice president, executive vice president, and the chair of the awards committee among other significant positions.

[READ MORE](#)



Martinez-Duarte

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Honors and Achievements

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Reid

Clemson's Reid receives two national honors

Chris Reid is receiving two high honors from the Human Factors and Ergonomics Society (HFES). He has been elected Fellow of HFES and was selected as the 2023 Arnold M. Small and Betty M. Sanders President's Distinguished Service Award.

Reid, who is the immediate past president of HFES, serves as an adjunct professor of practice in the Department of Industrial Engineering at Clemson University and is a Boeing Technical Fellow.

Election to Fellow is HFES' highest honor and recognizes outstanding achievement, consistently superior professional performance, exceptional contributions, personal service to the society, and other meritorious accomplishments by society members. Reid is one of seven elected this year.

The Distinguished Service Award, considered the "capstone" award of HFES, was established in 1985 to acknowledge individuals whose career-long endeavors have significantly uplifted the profession and the Society.

[READ MORE](#)

Clemson professor highlights overlooked stop on Underground Railroad

A previously overlooked stop on the Underground Railroad has been recognized by the National Park Service thanks in part to the scholarship of Professor Susanna Ashton in Clemson University's Department of English.

U.S. Representative James E. Clyburn (SC-06) joined Ashton and representatives from Audubon South Carolina and the National Park Service at Audubon's Center and Sanctuary at Francis Beidler Forest to commemorate the designation of Four Holes Swamp as part of the National Underground Railroad Network to Freedom program. Four Holes Swamp — a blackwater tributary to the Edisto River — contains Beidler Forest, which hosts the largest stand of virgin bald cypress trees anywhere on earth and serves as a sanctuary to more than 140 species of birds.

The Network to Freedom program, which is an initiative of the National Park Service, "honors, preserves and promotes the history of resistance to enslavement through escape and flight, which continues to inspire people worldwide."

Audubon South Carolina's effort to have the site's historical significance recognized was sparked by Ashton's work. Her research into the stories of enslaved people led her to identify the author of the anonymous "Recollections of Slavery by a Runaway Slave" as James Matthews of Dorchester County, South Carolina.

[READ MORE](#)



Ashton

[continued on next page](#) ►

Honors and Achievements

► [continued from previous page](#)

Architecture's Deaton receives high honors

Lyndsey Deaton, assistant professor of architecture in Architecture + Health, was the senior architect and planner on two of six projects that received “Honor Awards” — the highest national awards given by the American Planning Association this year — with the firm, The Urban Collaborative. The first is an Honor Award for Outstanding Area/Site Development Plan for the Air Force Institute of Technology. The second is an Honor Award for Outstanding Collaborative Planning Project for the NASA Kennedy Space Center Vision Plan and Programmatic Environmental Assessment.



Deaton

Student innovation earns national recognition

Four recent Clemson University graduates collected a national award for creating medical technology designed to help nurses monitor babies for urinary tract infections.

Reagan Hamm, Allie Beiter, Maddie Thomas and Anna Wichmann were students last academic year when they developed the U-Sert, which adheres to diapers and changes colors to signal when the child has an infection.

All four graduated in May and pursued further education or went on to professional jobs in healthcare. Their invention won a part of the DEBUT Challenge called the NINR Technologies to Empower Nurses in Community Settings Prize.

The DEBUT Challenge is a nationwide competition offered by the National Institute of Biomedical Imaging and Bioengineering and the nonprofit VentureWell.

The team's advisors were John DesJardins, the Hambright Distinguished Professor in Engineering Leadership, and lecturer Tyler Harvey, both in bioengineering.

[READ MORE](#)



The team that developed the U-Sert included (from left to right): Maddie Thomas, Anna Wichmann, Allie Beiter and Reagan Hamm.

[continued on next page](#) ►

Honors and Achievements

► continued from previous page



From left: John DesJardins poses with CatheSure team members Jordan Suzanna Cole, Kathleen Fallon and Allison Reichart.

Bioengineering students win People's Choice Award

A team of Clemson University bioengineering students that has been winning accolades for its novel medical device triumphed in its biggest national test so far, taking first place in the undergraduate category and receiving the Arrow Electronics People's Choice Award at the Collegiate Inventors Competition.

The team is composed of Jordan Suzanna Cole, Kathleen Fallon, Karly Faith Ripple and Allison Reichart. They created the CatheSure, a device designed to prevent unnecessary surgery in hydrocephalus patients. The CatheSure is designed to wirelessly detect shunt malfunctions in hydrocephalus patients in less than five minutes. Hydrocephalus patients, often children, suffer from a build-up of cerebrospinal fluid in their brains, and a shunt is surgically placed in the body to help drain the fluid.

When the shunt malfunctions, it can result in symptoms, such as nausea, that could be linked to a wide range of maladies and are difficult to diagnose. The CatheSure is designed to make diagnosis faster and less invasive, helping prevent unnecessary exploratory brain surgeries, prolonged hospital stays and repeated radiation exposure.

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Ph.D. candidate earns prestigious NASA grant

Madeline Clyburn, a doctoral student at Clemson University, has been selected for a prestigious NASA research grant to investigate the physics of merging black holes. The program, Future Investigators in NASA Earth and Space Science Technology (FINESST), selects about two dozen young researchers each year nationally and is highly competitive.

Clyburn, a third-year Ph.D. student in the Department of Physics and Astronomy, will use computer simulations to predict how massive black hole binaries — systems that have two black holes in close orbit around each other — will appear to telescopes in the final days before they spiral inwards and coalesce into a single black hole.

Her predictions will be crucial to the discovery of binary black hole systems in the distant universe using two “messengers” — light waves and gravitational waves, which are ripples in space-time.

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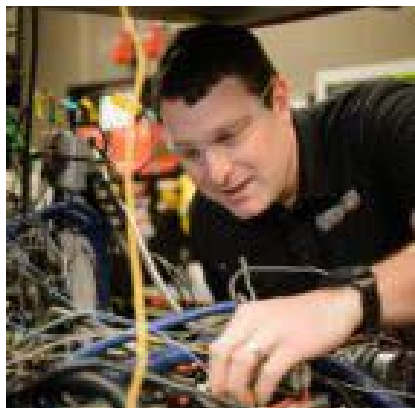


Clyburn

continued on next page ►

Honors and Achievements

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Robert Prucka works in his lab at the Clemson University International Center for Automotive Research.

Prucka named SAE International Fellow

A Clemson University professor who is internationally renowned for mentoring automotive engineering students and for his scholarship in advanced engine control has earned one of his profession's highest honors.

Robert Prucka, the Alan Kulwicki Professor of Motorsports Engineering, is among the newest fellows in SAE International, an association of about 200,000 members.

The SAE Fellow Membership designation is awarded to an elite group of professionals in the automotive, commercial vehicle, and aerospace industries who have made a significant impact on mobility through leadership, research, publishing, innovation, and volunteering. SAE International elects about 20 new fellows a year, making it an exceptional professional distinction.

[READ MORE](#)

Graduate student receives Space Grant fellowship

Alan Rowland, a graduate student in the Clemson University Department of Physics and Astronomy, has received a prestigious NASA SC Space Grant fellowship to explore the role nitrogen plays in sulfurized polymer-based lithium-sulfur batteries.

Rechargeable batteries are important in many NASA missions — for load leveling, for providing electrical power for survival during eclipse periods on solar-powered missions and as a power source for activities performed by astronauts outside their spacecraft. But NASA mission requirements for power and energy storage are way beyond what today's commercially available state-of-the-art electric vehicle batteries can achieve.

[READ MORE](#)



Rowland

Marketing professor making national news

Angeline Close Scheinbaum, the Dan Duncan Endowed Professor of Sports Marketing, has been featured in news outlets across the country for sharing the marketing lessons learned from the Taylor Swift-Travis Kelce romance that has connected pop music and football fans and captivated a national audience.

[READ MORE](#)

[continued on next page](#) ►

Honors and Achievements

► [continued from previous page](#)

Doctoral student named GMZ Graduate Fellow

Swati Goel, a doctoral student of Clemson's Ph.D. in Planning, Design and the Built Environment (PDBE), recently became the Foundation for Health Environments Research (FHER) 2023-24 Griffin/McKahan/Zilm (GMZ) Graduate Fellow.

The GMZ fellowship was established to encourage research related to the programming and planning of healthcare facilities and to advance the knowledge of planning and design for healthcare environments. According to the FHER, the fellowship allows recipients to better understand the team environment dynamics and what makes project delivery successful.



Goel

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Hitachi invests in student's plan for sustainable packaging

Clemson University Ph.D. student Afreen Sultana is working to engineer higher barrier, biodegradable, paper-based packaging enhanced by cellulose nanocrystals taken from the proliferate kudzu plant.

The effort earned her a \$25,000 fellowship from Hitachi High-Tech America Inc. to support her research and the completion of her doctoral degree in food technology.

Nearly 400 million tons of plastic waste is generated globally each year, only about 9 percent of which is recycled, according to the international Organization for Economic Cooperation and Development (OECD).

Paper-based packaging holds promise as an environmentally friendly, biodegradable alternative to petroleum-based plastics. The problem, however, is that paper is permeable to liquids, water vapors and gases. Current cardboard packaging often relies on synthetic polymer coatings to protect its contents. Recycling such materials can be challenging and costly.

Sultana is working to strengthen starch-based coatings by using cellulose nanocrystals taken from the invasive kudzu plant to improve paper-based packaging's resistance to liquids and gases. For the starch, Sultana extracts from pearl millet, a summer hay crop that is inexpensive to grow. Sultana is studying under the supervision of professor Scott Whiteside in the Department of Food, Nutrition and Packaging Sciences.

[READ MORE](#)



From left: Carl Hodines, Maurilio Martinez and Chris Watters of Hitachi High-Tech America Inc., Clemson Ph.D. student Afreen Sultana, Kohei Soda and Dean Plunkett of Hitachi, Clemson's Scott Whiteside and Tanju Karanfil.



RESEARCH

FOCUS ON FACULTY

This section features faculty members at Clemson University. Each College submits a profile of one faculty member.

Executive Summary

- Each college provided a brief introduction to a select faculty member. Click the links below to read about faculty from the respective college.
 - » [College of Agriculture, Forestry and Life Sciences](#)
 - » [College of Architecture, Art and Construction](#)
 - » [College of Arts and Humanities](#)
 - » [College of Behavioral, Social and Health Sciences](#)
 - » [Wilbur O. and Ann Powers College of Business](#)
 - » [College of Education](#)
 - » [College of Engineering, Computing and Applied Sciences](#)
 - » [College of Science](#)



College of
**AGRICULTURE, FORESTRY
AND LIFE SCIENCES**

Mažeika Patricio Sulliván, Ph.D.

Director

**Baruch Institute of Coastal Ecology and Forest
Science**



Sulliván joined Clemson University in August 2022 as director of the Baruch Institute and professor of forestry and environmental conservation. Prior to assuming these positions, he was faculty in the School of Environment and Natural Resources (SENR) at The Ohio State University (OSU), and the director of the Ramsar-designated Schiermeier Olentangy Wetland Research Park from 2014-2022.

As an aquatic scientist, Sulliván’s research focuses on community and trophic ecology; water quality and quantity; and land-water linkages in watershed, wetland and coastal ecosystems. He is particularly interested in translational approaches that apply science to conservation, restoration and policy. His research spans multiple geographic regions of the U.S. and internationally in Eastern Europe, the Caribbean, and South America, and has resulted in 76 peer-reviewed journal articles, five book chapters and 214 presentations.

Sulliván is also actively engaged in promoting and supporting equity, inclusion and diversity in ecology and natural resources through teaching, research and service activities. For example, research in the Streams, Rivers, and Estuaries (STRIVE) Lab is consistently linked to outreach activities that serve broad and diverse populations. At the national level, Sullivan leads the Justice, Equity, Diversity, and Inclusion (JEDI) Task Force for the Society for Freshwater Science, and is working with the U.S. Department of Justice, Bureau of Indian Affairs, and the Coeur d’Alene Tribe of northern Idaho on issues relative to Native American water rights. In October 2023, Sulliván testified about water protections in the U.S. Senate before the Committee on Environment and Public works, demonstrating his passion and expertise for science-based policy coupled with equity and inclusion considerations.

Select Accomplishments

- “Collaborative Research: EVOLVED – Embedding a Vision to Operationalize, Lift Up, and Value Equity and Diversity in the Consortium of Aquatic Science Societies” (\$584,724, National Science Foundation).
- “Wetlands to Combat Drought: Drought Preparedness on the Coeur d’Alene Reservation through Wetland Restoration and Monitoring” (\$499,495, U.S. Department of Commerce).
- “Environmental, Human, and Animal Health Risks from the Dissemination of Carbapenem-resistant Enterobacteriaceae into Agricultural Watersheds” (\$185,406, subaward through The Ohio State University).
- “Development of a Multi-scale Management Tool for Predicting and Mitigating HABs in Ohio River Watersheds” (\$91,712, U.S. Environmental Protection Agency).



College of
**ARCHITECTURE, ART
AND CONSTRUCTION**

Dustin Read, Ph.D.

Professor

Construction, Development and Planning



Read serves as director of the Master of Real Estate Development Program at Clemson University. Prior to this post, he held leadership positions in the real estate programs at Virginia Tech and the University of North Carolina at Charlotte.

Some of his research interests include affordable housing, land-use policy and public-private partnerships.

Read is a NAIOP (Commercial Real Estate Development Association) Research Foundation Distinguished Fellow, an inductee into the Institute of Real Estate Management's Academy of Authors and a seven-time recipient of honors from the American Real Estate Society for his contributions to real estate theory and practice. His research can be found in many of the leading academic journals in his field including the *Journal of Real Estate Finance and Economics*, *Journal of Real Estate Research* and *Journal of Real Estate Portfolio Management*.

In addition to his academic work, Read frequently consults with both public and private sector organizations to promote socially responsible real estate development.

Select Accomplishments

- Received a best paper award from the American Real Estate Society for his research on senior housing presented at the organization's annual conference.
- Emerald Literati Award (2020). Highly Commended Paper Published in *Property Management*.
- NAIOP Research Foundation Distinguished Fellow (2020).
- Read, D.C., and Sanderson, D.C. (2021). "Obstacles to comprehensive real estate asset management." *Journal of Financial Management of Property and Construction*, 26(1), 49-62.
- Fisher, P.J., and Read, D.C. (2020). "Learning about networking from women in the commercial real estate industry." *Journal of Real Estate Practice and Education*, 22(1), 13-21.
- Zillante, A., Read, D.C., and Seiler, M.J. (2020). "Assembling land for urban revitalization in the presence of linchpin parcels and information asymmetries: An experimental investigation." *Land Use Policy*, 99, 1-9.



College of
**ARTS AND
HUMANITIES**

H. Roger Grant, Ph.D., *In memoriam*

Kathryn and Calhoun Lemon Professor

Department of History and Geography



H. Roger Grant came to Clemson in 1996 from The University of Akron, where he had been teaching since 1970. A specialist in U.S. history and especially the Populist-Progressive era, he is recognized as one of the world's leading authorities on transportation history and American railroads. He has written or edited 37 academic books; his most recent are *Railroads and the American People* (2012), *The Louisville, Cincinnati & Charleston Railroad: Dreams of Linking North and South* (2014), *Railroaders without Borders: A History of the Railroad Development Corporation* (2015), *Electric Interurbans and the American People* (2016), *Rails to the Front: The Role of Railroads in Wartime* (with A.J. Veenendaal Jr.) (2017), *John W. Barringer III: Railroad Legend* (2018), *Transportation and the American People* (2019), and *A Mighty Fine Road: A History of the Chicago, Rock Island & Pacific Railroad Company* (2020).

Twice recognized by Clemson with awards for excellence in research, and more recently as the University's Centennial Professor, Grant was awarded the Doctor of Humane Letters by his undergraduate alma mater, Simpson College, in 2002. During spring semester 2005 Grant served as the Maxwell C. Weiner Distinguished Professor of Humanities at the University of Missouri–Rolla, today's Missouri University of Science and Technology. He was awarded the Kathryn and Calhoun Lemon Professorship in 2006. His book, "Sunset Cluster: A Shortline Railroad Saga," was published by Indiana University Press in summer of 2023. He is under contract with Indiana University Press for another book, "A History of Railroads in the Midwest." Grant serves on the board of directors of the Lexington Group in Transportation History, the Center for Railroad Photography and Art in Madison, Wisconsin, and the John W. Barringer III National Railroad Library in St. Louis, Missouri. He is a former editor of *Railroad History* magazine. He has authored two dozen books and articles too numerous to count. Grant makes railroad history relevant to new generations."

Grant passed away unexpectedly in November.

Select Accomplishments

- *The Station Agent and the American Railroad Experience*, Indiana University Press (2022).
- *A Mighty Fine Road: A History of the Chicago, Rock Island & Pacific Railroad Company*, Indiana University Press (2020).
- To celebrate its 75th anniversary, *Trains Magazine* in its November 2015 issue named 75 people of the past 75 years that are worthy of recognition, including Professor Grant: "If there's a chapter of railroad history that this scholar hasn't researched, we don't know what it is."



College of
**BEHAVIORAL, SOCIAL
AND HEALTH SCIENCES**

Aby Sene-Harper, Ph.D.

Assistant Professor

Parks, Recreation and Tourism Management



Sene-Harper is a trained environmental social scientist with expertise in managing cultural and natural resources in public lands. Her research lies at the intersections of parks and public lands management, sustainable tourism and rural development. For over a decade, Sene-Harper has worked closely with government land agencies to inform integrated management plans for conservation areas of international importance for biodiversity and socio-economic development (i.e. World Heritage Sites, National Parks, National Forests and National Wildlife Refuge).

Her current research explores African American heritage in wilderness areas of South Carolina. This project will assist African American communities and wilderness managers elevate their heritage and identify opportunities to support equitable economic development, land retention and strengthen partnerships connecting federal land agencies and wilderness-proximate African American communities. Her research is funded by the National Park Service, U.S. Forest Service and U.S. Department of Agriculture, and she is currently a key research personnel on a \$3.4 million Melon Foundation grant to develop a Black Heritage Trail linking Clemson University to the cities of Clemson and Seneca.

Sene-Harper has published multiple academic articles and technical reports on land agency community partnerships, community-based natural resource management, sustainable tourism and protected area management. Her work appears in leading academic journals including *Human Ecology*, *Rural Studies*, *Tourism Planning & Development*, *Sustainable Tourism*, *Leisure Sciences*, *Oryx: Cambridge International Journal of Conservation*.

Select Accomplishments

- Principal investigator on three federally funded awards totaling \$302,000.
- Published 12 peer-reviewed articles (2021-2023).
- Serves on the editorial board of three leading journals in her field, including *Tourism Planning & Development*, *Oryx: Cambridge International Journal of Conservation*.
- Serves on the Coastal Social and Economic Scientific Advisory committee of the SC Sea Grant.
- Co-authored a report to the National Academies of Sciences, Engineering, and Medicine on the evidence-base for understanding police use of force.



Wilbur O. and Ann Powers College of

BUSINESS**Brandon Lockhart, Ph.D.***Associate Professor***Department of Finance**

Lockhart is associate professor and Wells Fargo Faculty Scholar in the Department of Finance. He is a former corporate banker who conducts research on corporate investment and financing topics. He has published research on corporate capital structure, corporate lobbying and corporate tax avoidance. His recent published work focuses on links between financing constraints and corporate investment, labor market incentives for executives and corporate disclosure policies and executive compensation and corporate tax avoidance. His current work investigates the impact of executive compensation and labor market incentives on corporate debt contracts.

Lockhart teaches the first of two introductory corporate finance courses and an upper-level financial statement analysis and valuation course that draws on his previous work in corporate banking. He uses the opportunity of financial statement analysis to introduce his students to statistical and analytical software programming using large financial statement databases, preparing his students for corporate analyst roles. Lockhart also teaches the core corporate finance course in Clemson's MBA program, and the introductory finance course in Clemson's Business in Europe - Oxford summer study abroad program.

Lockhart received his undergraduate degree from Georgia Tech and his Ph.D. from the University of Florida. He was previously on the faculty at the University of Nebraska-Lincoln. While at Clemson, Lockhart has received departmental research productivity awards and two college-level graduate teaching awards.

Select Accomplishments

- "Judge ideology and debt contracting" with Thomas R. Kubick and David C. Mauer, *Journal of Banking and Finance*, Volume 152 (July 2023), 106859.
- "Internal capital and investment: Evidence from 2012 pension relief" with Thomas R. Kubick and John R. Robinson, *Contemporary Accounting Research*, Volume 38, Issue 3 (Fall 2021), pp. 2034-2070.
- "Industry tournament incentives and stock price crash risk" with Thomas R. Kubick, *Financial Management*, Volume 50, Issue 2 (Summer 2021), pp. 345-369.
- "Does inside debt moderate corporate tax avoidance?" with Thomas R. Kubick and John R. Robinson, *National Tax Journal*, Volume 73, Issue 1 (March 2020), pp. 47-76.
- "Does corporate lobbying activity provide useful information to credit markets?" with Emre Unlu, *Journal of Corporate Finance*, Volume 50 (June 2018), pp. 128-157.



Lindsey W. Rowe, Ph.D.

Assistant Professor

Education and Human Development



Rowe's research focuses on the language and literacy practices of emergent bilingual elementary school students. Specifically, she is interested in expanding children's multilingual writing practices. She uses ethnographic and practitioner research methods to co-design and document learning environments that foster multilingual literacy practices. Her recent work also explores how pre-service teachers learn about literacy instruction for multilingual students.

She has published in premier, top-tier research and practitioner journals in her field, including *Reading Research Quarterly*, *Teaching and Teacher Education*, *Bilingual Research Journal*, *Journal of Early Childhood Literacy*, *TESOL Quarterly*, and *The Reading Teacher*. She has recently completed an internal College of Education grant that launched her classroom-based research in a Greenville elementary school and culminated in her submission of a Spencer Foundation Small Grant application. In fall 2023, she was awarded two prestigious early career literacy awards: the National Council of Teachers of English (NCTE) Promising Researcher Award (2023) and the Literacy Research Association's Reading Hall of Fame Emerging Scholars Fellowship (2023-2025). The latter will provide her with two years of mentorship from prominent literacy/writing scholar, Steve Graham.

Rowe reviews for several international literacy and language journals and is an active member of the Literacy Research Association (LRA) and American Education Research Association (AERA). At Clemson, she is the program coordinator for the Language, Literacy, and Culture Ph.D. program.

Select Accomplishments

- Recipient of the Reading Hall of Fame Emerging Scholars Fellowship (2023-2025).
- Recipient of the National Council of Teachers of English (NCTE) Promising Researcher Award (2023).
- Principal Investigator for Clemson University College of Education Internal Seed Grant, Inclusive Literacy Practices for Bi/Multilingual Elementary (\$9,999; 2022-2023); submitted Spencer Foundation, Research Grants on Education: Small grant, December 2023.
- Recipient of the Literacy Research Association (LRA) Student Outstanding Research Award (2021).



College of
**ENGINEERING, COMPUTING
AND APPLIED SCIENCES**

Fatemeh Afghah, Ph.D.

Associate Professor

Electrical and Computer Engineering



Afghah is an associate professor with the Electrical and Computer Engineering Department at Clemson University and the director of the Intelligent Systems and Wireless Networking (IS-WiN) Laboratory. She is also a faculty scholar at the Clemson University School of Health Research (CUSHR). Before joining Clemson University, she was an associate professor with the School of Informatics, Computing and Cyber Systems, at Northern Arizona University.

Her research interests include wireless communication networks, decision-making in multi-agent systems, Unmanned Aerial Vehicle (UAV) networks, security and artificial intelligence in healthcare. Her recent project involves autonomous decision-making in uncertain environments, using autonomous vehicles for disaster management and IoT security. Her research has received more than \$15 million in funding from the National Science Foundation, Air Force Office of Scientific Research, Air Force Research Laboratory, NASA and other agencies. She is the recipient of several awards, including the Air Force Office of Scientific Research Young Investigator Award in 2019, the NSF CAREER Award in 2020, Northern Arizona University's Most Promising New Scholar Award in 2020, NSF CISE Research Initiation Initiative (CRII) Award in 2017 and Best Paper Award at INFOCOM WiSRAN in 2022. She is the author/co-author of more than 150 peer-reviewed publications and seven U.S. patents.

Select Accomplishments

- Lead principal investigator (PI) on two large grants supported by the NASA FireSense and NSF Cyber-Physical Systems programs to develop wildfire detection and management strategies using autonomous drones, where she leads a team of researchers from Georgia Tech, Desert Research Institute, National Center for Atmospheric Research, University of Nevada, Northern Arizona University, U.S. Forest Services, and CAL FIRE.
- In 2020, she received the prestigious NSF CAREER award for developing communication and spectrum management technologies for drones operating in disaster management missions.
- In 2019, she received the prestigious AFOSR Young Investigator Award for her research on dynamic data-driven decision-making in autonomous UAV systems, for which there are only about 40 awardees per year across all disciplines in the US.
- She was the lead PI on an NSF Partnership for Innovation-Research Partnerships (PFI-RP) grant where she worked with a team of academic and industrial partners from NAU, AFRL, ASU, Lockheed Martin, CrossBar LLC and developed robust hardware-based security solutions using embedded memories.



Samantha A. Price, Ph.D.

Assistant Professor

Department of Biological Sciences



Price and her lab apply principles of data science to discover the ‘rules of life’ which govern the evolution of biodiversity across scales. Working at the interface of evolutionary and organismal biology their goal is to establish how the astonishing diversity of life we see today was influenced by past ecological and environmental events. The lab works on vertebrates, usually teleost fishes or mammals, as there are a wealth of data and studies that identify processes driving diversification on small timescales, which can be used to inform their predictions over deep time. This enables them to directly address one of the major challenges in evolutionary biology, which is linking pattern and process across scales. They focus on morphological traits linked to organismal performance, as they have the potential to be a target for natural selection and thus reveal adaptive responses over time. They specialize in generating vast morphological datasets that are analyzed using cutting-edge phylogenetic comparative methods in a high-performance computing framework. This ‘big data’ approach allows them to identify repeated evolutionary patterns that often go undetected at smaller scales. Uncovering such repetition is critical, as it implies responses to ecological or environmental shifts are to some extent predictable, which enables them to start linking past, present, and future responses. Price’s growing reputation as an expert in her field is evidenced by numerous invitations to give workshops and talks both nationally and internationally, including several keynote presentations.

One of Price’s long-term educational goals is to improve access to undergraduate research opportunities, as this is one of the key factors shown to improve the STEM career pipeline, especially for women and folks with marginalized identities. She has developed her Creative Inquiry program into a 2-3 semester Classroom-based Undergraduate Research Experience (CURE), where students participate in scientific discovery by working as a group to develop and test a novel scientific hypothesis and present the results. Price has mentored 26 undergraduate researchers, five graduate students and three postdoctoral researchers since arriving at Clemson in 2017, many of whom have received both internal and national grants and awards for their research.

Select Accomplishments

- Authored 45 peer-reviewed publications with more than 7,200 citations and three book chapters.
- Received more than \$1.5 million in National Science Foundation funding at Clemson, including a prestigious Faculty Early Career Development (NSF CAREER) grant.
- Provided 21 invited presentations, including two keynote talks (national and international meetings, symposia, and departmental seminars).



Division of

RESEARCH

Quarterly Research Report

February 2024