











RESEARCH

Quarterly Research Report

October 2026

Tanju Karanfil

Senior Vice President for Research,

Scholarship and Creative Endeavors

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

Research elevates Clemson's impact.

A lagging indicator of research success, invention disclosures are the first step in forming startup companies or licensing innovations that solve real-world problems and support job growth and economic expansion. At Clemsona, the number of disclosures has nearly doubled over the past five years, signaling a strong rise in research innovation and impact.



DriveSafety Inc. utilizes Clemson research in driving simulators used for clinical rehabilitation, one of many examples of translational research at Clemson.

Currently, the Clemson University Research Foundation (CURF) manages 128 active licenses – the highest level in its history – on innovations spanning health care, manufacturing, energy, agriculture, advanced materials, software and other sectors.

Our opportunities for translational research are growing. In FY2026, CURF received 81 invention disclosures, up 84% over the past five years. More information on translational research at Clemson, along with some examples of licensed Clemson technology, is on page 18.

Growth in these numbers reflects the university's overall research trajectory over the past decade. Total research and development expenditures, for example, doubled over the past 10 years to $372 million in FY2025, the latest year for which data is available from the National Science Foundation Higher Education Research and Development Survey (NSF HERD). Clemson now aligns well with peer institutions in total research and development expenditures and per capita output (see page 6).

Considering Clemson's size and the makeup of our faculty body, our research enterprise is strong. And, FY2026 was another successful year as Clemson researchers continued to push the boundaries of scholarship and discovery. Clemson proposal submissions topped $1.2 billion, about 60% higher than they were five years ago. Much of that growth is driven by Clemson's pursuit of high-value research projects valued at $2 million and above and even $5 million and above. The number of proposals submitted in these ranges in 2026 was double the number submitted in 2021, and Clemson has been successful winning high-value awards. In FY2026, competitive awards topped $200 million for the fourth consecutive year. These investments support a diverse range of research activities at Clemson, helping the university enhance its strengths and expertise in key areas such as agriculture, manufacturing, healthcare, workforce development, disaster response and national security. Full details on awards, proposals and expenditures are in the Research Metrics section on pages 4-12.



Chris Saski, professor of plant and environmental sciences, leads an $11 million cotton research project, one of numerous high-value research awards Clemson earned in fiscal year 2026.

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

Importantly, our faculty and students continue to be recognized nationally for the impact of their research and scholarship. Faculty are earning prestigious fellowships and lifetime achievement awards, while our students are competing for nationally prominent scholarships and winning international competitions.

This year, 12 Clemson faculty have earned early career awards. These career-catalysts are the most competitive, prestigious awards given to the brightest young minds in academia. Some of Clemson's most successful researchers were once recipients of these young investigator awards. With 12 new awards this year, 89 junior Clemson faculty have received prestigious young investigator awards over the past 10 years (see page 17).



Daniel Jones, assistant professor of biological sciences, is one of 12 Clemson junior faculty to earn a prestigious early career award this year.

Our faculty and students embody the curiosity, ingenuity and entrepreneurial spirit that defines Clemson research. There are so many great examples of our faculty and students earning recognition that elevates Clemson's reputation and confirms our impact. More details on honors and achievements on pages 13-16.

There is so much great research happening at Clemson. The Focus on Faculty section on pages 19-27 provides a profile of one faculty member from each college to provide examples of the breadth of research, scholarship and creative endeavors happening at Clemson. I hope you'll enjoy reading about their work as much as I have.

I have great pride in the research at Clemson and the people doing that work. Research elevates Clemson's impact and enhances our national reputation.



Go Tigers!

Sincerely,



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

Senior Vice President for Research, Scholarship and Creative Endeavors

Clemson University

RESEARCH

RESEARCH METRICS

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

Executive Summary

- Total R&D expenditures increased to $372 million at Clemson in 2025. See details on page 5.
- Competitive expenditures were $198 million in FY2026. Details on expenditures by business unit, innovation cluster, funding source and per tenure/tenure-track faculty member are included on pages 7-8.
- Proposal submissions were $1.2 billion in FY2026. Details on proposals per college, along with targets for FY2026, are on page 9.
- Research awards topped $200 million for the fourth consecutive year in FY2026. Details on awards per college are on page 10.
- Clemson faculty remain successful at earning high-value awards. A list of the largest grants received in FY2026 is on pages 11-12.

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: College of Agriculture, Forestry & Life Sciences

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

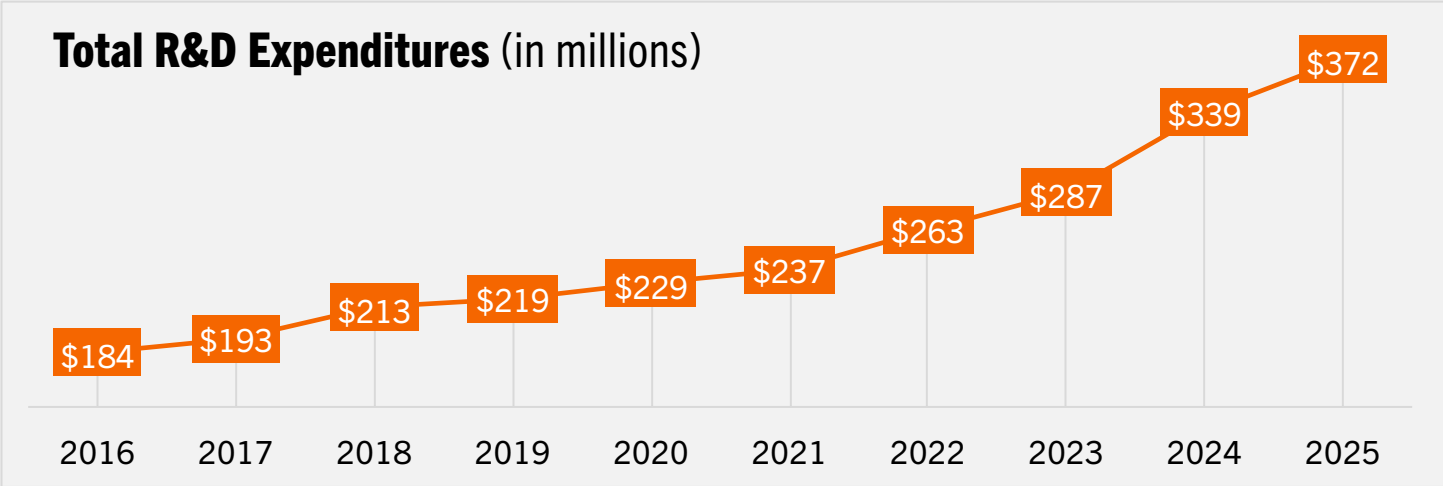
COS: College of Science

CVM: Harvey S. Peeler Jr. College of Veterinary Medicine

Total R&D Expenditures

Clemson's total R&D expenditures reached $372 million in FY2025, as shown in the graph 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.

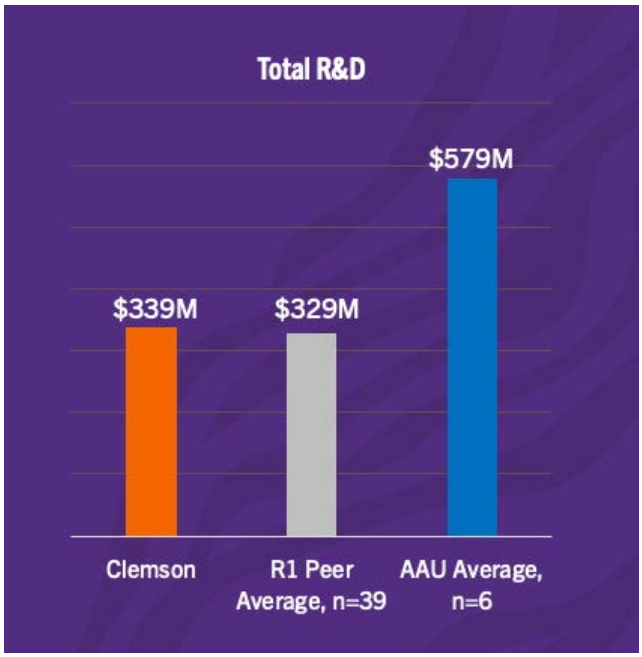


	2022	2023	2024	2025	2026
NIH R01-Equivalent Awards	1	6	2	3	2
Doctorates Awarded	242	285	310	318	343
STEM Doctorates Awarded	172	190	197	220	243
Disclosures	50	61	76	73	81
Patents	14	15	15	11	14
Licenses/Options	20	16	24	11	22
Licensing Revenue	$380,286	$392,162	$387,274	$410,660	$1,261,599
Start-up Companies (based on licenses/options)	4	4	7	8	9
Supporting Workforce					
Graduate Student Enrollment	5,448	6,401	5,872	5,676	5,485
Sponsored Graduate Research Assistants	729	926	1,049	1,031	944
Postdoctoral Fellows	117	112	141	151	156
Research Faculty: Permanent 100% Non-E&G Funded	2	5	4	3	4
Research Faculty: Temporary 100% Non-E&G Funded	32	28	36	56	50

Peer Comparisons

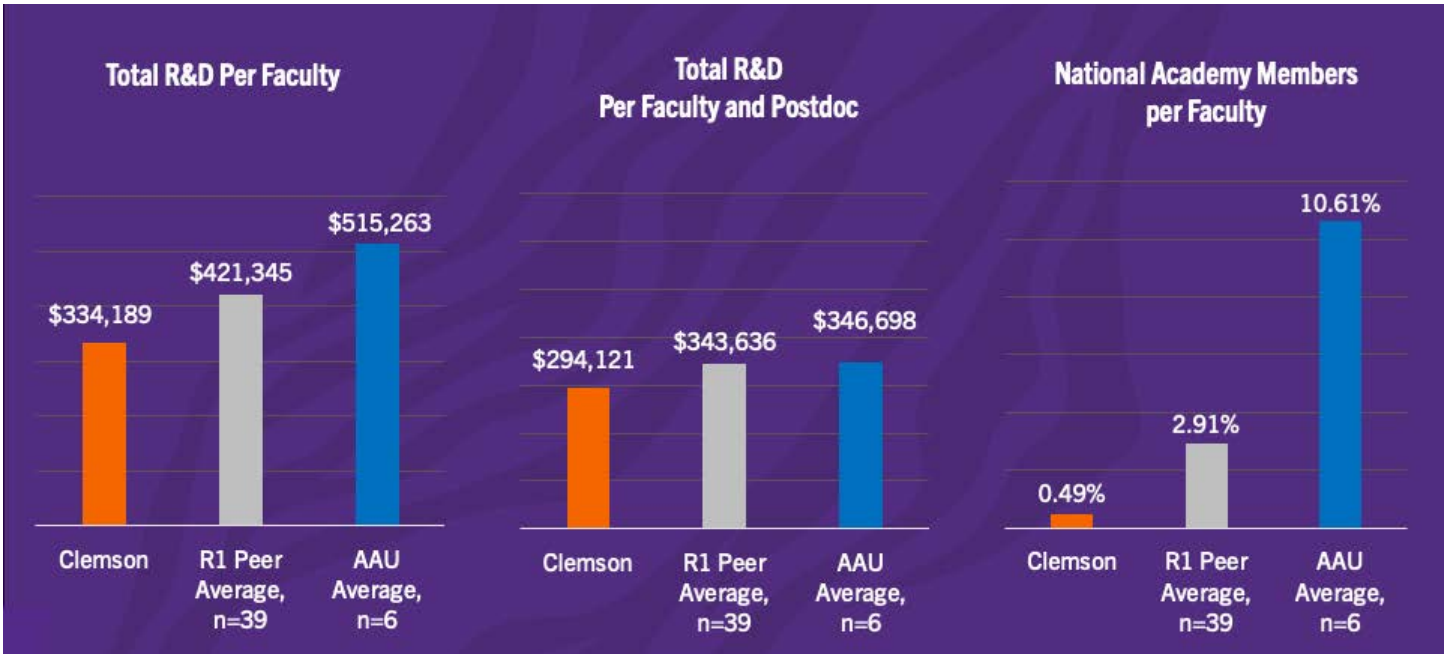
Clemson now aligns well with peer institutions in total research and development expenditures and per capita output. To compare to peers, we evaluate Carnegie R1 institutions and Association of American Universities (AAU) members with at least $100 million in annual total R&D expenditures. Our comparisons include only public institutions without medical schools; 39 R1 institutions meet this criteria, as do six AAU members.

The bar graph at right shows the average total research and development expenditures at the institutions, according to the National Science Foundation Higher Education Research and Development Survey. These comparisons use FY2024 data, the latest available for peer schools from NSF.



The graphs below compares per capita output as total research and development expenditures, based on National Science Foundation data, divided by tenure/ tenure-track faculty member and faculty member plus postdoctoral research associates (see the first two charts below). Clemson compares well in per capita output.

Institutions with higher levels of R&D have more National Academy members, as shown in the third bar chart below. These faculty members are highly productive, pushing per-capita output higher at their institutions. The six AAU members used in our peer comparison, for example, had total R&D per faculty member of $515,263. At these schools, more than 10% of the faculty body consists of National Academies members. At Clemson, less than one-half percent of the faculty are members of the National Academies. Our R1 peers also reported a higher percentage of National Academies membership than Clemson at about 3%.



Competitive Expenditures (FY2026)

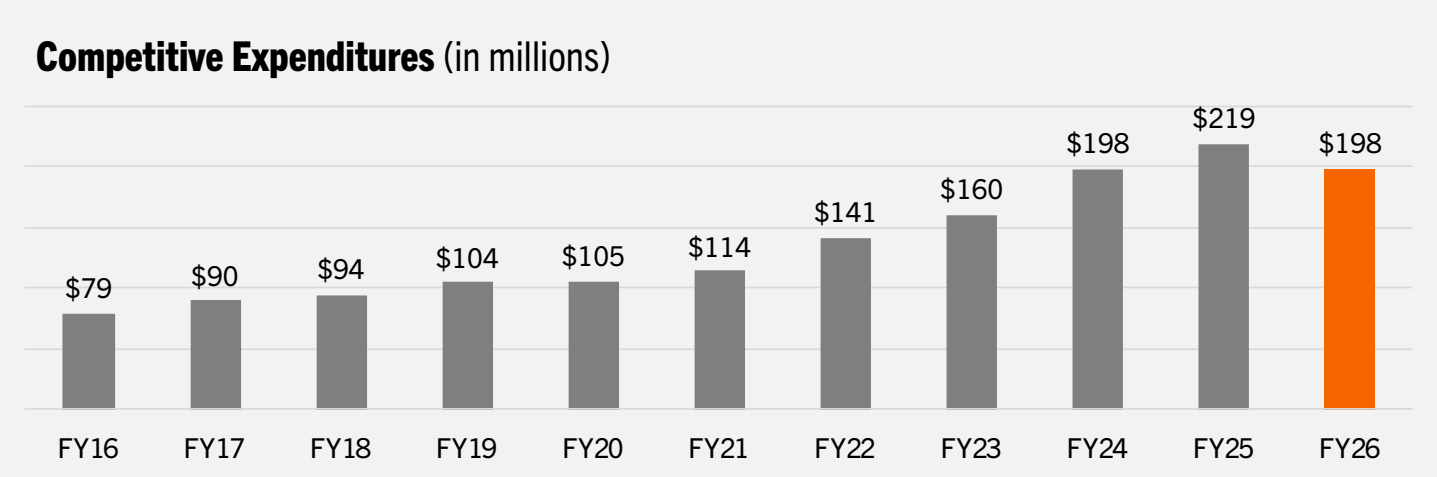
Competitive expenditures were $198 million in FY2026. Competitive expenditures include funds only from competitively bid projects, such as federal grant awards.

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 graph on the following page compares annual competitive expenditure data over the past decade.

Research Expenditures (millions)	2022	2023	2024	2025	2026
By Business Unit	$141.4	$160.3	$198.5	$218.5	$198.1
CAAC	$1.1	$1.3	$1.8	$1.9	$2.0
CAH	$0.2	$0.6	$1.0	$1.4	$1.2
CAFLS	$25.0	$29.7	$40.7	$45.8	$38.0
COB	$0.7	$1.0	$1.4	$1.6	$1.7
CECAS	$72.2	$76.8	$88.9	$96.5	$88.8
CBSHS	$12.0	$16.7	$21.0	$27.1	$23.2
COE	$3.8	$5.6	$6.6	$7.0	$8.0
COS	$18.5	$23.1	$28.0	$28.7	$27.2
VP for Res & Interdisc Inst	$7.0	$6.2	$7.9	$6.9	$6.0
All Other	$1.0	$0.8	$1.2	$1.6	$2.0
By Innovation Cluster	$141.4	$160.3	$198.5	$218.5	$198.1
Advanced Materials	$18.6	$21.1	$23.6	$25.6	$23.0
Cyberinfrastructure & Big Data Science	$8.2	$7.7	$8.6	$9.8	$10.2
Energy, Trans. & Advanced Manufacturing	$27.7	$29.5	$32.0	$34.5	$30.7
Health Innovation	$26.3	$30.5	$38.7	$42.9	$35.4
Human Resilience	$14.8	$19.1	$24.2	$25.8	$24.1
Sustainable Environments	$26.8	$33.7	$49.7	$55.9	$47.1
Other	$19.6	$20.2	$21.7	$24.1	$27.6

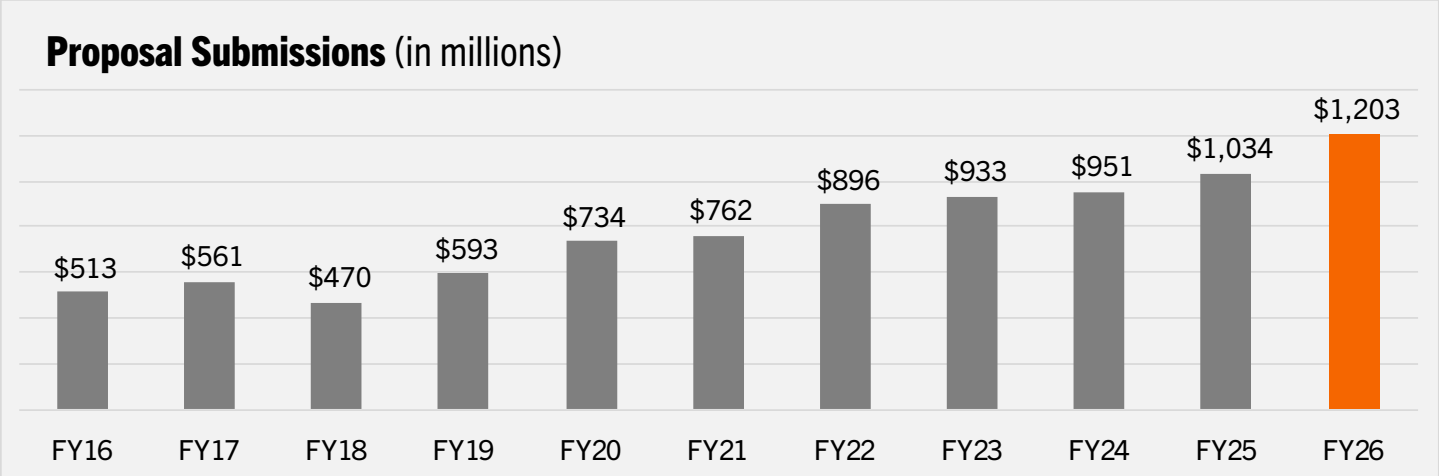
Competitive Expenditures (FY2026)



Research Expenditures (millions)	2022	2023	2024	2025	2026
By Funding Source	$141.4	$160.3	$198.5	$218.5	$198.1
Federal Government	$125.1	$141.0	$175.0	$193.0	$172.4
Foundations, Societies and Associations	$4.6	$5.4	$6.6	$7.2	$7.5
Industry/Other	$4.8	$5.9	$5.2	$4.9	$5.3
International	$0.5	$0.5	$0.6	$0.5	$0.9
Local Government	$0.9	$0.7	$0.6	$0.8	$1.5
State Government	$6.2	$8.2	$10.4	$12.0	$10.4
Per T/TT Faculty Member					
CAAC	$21,321	$26,231	$35,020	$36,468	$38,428
CAH	$1,864	$5,507	$10,135	$13,125	$11,294
CAFLS	$196,657	$231,788	$301,646	$339,614	$271,434
COB	$6,787	$9,865	$14,562	$15,709	$16,418
CECAS	$298,419	$313,550	$359,731	$389,052	$346,705
CBSHS	$90,220	$121,581	$149,288	$179,508	$167,120
COE	$80,058	$121,114	$124,251	$124,571	$140,179
COS	$120,778	$146,445	$177,322	$177,284	$160,197
Clemson average (Total exp/Total T/TT faculty)	**$142,129**	**$159,792**	**$196,501**	**$207,926**	**$193,045**

Proposal Submissions (FY2026)

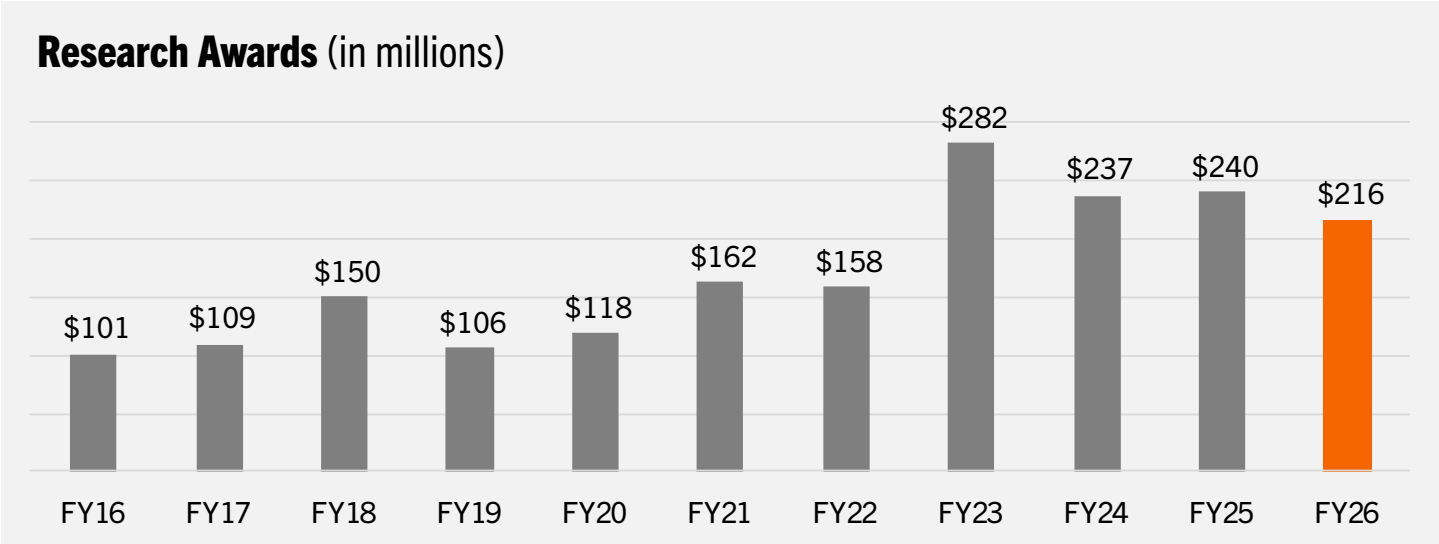
Proposal submissions were $1.2 billion for FY2026. The graph shows annual submissions value over the past decade. The table breaks down submissions by college.



Proposal Submissions	2022	2023	2024	2025	2026	
By Count	1,492	1,680	1,728	1,708	2,032	
CAAC	24	20	18	30	27	
CAH	11	7	12	14	14	
CAFLS	392	451	455	454	610	
CBSHS	151	183	179	176	196	
CECAS	631	684	701	623	744	
COE	43	45	49	97	86	
COB	9	11	11	14	14	
COS	193	259	262	272	305	
VP for Res & Interdisc Inst	23	11	13	11	7	
All Other	15	9	28	17	29	
By Value (millions)	$896	$933	$951	$1,034	$1,203	FY2026 Targets
CAAC	$6.5	$10.4	$8.6	$9.6	$7.6	**$12.13**
CAH	$1.7	$3.0	$1.5	$0.9	$1.6	**$3.58**
CAFLS	$249.9	$149.6	$188.9	$205.3	$288.0	**$173.22**
CBSHS	$73.1	$106.5	$116.4	$107.6	$137.2	**$123.48**
CECAS	$381.0	$427.5	$447.4	$436.1	$451.3	**$496.13**
COE	$32.3	$34.4	$34.0	$76.8	$68.2	**$39.69**
COB	$4.8	$6.3	$3.1	$4.1	$1.9	**$7.17**
COS	$127.3	$169.8	$125.5	$186.6	$202.6	**$198.45**
VP for Res & Interdisc Inst	$11.0	$6.7	$5.7	$2.1	$18.2	
All Other	$8.8	$18.8	$19.4	$4.7	$26.4	

Research Awards (FY2026)

Research awards topped $200 million for the fourth consecutive year. The graph below shows annual awards earned over the past decade. The table provides details on awards per college and young investigator awards received.



Research Awards	2022	2023	2024	2025	2026
By College/Unit (millions)	$157.6	$282.0	$237.3	$240.4	$215.5
CAAC	$0.4	$3.4	$1.5	$2.3	$1.9
CAH	$0.8	$2.1	$0.7	$0.4	$0.9
CAFLS	$26.9	$107.4	$37.4	$47.8	$49.4
CBSHS	$13.7	$21.0	$27.8	$20.7	$32.2
CECAS	$83.8	$104.6	$109.4	$112.6	$77.3
COE	$5.7	$10.1	$4.9	$13.4	$10.7
COB	$0.9	$1.1	$1.1	$1.9	$1.6
COS	$17.8	$24.4	$34.0	$24.6	$29.2
VP for Res & Interdisc Inst	$6.6	$7.1	$7.0	$7.4	$4.7
All Other	$0.7	$0.8	$13.5	$9.2	$7.6
Young Investigator Awards	5	8	10	8	12
NSF CAREER	4	6	10	6	10
NIH KO1	-	-	-	2	-
Air Force Young Investigator	-	1	-	-	1
Army Young Investigator	-	-	-	-	-
DARPA Young Investigator	-	-	-	-	-
EPA Early Career	-	-	-	-	-
DOE Early Career	1	-	-	-	1
Arnold & Mabel Beckman Foundation	-	1	-	-	-
Dept. of Education Inst. of Educational Sciences	-	-	-	-	-

Top Competitive Awards (FY2026)

The U.S. Forest Service awarded Clemson University $18.6 million to lead a large ecological damage assessment and recovery effort across North Carolina's national forests following Hurricane Helene. The storm triggered widespread flooding, landslides and forest loss that reshaped entire watersheds. Clemson was chosen for the project due to its long-standing leadership in applied natural resource science. The project is led by Kyle Barrett, interim chair and professor of wildlife ecology in Clemson's Department of Forestry and Environmental Conservation.

The Bezos Earth Fund awarded Clemson $11 million to advance the development of new cotton varieties that are more productive and profitable for farmers. In particular, this project aims to reduce the environmental footprint of cotton production and processing by developing new varieties with built-in color, improved performance and greater resilience. The project is led by Chris Saski, professor of plant and environmental sciences.



The U.S. Army awarded Clemson $9 million to support the Virtual Prototyping of Autonomy-Enabled Ground Systems (VIPR-GS) project based at the Clemson University International Center for Automotive Research. VIPR is leading the development of next-generation military vehicles. Led by Robert Prucka, Alan Kulwicki Professor and chair of the Department of Automotive Engineering, VIPR consists of 80 Clemson faculty from across 13 departments and more than 130 student researchers.



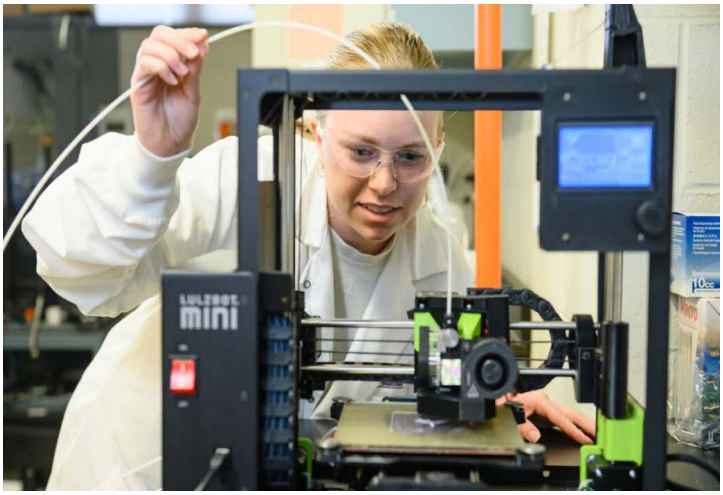
The S.C. Department of Public Health awarded Clemson Rural Health $7.7 million to develop and operate a mobile maternity clinic to improve prenatal and postpartum care in areas with limited services. A signature goal of the grant is to reduce the number of preventable maternal deaths due to lack of access to care. The project is led by Clemson Rural Health director Ron Gimbel in partnership with Self Regional Healthcare.

The S.C. Department of Education awarded Clemson $6.5 million to support the Behavior Alliance of South Carolina, a collaborative with the University of South Carolina that works directly with K-12 schools across South Carolina to build capacity for supporting students with social, emotional and behavioral needs. Already, the Alliance is providing support for 18 school districts across, supporting improvements in student behavior that are leading to better grades in the classroom. The project is led by Megan Carpentar, research associate professor of education and human development.



Top Competitive Awards (FY2026)

The National Science Foundation (NSF) awarded Clemson $5 million to develop strategies that will help transfer students succeed in STEM education. The goal of STEPS2Clemson (Strategies for Transfers to Engineering to Promote Student Success) is to support domestic, academically talented, low-income students who begin their engineering studies at Tri-County Technical College (TCTC) and transfer to an engineering major at Clemson University (CU) for degree completion. The project is led by Mary Beth Kurz, associate professor of industrial engineering.



The Patient-Centered Outcomes Research Institute (PCORI) awarded Clemson $3.5 million to continue research on treatments for hepatitis c. This project is led by Alain Litwin, professor of practice in the Department of Psychology, co-director of the Clemson University Center for Addiction and Mental Health Research and vice chair of academics and research in the Department of Medicine at Prisma Health and University of South Carolina School of Medicine.

The U.S. Department of Agriculture (USDA) awarded Clemson $2.4 million to lead efforts to eradicate the Asian longhorned beetle infestation in the Lowcountry. This non-native pest has the potential to spread to other areas of the United States and cause extensive loss to ornamental and commercial tree species and forested areas, along with associated industries that either utilize wood or its products or depend on tourism related to tree species. The project is led by Jacob Beach, Asian longhorned beetle program manager for the Department of Plant Industry.



NSF awarded Clemson $2.4 million to advance the use of artificial intelligence and machine learning techniques in the development of improved crop varieties, specifically in this case corn. The research team will advance foundational knowledge and create tools to help identify genetic, metabolic and regulatory mechanisms in corn that can help plants improve nitrogen-use efficiency and increase resilience to abiotic stress, those reducing fertilizer usage. The project is led Rajandeep Sekhon, associate professor of genetics and biochemistry.

The U.S. Army awarded Clemson $2.1 million through the University of Alabama-Huntsville to continue a project investigating advanced laser systems. This work aims to improve the performance of beams of directed energy (DE) that can address threats at the speed-of-light and are especially critical to counter future hypersonic weapons. This project utilizes cutting-edge optical materials and structured light engineering capabilities within Clemson University's Center for Optical Materials Science and Engineering Technologies. The project is led by Joe Watkins, director of general engineering.

RESEARCH NEWS

This section highlights research news from across the university.

Executive Summary

- Clemson faculty and students are earning significant awards, fellowships and scholarships for their research. Examples of faculty student success through research are on pages 14-16.
- This year, 12 Clemson faculty have earned young investigator awards, the most competitive, prestigious awards given to the brightest young minds in academia. Details are on page 17.
- The Clemson University Research Foundation reports a steep increase in invention disclosures, a lagging indicator of strong translational research. Details are on page 18.

Honors and Achievements



Scott Husson, right

The North American Membrane Society (NAMS) recently has named Scott Husson a Fellow, recognizing his long-term contributions to membrane science, engineering, and professional service. NAMS is a professional society dedicated to advancing membrane science and technology. Election as a Fellow is one of the society's highest honors and recognizes sustained accomplishment in membrane research and practice, as well as significant service to the membrane community. Husson, the William B. "Bill" Sturgis '57 & Martha Elizabeth "Martha Beth" Blackmon Sturgis Endowed Chair in Chemical and Biomolecular Engineering at Clemson University, Husson's research focuses on membrane separations for biotechnology, biomanufacturing and national security applications. Among numerous innovations, Husson's team developed systems for radionuclide detection and environmental monitoring. READ MORE

Mashrur "Ronnie" Chowdhury of Clemson University has received the American Road & Transportation Builders Association's S.S. Steinberg Award in recognition of his remarkable contributions to transportation education. Chowdhury, the Eugene Douglas Mays Chair of Transportation, is a nationally and internationally recognized leader in intelligent transportation systems, cybersecurity, and connected and automated mobility. He is the founding director of two U.S. Department of Transportation-sponsored centers: the National Center for Transportation Cybersecurity and Resiliency and the Center for Connected Multimodal Mobility. Chowdhury's work has helped move transportation research from emerging ideas to real-world systems that are safer, more secure and more connected. READ MORE

Catherine Mobley, professor emeritus in the Department of Sociology, Anthropology and Criminal Justice and Class of '39 Award for Excellence recipient, received the William Foote Whyte Award from the Sociological Practice and Public Sociology Section of the American Sociological Association for advancing sociological practice through excellence in applied sociological work. Throughout her career, Mobley, who currently serves as a research professor in the Department, has maintained a commitment to applied and community-engaged research, interdisciplinary collaborations and mentorship through applied pathways. She has worked across disciplines – in public health, food insecurity, environmental sustainability and workforce development – and her work has spanned federal agencies, nonprofit organizations, international research settings and statewide partnerships. READ MORE



Catherine Mobley

Honors and Achievements



Clockwise from top left: Chad Carter, Charly Greenthaler, Justin Ballew, Susan Lunt, Mark Cathcart and Matthew Burns.

Clemson Cooperative Extension professionals earned national recognition from the National Association of County Agricultural Agents (NACAA), receiving honors for professional achievement, service, educational programming and communications. The awards recognize Extension professionals from across the country for their contributions to agriculture and their communities through research-based education, leadership and public service. Six Clemson Extension professionals received NACAA Achievement or Distinguished Service awards. Susan Lunt, Mark Cathcart and Chad Carter received Achievement Awards, which recognize Extension professionals with fewer than 10 years of service who have demonstrated excellence in their fields. Matthew Burns, Justin Ballew and Charly Greenthaler received Distinguished Service Awards, recognizing Extension professionals with at least 10 years of service who have made significant contributions to Cooperative Extension. READ MORE



From left: Shayar Joshi, Ava Goff, Blake Peeler and Andrew Tuzt.

A team of Clemson students won the 2026 48HR REPACK Student Design Competition, an international competition that challenges students to solve real-world packaging problems for industry partners. This year's design prompt, developed by The Coca-Cola Company, asked teams to reimagine the fountain beverage experience for the food-delivery era. Inspired by the nostalgia of classic Coca-Cola experiences, four Clemson University students set out to tackle the problem. Their solution, "A Glassic Taste," earned first place and the Sponsor's Choice Award.The winning team included Ava Goff, a graphic communications student; Blake Peeler and Shayar Joshi, packaging science students; and Andrew Tuz, an architecture major. Guided by packaging science faculty member Haley Appleby, the team had 48 hours to develop, prototype and pitch its concept. Joshi, Goff and Tuz are Clemson National Scholars, members of the University's most selective university-wide merit scholarship program. READ MORE

Honors and Achievements

Clemson University doctoral student Nima Zafarmomen earned him the J. Waldo Smith Hydraulic Fellowship from the American Society of Civil Engineers. He is using artificial intelligence to help predict and manage stormwater risks. The fellowship is presented annually to not more than two graduate students, who will use the fellowship for tuition, research and living expenses. The ASCE scholarship is awarded by the nation's oldest civil engineering society and one of the field's most respected professional organizations. READ MORE



Nima Zafarmomen



Heidi Sabatini, right, with Chris Chouinard

Heidi Sabatini, a rising fourth-year Ph.D. student, received an ASMS Graduate Student Award from the American Society for Mass Spectrometry for her research, and Sabrina Fernandez earned the Undergraduate Student Award. Clemson was one of only three institutions represented in both award categories, joining Purdue University and University of California Riverside. Mass spectrometry is a scientific tool that measures the weight of molecules and helps identify, measure and understand the substances in a sample. Fernandez graduated in May with a degree in chemistry. Fernandez and Sabatini studied under the guidance of Chris Chouinard, associate professor of chemistry. READ MORE

Jackson Wisecarver recently won first place at the 2026 Clemson Grand Finale EnterPrize Awards, earning the $15,000 prize for Flowple, a legal technology company that automates post-retainer client onboarding and document collection for law firms. The platform guides clients through document requests, provides a central place to submit information, sends reminders, tracks progress and returns approved information and files right into the firm's system. Wisecarver recently graduated from the Master of Business Administration in Entrepreneurship and Innovation. READ MORE



Jackson Wisecarver

Young Investigator Awards

This year, 12 Clemson faculty have earned young investigator awards from either the U.S. Department of Energy, the National Science Foundation or the U.S. Air Force. These are the most competitive, prestigious awards given to the brightest young minds in academia. These awards are career catalysts. Some of Clemson's most successful researchers were once recipients of these young investigator awards. With eight new awards this year, 85 junior Clemson faculty have received prestigious young investigator awards over the past 10 years. Names of this year's recipients are listed below. A full list of active young investigator awards is posted online here.



Christopher Chouinard
Chemistry
Sponsor: National Science Foundation (NSF)



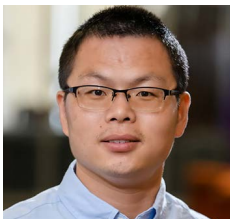
Shanna Estes
Chemistry
Sponsor: U.S. Department of Energy



Chris Flathmann
School of Computing
Sponsor: U.S. Air Force



Prakash Khedun
Agricultural Sciences
Sponsor: NSF



Kai Liu
School of Computing
Sponsor: NSF



Kunpeng Liu
School of Computing
Sponsor: NSF



Daniel Jones
Biological Sciences
Sponsor: NSF



Soledad Peresin
Forestry and Environmental Conservation
Sponsor: NSF



Mert Pese
School of Computing
Sponsor: NSF



James Sternberg
Food, Nutrition and Packaging Sciences
Sponsor: NSF



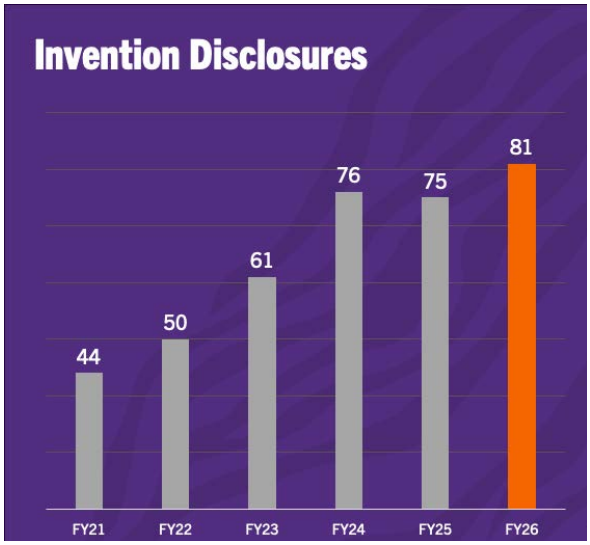
Lan Zhang
Electrical and Computer Engineering
Sponsor: NSF



Zhenkai Zhang
Chemical and Biomolecular Engineering
Sponsor: NSF

Translational Research

A lagging indicator of research success, invention disclosures are the first step in forming startup companies or licensing innovations that solve real-world problems and support job growth and economic expansion. At Clemson, the number of disclosures has nearly doubled over the past five years, signaling a strong rise in research innovation and impact.



Currently, the Clemson University Research Foundation (CURF) manages 128 active licenses – the highest level in its history – on innovations spanning health care, manufacturing, energy, agriculture, advanced materials, software and other sectors.

A few examples:

Nurseries throughout the Southeast supply disease-resistant peach varieties developed at Clemson. Clemson peaches like EveRes Ruby, CaroRes Delight and CaroRes Wonder are grown throughout the Southeast and around the country.

Clemson startup The Packaging School was licensed by the S.C. Commission on Higher Education to provide online training to processing and packaging companies.

Organizations around the Southeast have licensed a diabetes management platform developed at Clemson. The program provides training, health coaching and community education that has reached more than 1,500 patients.



Clemson professor Ksenija Gasic has developed several peach varieties grown in the Southeast.

DriveSafety Inc. licenses Clemson technologies to equip driving simulators used for clinical rehab of patients with motor, visual and cognitive impairments. The technology is in use in hospitals and veterans clinics around the country.

Elastrin Therapeutics Inc. spawned from Clemson research. The company is developing novel therapies to treat chronic cardiovascular and lung diseases.

Salient Power Solutions utilized Clemson technology in the development of custom switchgear and industrial controls used to safeguard critical systems in data centers, healthcare facilities, wastewater utilities and other industries. The company is now part of Trystar.

These are just a few examples of licensed Clemson innovation, and the opportunities are growing. In FY2026, CURF received 81 invention disclosures, up 84% over the past five years. It filed 54 patent applications, up 74% over that time period. Nine startup companies were formed from Clemson research last year, a six-year high.

Learn more about the Clemson University Research Foundation (CURF).

RESEARCH

FOCUS ON FACULTY

This section highlights junior faculty members at Clemson University. Profiles were submitted by the colleges.

Executive Summary

- Click the links below to read about faculty member 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



Prakash Khedun, Ph.D.

Assistant Professor

Agricultural Sciences

Khedun joined the College of Agriculture, Forestry and Life Sciences in 2022. He received his Ph.D. in water management and hydrological science from Texas A&M University in 2012; his master's degree in environmental engineering (2002) and bachelor's degree in civil engineering (1999) were awarded by the University of Mauritius. In addition to his role with the Water Resources Program Team, Khedun has an assignment through the U.S. Department of the Interior and US Department of State's Ambassador's Water Experts Program. In this role, he helps advance "U.S. national security and strategic interests in the Indian Ocean by strengthening a key partner's (Mauritius') flood resilience and generating knowledge that supports regional stability, contingency planning, and defense logistical readiness amid growing competition in the region."

Khedun's research interests focus on hydrological extremes (e.g., droughts, floods) and their impact on water resource availability in the southeastern United States, with an emphasis on water resource management and agriculture. Large-scale teleconnection patterns' influence on hydrological cycles is of particular interest. He uses both established and new tools, including statistical and machine learning and data analytics, to understand, monitor, model and forecast the influence of these extremes to help decision makers with short- to medium-term planning and water resource management. These activities reflect his 75% research, 25% public service/extension appointment. Further, Khedun is listed as an expert regarding water-related challenges affecting agriculture, communities and the economy with the university's Division of Marketing and Communications to respond to media inquiries.

Select Accomplishments

- Has published six peer-reviewed journal articles and two book chapters in his short tenure at Clemson University.
- Currently advising two Ph.D. students, one of whom expects to graduate in December 2026.
- Selected grants include:

1. "CAREER: A Statistical Tool to Integrate the Magnitudes and Times of Occurrence of Extreme Events with Application in Hazards Planning and Management" – NSF, $549,922 (August 2026)
2. "Water Demand Projects for the South Carolina Water Planning Framework" – SC Department of Natural Resources, $249,990 (January 2023)

College of
ARCHITECTURE, ART AND CONSTRUCTION



Lavender Tessmer, Ph.D.

Assistant Professor

Architecture

Tessmer is a computational design researcher exploring scalable production methods that incorporate textiles, digital processes and embedded material properties. Her current work investigates design-to-fabrication workflows for textile applications in garments and architectural structures, bridging industry and academic research.

In her previous role as a research assistant at the Massachusetts Institute of Technology (MIT) Self-Assembly Lab, she has developed climate-responsive textiles, adaptable garments, and custom-made fibers. She has taught design studios in digital fabrication at Washington University in St. Louis and MIT, and her recent design work has been exhibited at the Contemporary Art Museum St. Louis and Seaport Common in Boston, MA.

Lavender received an MArch from Washington University in St. Louis and a SMArchS/PhD with a concentration in design and computation from MIT. She joined Clemson in fall 2024.

Select Accomplishments

- Du Pasquier, Cosima*, Lavender Tessmer*, Ian Scholl, Liana Tilton, Skylar Tibbits, and Allison Okamura. n.d. “Haptiknit: Distributed Stiffness Knitting for Wearable Haptics.” *Science Robotics*. Accepted October 2024.
- Elberfeld, Nathaniel*, Lavender Tessmer*, and Alexandra Waller*. 2024. “Beyond Braiding: Transcending Artifact-Centered Conceptions of Craft in Digital Fabrication.” *Resistance, Recovery, Reflection, Reimagination*. Boston, MA: Design Research Society Digital Library.
- Tessmer, Lavender, Sasha McKinlay, and Skylar Tibbits. 2023. “Visualization of Three-Dimensional Knit Textiles: Multimaterial Fabrication and Design Iteration.” *ACADIA 2023: Habits of the Anthropocene* / Proceedings of the 43rd Annual Conference of the Association for Computer Aided Design in Architecture. Vol. I: Technical Papers: 460-69. Denver, CO: CUMINCAD.
- Tessmer, Lavender*, Ganit Goldstein*, Guillermo Herrera-Arcos, Volodymyr Korolovych, Rachel Bellisle, Cody Paige, Atharva Sahasrabudhe, et al. 2022. “3D Knit Spacesuit Sleeve with Multifunctional Fibers and Tunable Compression.” *ACADIA 2022: Hybrids and Haeccities*, edited by Masoud Akbarzadeh, Dorit Aviv, Hina Jamelle, and Robert Stuart-Smith, Vol. I: Technical Papers: 182–93. Philadelphia, PA: CUMINCAD.

College of ARTS AND HUMANITIES

Charlie Kurth, Ph.D.

Professor

Philosophy & Religion



Kurth joined Clemson's Department of Philosophy and Religion a year ago, having previously held full-time, tenure-stream appointments at Washington University in St. Louis and Western Michigan University.

His research focuses on ethics, moral psychology, and emotion theory. Much of this work aims to show how "negative" emotions — shame, anxiety, disgust — can help make us better, happier people.

Kurth has long been interested in developing international, inter-disciplinary collaborations and has held prestigious fellowships at The Centre for Ethics, Philosophy and Public Affairs at the University of St. Andrews in Scotland and, more recently, a two-year appointment at the Helsinki Collegium for Advanced Studies. He is currently the principal investigator for the Negative Emotion Research Group, an interdisciplinary collaboration that he launched with funding from the University of Helsinki in 2023.

His teaching covers a wide-range of topics including introductory courses in both ethics and metaphysics, as well as advanced courses on ethical theory, biomedical ethics, virtue and moral development, the philosophy of emotion, cognitive science and the philosophy of law. He has received university-wide awards for both his research and teaching.

Before returning to school to pursue a Ph.D. in philosophy, Kurth spent three years working on Wall Street as an investment banker. And while pursuing his graduate studies, he worked for Accenture as a consultant on projects for the U.S. Navy. He is a native of Washington, D.C., an ultra-marathon runner, and an outdoor enthusiast.

Select Accomplishments

- Has authored more than two dozen academic articles and two books, The Anxious Mind: An Investigation into the Varieties & Virtues of Anxiety (MIT Press, 2018) and Emotion (Routledge, 2022).
- A third book, Good Guilt, Bad Guilt: A Philosophical Guide to a Complicated Emotion is under contract with Princeton University Press.
- In addition to his academic scholarship, Kurth has also published editorial pieces in places like *The Washington Post*, *Scientific American*, *The Conversation* and *Aeon*.

College of
BEHAVIORAL, SOCIAL AND HEALTH SCIENCES

Luigi Boccuto, Ph.D.

Assistant Professor

School of Nursing



Boccuto's research focuses on autism spectrum disorder and related conditions, such as Phelan-McDermid syndrome, intellectual disability, hereditary and sporadic cancer, overgrowth syndromes, and liver and metabolic disorders. His work combines deep phenotyping, genome-wide analyses, multidisciplinary omic investigations, and system-biology-driven approaches to treatment development.

His current research agenda includes projects assessing the efficacy of alternative and non-invasive anti-cancer compounds in cellular and animal models, exploring the metabolomic profiles of individuals with syndromic and complex neurodevelopmental disorders to identify ideal candidates for clinical trials, and analyzing the genotype-phenotype correlations in subjects presenting with Long-COVID. In addition to his scholarly research, Boccuto actively mentors graduate students, currently serving as chair of 12 dissertation committees, and collaborates with scholars across the United States and internationally.

Boccuto received his MD degree at the Catholic University of Sacred Heart, Rome, Italy, in 2002. Prior to joining Clemson University, as a faculty member of the Healthcare Genetics and Genomics PhD Program (HCG), he served as an assistant research scientist at the Greenwood Genetic Center and as the chief scientific officer at STALICLA, SA, Geneva, Switzerland.

Select Accomplishments

- Recipient of the Clemson University Junior Researcher of the Year Award (2026).
- Recipient of the College of Behavioral, Social and Health Sciences (CBSHS) Emerging Scholar for Excellence Research Award (2026).
- Recognized among the world's Top 2% Most-Cited Scientists by Stanford University, Elsevier standardized citation indicators (2025).
- Editor-in-Chief of the *Reviews on Recent Clinical Trials* journal.
- Author or editor of a book and multiple book chapters, and more than 170 peer-reviewed journal articles (38 since August 2024).
- Mentor to more than 35 graduate students and 40 undergraduate students whose research has earned conference awards, publications and grants.

Wilbur O. and Ann Powers College of BUSINESS

Vincent Intintoli, Ph.D.

Associate Professor

Finance



Intintoli's research focuses on corporate finance and governance, executive turnover, equity issues, boards of directors and regulation. His recent scholarship has produced four publications in highly regarded finance and management journals, including an accepted article in *Management Science*, a Financial Times FT50 journal; two articles in the *Journal of Corporate Finance*; and the lead article in Volume 31 of *European Financial Management*. His work on government mandates and board diversity has attracted substantial national attention, with coverage in the Wall Street Journal, The New York Times, Politico, Bloomberg, USA Today, Time, the Los Angeles Times, and other major outlets. Overall, his research has received more than 1,000 Google Scholar citations, including more than 700 since 2021.

Since joining Clemson University in 2015, Intintoli has contributed extensively to the research life of the Department of Finance and the broader profession. During the past several years, his work has been presented at leading universities and finance conferences, including Wake Forest University, Tulane University, the University of Mississippi, the University of Alberta Frontiers in Finance Conference, and the Southern Finance Association Meetings. He has reviewed 19 manuscripts for academic journals, including the *Journal of Finance*, the *Journal of Financial and Quantitative Analysis*, the *Review of Finance*, and *Management Science*, and has served on program committees for the Financial Management Association, Southern Finance Association, Eastern Finance Association, and Clemson Finance Research Conference.

Intintoli was appointed director of Clemson's new Master of Science in Finance program in 2025. In that role, he has assisted with SACSCOC accreditation, helped develop the course schedule and faculty assignments, created the MSF program guide and website, formed admissions and advising committees, and organized informational and recruiting sessions for prospective students and their parents

Select Accomplishments

- "Comment on Regulating Gender Diversity: Evidence from California Senate Bill 826," with Daniel T. Greene, JiHoon Hwang, and Kathleen M. Kahle. Accepted in *Management Science*
- "Reconciling the evidence on board diversity mandates," with Daniel T. Greene, JiHoon Hwang, and Kathleen M. Kahle. *Journal of Corporate Finance*, 94, 102838, 2025.
- "Does managerial compensation impact the likelihood of product market failures? Evidence from inside debt holdings," with Shweta Srinivasan. J*ournal of Corporate Finance*, 91, 102726, 2025

College of
EDUCATION

Jonathan Templin, Ph.D.

Eugene T. Moore Endowed Distinguished Professor

Education and Human Development



Templin joined Clemson in January 2026 after serving as the E. F. Lindquist Chaired Professor at the University of Iowa, where he co-directed the Center for Advanced Studies in Measurement and Assessment. Templin earned a Ph.D. in quantitative psychology and an M.S. in statistics from the University of Illinois Urbana-Champaign.

Templin's work focuses on making educational assessment more useful to teachers and students. He develops statistical models that move beyond reporting a single test score to provide specific, reliable information about what students understand, where misconceptions exist and how instruction can be adjusted. His research encompasses diagnostic classification models, Bayesian statistics, multidimensional psychometrics and multilevel modeling. As a principal investigator, co-principal investigator or key personnel, he has contributed to funded projects totaling more than $34.6 million. His scholarship includes more than 60 peer-reviewed publications in leading measurement, psychology, and education journals.

A defining feature of Templin's career is his commitment to moving research into practice. He developed the scoring algorithm for Dynamic Learning Maps; an assessment system designed for students with significant cognitive disabilities and used by 23 states. He is also co-founder and CEO of Innovative Assessment Solutions, an educational assessment and analytics company that helps school districts develop assessments tied directly to their curricula.

Templin's research has also generated three U.S. patents and technologies licensed by education companies. He is co-author of Diagnostic Measurement Theory Methods and Applications, which received the American Educational Research Association Division D Award for Significant Contribution to Educational Measurement and Research Methodology. His other honors include the AERA Cognition and Assessment Special Interest Group Award for Outstanding Contribution to Research in Cognition and Assessment and the inaugural Robert L. Linn Memorial Lecture Award.

Select Accomplishments

- Co-founder and CEO of Innovative Assessment Solutions, which brings university-developed assessment innovations directly to school districts.
- Inventor on three U.S. patents related to diagnostic assessment and measurement.
- Developed the scoring algorithm for Dynamic Learning Maps, an assessment system for students with significant cognitive disabilities.

College of
ENGINEERING, COMPUTING AND APPLIED SCIENCES



Rong Ge, Ph.D.

Professor

School of Computing

Ge is an internationally recognized scholar whose research spans energy-aware computing, GPU technologies, high-performance computing systems and quantum computing. Her research strengthens Clemson's leadership in advanced computing systems that support scientific discovery, artificial intelligence and emerging quantum technologies. Her work develops methods and tools for analyzing performance bottlenecks, improving resource utilization and enabling complex applications to run efficiently on modern supercomputers and high-performance computing platforms. Her research in energy-aware computing addresses one of the most pressing challenges in advanced computing: delivering high performance under power, cost, and sustainability constraints.

Ge has also played a leading role in expanding quantum computing research and education at Clemson. She developed a sequence of quantum computing courses for students across disciplines, ranging from hands-on introductory learning to advanced, research-oriented training. This curriculum lays the foundation for a future minor degree in quantum computing and supports broader efforts to establish graduate-level quantum programs. She is also leading efforts to develop a university-wide quantum computing hub that will connect faculty, students, courses, research projects and shared resources across campus. Together with her Ph.D. student, she founded Clemson's student quantum computing club, which holds regular meetings, prepares students for competitions, and has supported Clemson teams in multiple international quantum hackathons, where they have won major prizes.

Through her research leadership, external funding, national partnerships, curriculum development, and student mentoring, Professor Ge is helping Clemson build strength in technologies that are central to scientific discovery, economic competitiveness, national security, and the future quantum workforce

Select Accomplishments

- Received the prestigious NSF CAREER Award in 2015.
- Served as an associate editor for the IEEE Transactions on Parallel and Distributed Systems from 2018 to 2022 and received the IEEE TPDS Award for Editorial Excellence.
- Currently leading nine active externally funded projects totaling approximately $4.3 million
- Actively collaborates with Department of Energy national laboratories, including Argonne, Lawrence Livermore, Los Alamos, Oak Ridge and Savannah River national labs.
- Has graduated four Ph.D. students and currently advises five more. Her students have conducted research with national laboratories, published in competitive venues and built practical systems for solving real-world challenges.

College of SCIENCE

Daniel S. Jones, Ph.D.

Assistant Professor

Biological Sciences



Jones is a plant biologist whose lab works on development and evolution in sunflowers, using genetics and genomic techniques. Plants exhibit highly diverse form and function, yet the genetic mechanisms underlying this evolutionary novelty remain poorly understood. The goal of the Jones Lab (CapituLab) is to define how changes in genomes during evolution influence developmental programs and give rise to innovations. Jones's research focuses on the sunflower family (Asteraceae), the largest family of flowering plants with more than 30,000 species. The success of Asters has been linked to the evolution of novel morphologies, including the distinctive capitulum (think sunflower/dandelion "head" or flowers) and specialized floral structures involved in seed dispersal (pappus; think dandelion "fluff"). Integrating comparative genomics, developmental analyses, and functional genetics across diverse Asteraceae lineages, Jones seeks to uncover evolutionary innovations that can be leveraged for crop improvement and plant biotechnology.

Jones started his lab at Auburn Univeristy in 2021 and moved to Clemson in July 2025. This year at Clemson, Jones received a five-year NSF CAREER award totaling $1,618,489 to identify and test the function of developmental paralogs (duplicated genes) in Asteraceae that will then be used to improve modern biotechnological approaches. The CAREER award also supports the development of a multi-semester training program ("GrowLab") focused on plant molecular biology. This GrowLab curriculum to be implemented here at Clemson starting Fall '27 will provide hands-on training in molecular biology to both undergraduate and graduate students and will facilitate undergraduate placement into research labs where practical, technical skills can be developed. Jones teaches at both the undergraduate (Biology of Plants - ~100 students) and graduate (Plant Anatomy and Cell Bio; MCDB Graduate Core course) levels and currently supervises 7 graduate students (5 PhD and 2 Master's) and 4 undergraduates in his lab.

Select Accomplishments

- NSF CAREER Award winner in 2026.
- Three total NSF awards totaling $2,845,460 during first five years as an assistant professor
- Co-corresponding author on manuscript in revision at *Science* (PhD student is a first author)
- Given two invited seminars this year: Penn State Univeristy and the Donald Danforth Plant Science Center in St. Louis, MO
- Co-organizer of the Compositae Genomics and Evolution Worksop at the annual Plant and Animal Genome Conference

RESEARCH

Bold Ideas. Broad Collaboration. Big Impact.