

DR. EMMETT DAVIS, JUNIOR, '50, DEPARTMENT OF CIVIL, ENVIRONMENTAL, AND CONSTRUCTION ENGINEERING NEWS



TRADITIONS: THE MAKING AND THE BREAKING

The Citadel is often referred to as a “bastion of antiquity” due to the preservation of many activities and events rooted in the early days of the college. Within the CECE Department, we maintain many traditions, both supporting the campus at-large and within the walls of LeTellier Hall. However, our department also embraces change in support of our student-centered educational mission. This edition of the newsletter will feature stories of how students, staff, and faculty have both embraced Citadel and department traditions while not being afraid to forge new paths when needed. An important change for the department occurred this October when the Department’s name changed to reflect our educational reality for the past ten years. We are now officially the Emmett Davis Jr. Department of Civil, Environmental, and Construction Engineering. This name honors Emmett Davis Jr. a Civil Engineering Alumni from the class of 1950 and co-founder of the notable South Carolina company Davis & Floyd. The name also provides important attribution to all three of the disciplines represented in our department’s majors and minors: Civil, Environmental, and Construction Engineering.

THE SUMMERALL GUARD: A TRADITION OF STRENGTH

One of 61. That is Timothy Overend—senior Civil Engineering major, aspiring geotechnical analyst, and member of The Summerall Guards. The Summerall Guards are a group of first-class (senior) cadets who exemplify the best of The Citadel through the rigorous discipline required to learn a drill that has never been written down and is performed to a silent count.

Cadets officially begin their Summerall journey during the weeks-long Bond

Volunteer Aspirant (BVA) training, a highly competitive process not only involving drill practice, but physical fitness evaluations. “This is like your chance to prove what you have,” Overend said, referring to the time management and physical rigor required to be chosen as one of the 61. “Being a junior is hard, but there’s nothing on this campus like [BVA]. It takes intensity to a whole new level.”

BVA is often doubly challenging for engineering majors as the junior year curriculum is often regarded as the most difficult part of the program. Overend said that training for the Summerall Guards along with aiming for and earning Gold Stars (a semester GPA of 3.7+) “forced me to manage time better than I had in the past.” In order to prepare for BVA, he “started training the summer before junior year. To prep over Christmas, [he] woke up at 4 am and worked out for two hours. [He] ran with a barbell to replicate running with a rifle.” Overend said he was motivated to pursue the Summerall Guards in order to represent Band Company. “One tradition is they pass the rifles down. I got the rifle of the Summerall Guard who was in Band [Company] last year. He ran alongside me during Phase One and Phase Two [BVA] training. He became my good friend.... It’s great to [be connected to] the Summerall Guards who came before you.”

One such alumnus of Summerall Guards is Dan Nale, PhD, PE, Class of ’82 and one of Overend’s Civil Engineering professors. Nale too said he was motivated to pursue Summerall Guards because of the “the discipline, precision, and prestige associated with the Drill Team.” Nale said, “I was most proud, to be honest, during the process to become a Summerall Guard, when I was still a Bond Volunteer. That’s when I became a 61-minute man.” “During my time, we performed at Disney World, the US Naval Academy, and at many Citadel events. The one I remember most was the Manning (SC) Bass Festival,” Nale said, smiling broadly. Travel remains a tradition: Overend said he’s looking forward to performing in the 2024 Mardi Gras parade in New Orleans. Nale adds, “Timothy is right – the time required by Summerall Guards actually complimented my other work. That year, I was F Company Commander, a member of the Honor Court, and a Gold Star recipient.... As I reflect on my long career in engineering, I don’t have any doubt that the success Timothy is demonstrating by being part of the tradition of Summerall Guards will benefit him for decades to come, just as it did me.”



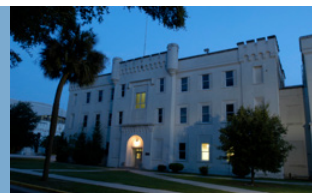
Senior cadet Timothy Overend (front center), a Civil Engineering major, along with members of the 2023-24 Summerall Guards, performs a traditional drill that has never been written down and must be memorized and practiced regularly.



During his senior year, 1981-82, Civil Engineering professor Dan Nale, PhD, PE (4th in line), along with his fellow Summerall Guards, traveled regularly to represent the discipline and tradition of The Citadel through their drill performances.

INSIDE THIS ISSUE:

- 2) No More ASCE Glass Ceiling, Coming to a Computer Near You
- 3) Moving Onwards and Upwards in CTP, Department Head Message
- 4) Department Student Scholarships, Faculty and Staff News



MOVING ONWARDS AND UPWARDS IN CTP



Jason McFarland, 2+2 student and Boeing Employee.

The Citadel College Transfer Civil Engineering Program allows students to earn an ABET accredited Bachelor's degree in the Lowcountry without being a Citadel Cadet. Courses are offered in the late afternoon and evening so that students are able to work during the day. This creates a pathway for working professionals to advance their careers through engineering education. Three students who epitomize the transfer program are seniors Tony Hunt and Jason McFarland and junior Jason Flynn. All are currently employed by Boeing and aim to use their Civil Engineering degrees to advance there.

Flynn began studying civil engineering years ago due to an interest in construction and architecture before stopping to pursue work in a different sector. He is now able to complete his degree while working in the aviation sector aiming to move to management. Likewise, Hunt aims for management roles, saying, "I've always wanted to further my career with Boeing ... At Boeing, you must have an ABET accredited engineering degree to be an engineering manager. And the Civil program offers many courses in project management." McFarland is more on the technical side at Boeing, currently working as a Wire Installation Designer. After earning his degree he hopes to "eventually transition to the air frame team. [Where he would conduct] stress analysis for the supporting brackets that are utilized by the aircraft systems and wiring installations for fastening and securing those elements to the aircraft structure."

Completion of bachelor's degrees allows these students to change their family trajectories. McFarland is a first-generation college student but had been encouraged by his parents to pursue engineering. As a Summer-ville native, The Citadel's night program was a great fit. Hunt ended up getting serious about completing his degree shortly after his daughter was born. He credits his motivation to setting an example for her as well as his wife's willingness to act as a single parent for two years while he is a full-time employee at Boeing and a full-time student at The Citadel. Flynn's children are a bit older and he jokes that he needs to finish his degree soon so he only has to pay one tuition at a time. But one can tell in conversation that he is happy to support his kids if they pursue college right out of high school. All three began their transfer programs at Trident Technical College.

They credit assistance from Dr. Davis and Dr. Nale for helping to make the transfer process as frustration-free as possible. Hunt credits the close partnership of Trident and Citadel for maintaining a straightforward and well-organized curriculum. He also says, "I love the way that the curriculum at the Citadel is set up so that all classes and semesters are laid out, as well as going through the program with a group of students that are all in the exact same classes for more effective working together success." McFarland added more advice for future 2+2 students, "Take your classes seriously. Do your best to always stay ahead on assignments as opposed to just catching up. But most importantly always believe in yourself and never give up!" Hunt offers further encouragement for students to pursue a degree in civil engineering saying, "Civil engineering is a great career path as the adoption and transition to alternative energy technologies continues to accelerate. In addition, the infrastructure in the United States is aging and it will need to be rebuilt for years to come."

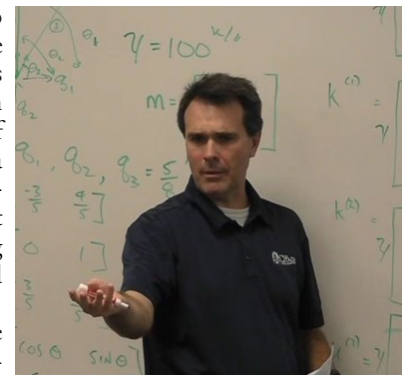


Tony Hunt, 2+2 student, currently employed by The Boeing Company.

COMING TO A COMPUTER NEAR YOU

While many traditions had to be modified due to the COVID pandemic and have now returned to the status quo, selected online classes in the CECE Department are here to stay. Online classes have become the standard for our Master's program and many Summer Semester classes. These courses must adhere to the Quality Matter's Rubric to ensure that content is appropriate as compared to an in-person equivalent course and each received a peer review to maintain the department's mission of being "a student-centered learning environment." The online course offerings, beyond maintaining a high-quality education experience, have allowed students to simultaneously pursue professional development opportunities through working a job or internship at the same time. Many courses are taught with "asynchronous" elements which means students can largely set their own schedule for watching lectures or completing assignments. Dr. Timothy Mays, who teaches the online Summer Statics and Dynamics courses says, "I love creating an online student-center learning environment."

To mirror peer learning opportunities that may be missed when online, discussion boards are used for students to share notes. The synchronous sessions feature conceptual Pickers questions, break-out room discussions, and problem-solving sessions. I frequently set up additional virtual office hours outside class time where we discuss concepts, students' skills, and engineering opportunities." With regard to the online Master's Program, director Dr. Timothy Mays says, "We always envisioned an on-line MSCE Program. We started with a face-to-face program for 4 years since we had plenty of local interest and needed time to develop the courses for online delivery... COVID and planned timing both led to the switch to fully online in 2021. For the graduate program this is a game changer! We now recruit great practicing engineers across the county that want a practical MSCE degree that is challenging, code-based, and simultaneously prepares them for licensure, leadership, and advanced engineering practice." For the Master's program, about 70 students have enrolled since the program began in 2016, with an intimate class experience since enrollment is normally about 15 to 20 students. Since the summer of 2021, 55 students have taken the online summer Dynamics course while 27 have completed Statics.



Timothy Mays teaching a graduate Structural Engineering course.

NO MORE ASCE GLASS CEILING

One of the longest running organizations within the CECE Department is the student chapter of the American Society of Civil Engineers (ASCE). It was originally founded in January 1938 and, following a short break due to WWII, has operated continuously. Our ASCE Chapter was a founding member of the Carolinas Conference, now the Carolinas Student Symposium, which hosts various competitions to challenge students to utilize their skills beyond the classroom environment in a fun competitive way. Originally, however, the Carolinas Conference functioned as a student research showcase for professional development among the Civil Engineering programs in the Carolinas region. This past spring, The Citadel's ASCE student chapter once again hosted the Carolinas Conference in Charleston. Central to the success of the event was Cadet Mary Coastal Watkins, the ASCE Student Chapter President for 2023. Watkins is the first female ASCE president in the club's 90-year history, although that landmark should be tempered by the fact The Citadel only began to admit female students in the mid-1990s. While her election as first female ASCE president is historic milestone, Watkins takes a more "business as usual approach." She says, "it is cool to be the first female, but it is also just cool to be the president." Further she says, "growing up I never really realized there was much difference [between men and women] in society because my mom was a

go-getter and I just did that too." She acknowledges that her way of approaching problems may be different than many of her male classmates but has found ways to utilize those differences for her team's advantage. She approached running for the president position as a natural progression of how to "give back to the department that has supported [her] so much through scholarships and research opportunities." Watkins looks forward to finishing the annual ASCE student chapter report for nationals and competing again in the concrete canoe competition. Watkins is from Goat Island, South Carolina, a sea island near the Isle of Palms. Her passion for environmental protection, especially related to South Carolina's sea islands, is clear when speaking to her. She is a proud graduate of The School of the Arts and owns up to the fact that The Citadel "was not even on her radar" when looking at colleges. She ruled out marine biology and marine architecture as possible college majors after internships, making engineering a more attractive option. Watkins has female role models in her family who work as civil engineers who helped win her over to our discipline and a neighbor who brought the Citadel's program to her attention. Now as she prepares to graduate, she is contemplating various career paths, as well as graduate school options, to continue to pursue a way to protect the coastlines.



First Female ASCE President Cadet Mary Coastal Watkins holds the ASCE Flag she designed.

DEPARTMENT HEAD'S MESSAGE: WILLIAM J. DAVIS, PH.D., P.E. (AL)

Greetings from LeTellier Hall! Our students, faculty, and staff are hard at work to make the most of their learning experiences thus far in the 2023 Fall semester. Highlights include:

Site Visits: We maintained an active schedule of 10 site visits and field trips so far in the semester with another 8 scheduled. I led one to NOAA's ship Thomas Jefferson with a group of surveying students. It provided an outstanding educational experience for Citadel engineering students who are studying surveying, to learn about equipment and procedures used to collect hydrographic survey data and post-processing software used to create high quality underwater mapping, essential for the maritime community. It was inspiration to learn about the dedication of NOAA officers and civilians serving on the ship, as well as to reflect on the amazing career of Citadel alumnus, Rear Admiral Richard T. Brennan, Director of NOAA's Office of Coast Survey, a 1992 civil engineering graduate and revered leader who served NOAA until his passing May 13, 2021.

Career Fairs: This Fall, the support of the larger Civil and Construction Engineering industry has been overwhelming. The Citadel Career Center hosted two career fairs for engineers: (1) the Civil and Construction Engineering Career Fair and (2) the Engineering Expo. Between the two events, over 75 companies were represented and nearly 60 of them were civil or construction firms. We are dedicated to our academic mission of developing and graduating principled engineering leaders and it is encouraging to see how much demand there is for our students and graduates in industry.

Scholarships, Donations, and Names: We are honored each year to award over \$300 thousand in named scholarships to our students in recognition of notable alumni and friends of our programs. You can see the list of recipients for Academic Year 2023-2024 in this newsletter. This year, our department has received a new name in recognition of a \$3.5 million gift to The Citadel and the School of Engineering by the Davis Family Foundation. Emmett and Stephen Davis are inspirational graduates who embody the highest ideals of The Citadel through their legacy of service to the engineering profession, contribution to communities across South Carolina and commitment to future civil and construction engineers in our program.

Our student-centered teaching and learning community includes nearly 250 civil and construction engineering students and 13 full-time faculty/staff. Through teamwork, synergy, and collaboration, we strive to honor the legacy of our program and build upon the rich traditions at The Citadel. Please visit us on campus, or reach out online, if you would like more information about our students or academic programs. Contact: <jeff.davis@citadel.edu>





FACULTY & STAFF NEWS

Awards and Recognitions

Dr. Stephanie Laughton - 2023 Educator of the Year for the South Carolina Chapter of ASCE

Dr. Simon Ghanat - KEEN Fellow for the "Engineering Unleashed" Program by the KERN Family Foundation

Dr. Timothy Mays and **Dr. John Ryan** - Recipients of a four-year grant to develop Seismic Design Specifications (SDS) for the South Carolina Dept. of Transportation

Welcomes

Welcome to our newest staff member, **Ms. Elizabeth Quarles**. She is now the Administrative Coordinator for the Department. She has previously worked in the Citadel Graduate College and the Student Success Center, so we are excited to see how she will add value to our Department's student support initiatives.

Distinctions

Dr. Dimitra Michalaka is currently on sabbatical from The Citadel, but she is not resting on her laurels. In Fall 2023, she served as an instructor at Technische Universiteit Delft in the Netherlands. We look forward to what she will return to teach us about transportation system design in Europe.

Name Change to **Dr. Emmet Davis, Junior., '50, Department of Civil, Environmental, and Construction Engineering**

This Fall, the Davis Family Foundation donated \$3.5 million to the Citadel Foundation. In appreciation of this contribution, our department has officially been renamed as the "Emmett Davis Jr. Department of Civil, Environmental, and Construction Engineering."

This name honors Emmett Davis Jr. (Class of 1950) whose Citadel Civil Engineering degree helped him as a founding member of Davis & Floyd. His son, Stephen Davis (Class of 1985) is another Citadel Civil Engineering graduate was responsible for the donation. Our new name also allows us to formally recognize our majors and minors in the department name. At present, we offer two undergraduate majors (CivE and ConE), three undergraduate minors (CivE, EnvE, and ConE), and a master's degree in Civil Engineering.

2023-2024 DEPARTMENT STUDENT SCHOLARSHIPS

HAMPTON SR. SCHOLARSHIP

Thomas Aycock
Scott Rayack

ADC ENGINEERING SCHOLARSHIP

Louise Bonnimond

CIVIL AND ENVIRONMENTAL ENGINEERING SCHOLARSHIP

Aryan Patel
Roscoe Williams

COL. DION, CLASS OF 1968, SCHOLARSHIP

Mary Coastal Watkins

X. O. BUNCH JR. SCHOLARSHIP

Thomas Haren

DR. VECELLIO TRANSPORTATION SCHOLARSHIP

Eric Lipscomb
Thomas Morrison

HARRY McCULLOUGH MIMS SR. SCHOLARSHIP

Thomas Aycock

JACK McCORMAC SCHOLARSHIP

Andrew Hanson
Nathaniel Standing

INGRAM, JR. SCHOLARSHIP

Joseph Combs

"MAC" NIGELS SCHOLARSHIP

Caden Leckelt

DAVIS FAMILY SCHOLARSHIP

Harrison Bishop
Louise Bonnimond
Ryan Brozek
Blake Buchholz
Luke Crouch
James Crowther
Jake Debenport
Landon Gregory
Clay Gurley
Levi Hoegemeyer
Tilden Fowler
Paul Maskery
Richard Milling
Timothy Overend
Houston Palmiter
Daniel Ramirez-Vital
Scott Rayack
Charles Walker
Mary Coastal Watkins
Luke Wiggins
Jeffery Zeigler

GIVING TO CECE

Sustaining the levels of student success highlighted in this newsletter is greatly aided by support from our benefactors. You can contribute by making a donation designated for Civil, Environmental, and Construction Engineering through The Citadel Foundation at <http://foundation.citadel.edu/> or call CEE at 843-953-5083.