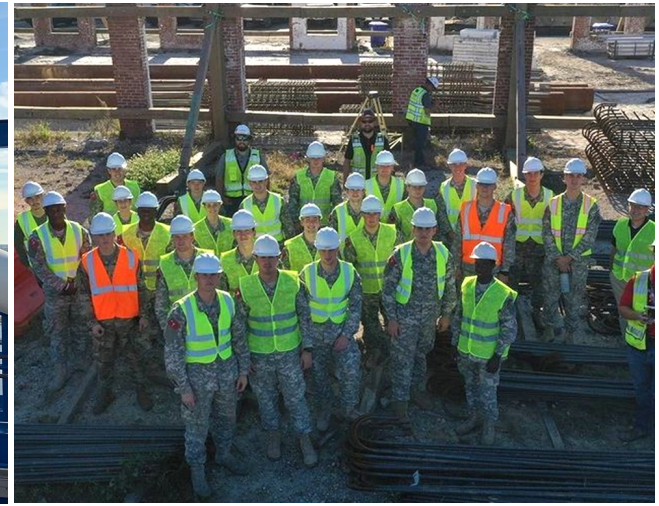


# The Citadel, Civil, Environmental, & Construction Engineering News



Winter 2021  
Newsletter



## CIVL AND CONE BS PROGRAMS ABET ACCREDITED

Dec 2021- Last academic year, the staff and faculty for the CIVL and CONE programs published extensive self-studies and completed virtual site visits with the ABET Program Evaluators. All this work resulted in both the CIVL and CONE programs receiving ABET accreditation.

Dan Nale, Civil Engineering Professor of Practice, alumnus, & Retired Senior VP of Gulfstream Aerospace said, "ABET accreditation has been a fundamental requirement of The Citadel Civil & Environmental Engineering Program and has been a tremendous benefit to all of our graduates."



ABET, the Accreditation Board for Engineering and Technology, reviews post-secondary education programs in the sciences and engineering world-wide. For engineers, graduation from an ABET accredited program is the first step toward professional licensure.

The Civil Engineering Program has been accredited by ABET since 1936. This is the first successful accreditation of the Construction Engineering Program, originally formed in 2018. This accreditation benefits not only our current graduating CONE students, but also the first class who graduated in 2019.



The Civil and Construction Engineering Programs are happy to welcome the new Dean of the Citadel School of Engineering, Dr. Andrew Williams, MBA. He is a professor of electrical engineering and computer science, joining us Summer 2021 after serving as an Associate Dean of the School of Engineering at the University of Kansas. Dean Williams is a great supporter of innovation, both in research and teaching. Welcome Dean Williams!

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## DEPARTMENT HEAD'S MESSAGE:

## WILLIAM J. DAVIS, PH.D., P.E. (AL)

Greetings from LeTellier Hall! Our students, faculty, and staff completed an outstanding Fall 2021 semester, adding to 179-year engineering history at The Citadel, with highlights including:



**Civil Engineering Capstone:** Capstone students are completing an airfield design to accommodate Electric Vertical Takeoff and Landing (eVTOL) aircraft for Rock Hill-York Co. Airport. This semester included a technical briefing for Congresswoman Nancy Mace and SC Aeronautics Commission.

**Construction Engineering Capstone:** Capstone students prepared construction submittal packages for the Spartina Creek Office Building in Mt. Pleasant under Choate Construction. This *real world* project involved student team presentations to 7-member expert panel.

**NSF-STEM Scholarship Program:** The Excellence in Civil Engineering Leadership (ExCEL) program, funded by the NSF, is expanding. A 9-student Freshman Cohort was recruited and onboarded to join the current 7-student Junior cohort.

**Students:** CIVL and CONE students continue to excel, as indicated by the Numerous Awards and Scholarships they earned. Extracurricular activities continue to play a major role in student development through Undergraduate Research, Chapter meetings, field trips, guest speakers, and Conferences including Society of Women (SWE) National Conference.

**Faculty:** Wide array of impactful research, scholarship, funded grants, service, including 2021 ASCE-SC Infrastructure Report Card

**Presidential Award Winner (PAW):** LeTellier Hall Laboratory Director, Ege Arslaner, received The Citadel 2021 Rising Star, presented by President, Gen. Glenn M. Walters.

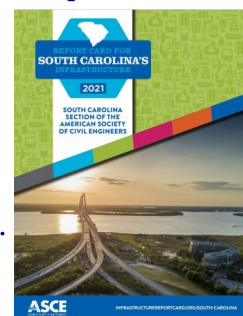
Our student-centered teaching and learning community includes 225 civil and construction engineering students, 14-faculty, 2-staff, and 2-graduate assistants. Through teamwork, synergy and collaboration, we strive to honor the legacy of our collegiate forefathers and build upon the rich traditions of our storied engineering program at The Citadel. We are dedicated to our central mission of developing and graduating principled engineering leaders. Please visit us on campus, or reach out, if you would like more information about our students or academic programs.

FACULTY AUTHOR  
2021 ASCE-SC  
INFRASTRUCTURE  
REPORT CARD

ASCE conducts periodic reviews of the status of infrastructure across the United States. The purpose of such publications is to draw the public's attention toward the infrastructure used daily. These reports break down infrastructure into multiple categories including: aviation, drinking water, ports, and roads. Each category is assessed on current and future efficacy by a team of civil engineering professionals and receives a grade of A through F.

States create their own state-specific report cards to better draw attention to their local needs. In 2021, the most recent report card for the state of South Carolina was published. Primary authors include four of our Department's faculty:

Dr. Dimitra Michalaka,  
Dr. Mostafa Batouli,  
Dr. Dan Nale,  
and  
Dr. John Ryan.

CIVIL ENGINEERING STUDENTS BY DAY  
FUTURE ENTREPRENEURS BY NIGHT

Senior Cadets Chandler Beale (pictured top left) and Collier Summers (lower picture) found an exciting way to spend their \*limited\* free time this Fall. They are the department's first students to compete in the Baker Business Bowl hosted by the Baker School of Business. Teams of Citadel students compete in three rounds of evaluation. Round 1 reviews the business concept, Round 2 is an oral "elevator pitch," and Round 3 is a full business plan.



Team "ACE", Beale and Summers, proposed an engineering firm that will plan, design, and develop vertiports to accommodate the future demand for eVTOL transit. Beale and Summers had heard of the competition in previous years but had never had a potentially winning idea and thus never entered. However, this year drawing inspiration from exposure to electric vertical take-off and landing (eVTOL) aircraft during the Civil Capstone course, everything came together perfectly. Mr. Beale says, "The idea of creating an engineering design company requires both of us to utilize the engineering subsets that we have learned in the last [three] and a half years. Competing ... allows us to direct operations from a business aspect. This competition has been challenging but has guided us in preparation for this [emerging] industry." The Department sends our best wishes to Team "ACE" as they prepare for the final round of competition in February 2022!





## STUDENT HIGHLIGHTS & DISTINCTIONS



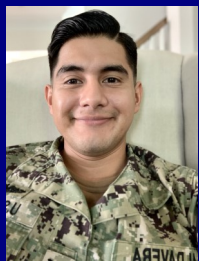
Our students benefit greatly from hands-on demonstrations and design projects related to the materials covered in class. Such activities are implemented from freshman year all the way through graduation.



Santa made a visit for the annual ASCE Holiday Party and posed for a photo with Dr. Ryan (below). These traditions allow our cadets to have a bit of fun during an otherwise stressful end of semester period.



We are honored to host guest speakers as part of our classes. When students see current practitioners, they can connect theory to practice. Pictured is Mr. Nick Matthews, P.E. who presented to the Transportation Engineering course on Traffic Signal Coordination.

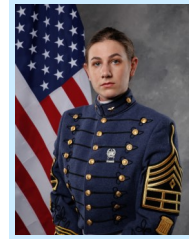


### MEET VETERAN STUDENT NEAL ALDAVERA

Mr. Aldavera came to The Citadel after 5 years in the US Navy as a submarine electronic navigation technician. He chose to attend The Citadel primarily for the “prestigious civil engineering program” and the school’s “strict classroom environment” that promotes learning, but also for the “foodie” culture of Charleston.

Our veteran students often have top grades and Mr. Aldavera is no exception. He credits his time on the submarine, balancing multiple responsibilities simultaneously, for his ability to balance learning multiple topics at the same time. The necessary attention to detail when lives are at stake on a submarine carries through to his school work. He also says, “When I lose motivation to study or be alert in class, I remind myself that it can be worse. It reminds me to appreciate the little things in life, like breathing fresh air and seeing the sunlight.”

## UNDERGRADUATE RESEARCH SPOTLIGHT



### Emma Larsen

Senior Cadet Emma Larsen participated in the Summer Undergraduate Research Experience (SURE) mentored by Dr. Ghanat and Dr. Curtis

Scott of The Citadel Climate Center. This funded program allowed Ms. Larsen to research over the summer and has influenced her post-graduation plans. She is in the process of applying to graduate schools across the country to continue her studies and research.

### Mary Coastal Watkins

Sophomore Cadet Watkins is working with Dr. Ghanat to analyze water table depths in the greater Charleston area. This data has never been comprehensively tabulated so this will be a great contribution to understanding of the Low Country. As someone who grew up in the area, Ms. Watkins is personally connected to the project. She says, “The environment, conservation, water quality, nature are all key elements of my upbringing. Having this opportunity deepens my knowledge and gives me a quantitative perspective on something so vital to my life.”



### MEET GRADUATE RESEARCH ASSISTANT NEGIN SHAMSI

Ms. Shamsi started at The Citadel in Fall 2021 to complete a funded research Master’s degree. She is one of the Department’s first funded research graduate student.

Her research project “Climate Risks, Infrastructure Systems, and Income Disparities: Impacts of Sea-Level Rise on Social Inequality in South Carolina’s Coastal Communities” is sponsored by the SC SeaGrant Consortium and supervised by Dr. Batouli. She focuses on “improving the effectiveness and efficiency of infrastructure projects to protect vulnerable communities in low-lying coastal regions affected by sea-level rise.” We can all agree that there is no better low-lying coastal region in the country than Charleston, so Ms. Shamsi is in a great place to conduct research and take graduate courses.

Look out for future outcomes from Ms. Shamsi’s work.





## FACULTY &amp; STAFF NEWS

**Welcome New Staff Member  
Jennifer Welch**

Ms. Welch joined the department in Fall 2021 as our Student Services Program Coordinator. She plans events, coordinates purchases, and manages advising for students, staff, and faculty. She hopes to “show everyone what an amazing job [the department] does to help students succeed... at The Citadel.”

GET INVOLVED WITH  
THE DEPARTMENT

Our faculty strive to provide quality lectures and assignments to support student learning, but many of the most impactful experiences occur due to the generosity of our alumni community. They help us provide student experiences such as guest speaker visits, field trips, and internships. If you are interested in volunteering your time, please contact Ms. Welch at <jwelch10@citadel.edu>.

GIVING TO THE CEE  
DEPARTMENT

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

**The Department's Staff and Faculty are happy to be able to serve our Citadel community of students and alumni. With the global situation, we have not seen you for a while, so if you stop by campus, be sure to say “Hello.”**

Pictured (L-R): Dr. Batouli, Dr. Laughton, Ms. Welch, Dr. Burke, Mr. Arslager, Dr. Nale, Dr. Mays, Graduate Assistant Mr. Martin, Dr. Wood, Dr. Davis, Dr. Brown, Dr. Michalaka, Dr. Ghanat, and Dr. Shetty. Not pictured: Dr. Watson, Dr. Ryan, Dr. Giles

## 2021-22 DEPT STUDENT SCHOLARSHIPS

**Ambrose G. Hampton Sr.  
Scholarship**

Eli Rodriguez  
Jace Baer  
Thomas Aycock

**ACD Engineering Scholarship**

James Gillam  
Chayne Dawley

**Col. Thomas R. Dion, PE, PLS  
Scholarship**

Emma Larsen

**David A. Falatok Scholarship**

Anthony Sands

**Davis Family Scholarship**

Austin Hammond  
Roman Bruce  
Clay Gurley  
Eli Rodriguez  
John Baker  
Joshua Gibson  
Julian Jenkins  
Kelsey Cordero  
Louise Bonnimond  
Spencer Bovenizer

**Harry McCullough Mims Sr.  
Scholarship**

Ronald Flowers

**Jack McCormac Scholarship**

Connor Brownlee  
Kaleb Hyland  
Ronald Flowers

**Lt. Col. James R. Beam  
Scholarship**

Angel Figueroa  
Connor Brownlee

**“Mac” Nigles Scholarship**

Richard Milling

**SC ITE Gilbert Rowe Transportation  
Scholarship**

Matheson Wannamaker

**NYCity SAME Post Scholarship**  
Greer Hensley**Rennebaum Family Civil  
Engineering Scholarship**  
Kelsey Cordero**The Schuler Family Scholarship**

David Smith  
Neal Aldavera  
Robert King  
Samuel Ouzts

**Roscoe Ashley Page III Scholarship**

Mary Coastal Watkins

**Smith-Barnett Scholarship**

Eli Rodriguez  
Ezekiel Durand  
John Baker  
Kelsey Cordero

**George Walker White Engineering  
Scholarship**

Emily Perkins  
Emma Larsen

**Kenneth C. Dufford Scholarship**

Ryan Beam

**The Psillos Family Scholarship**

Robert Jennings

**Richard B. DeYoung Scholarship**

Aidan Puzio  
Benjamin Kicklighter  
William Metts

**SC Society of Professional Land  
Surveyors, Coastal Chapter  
Scholarship**

Jeffrey Zeigler  
Chayne Dawley

**Benjamin W. Ingram Jr.  
Scholarship**

Louis Bonnimond  
Spencer Bovenizer  
Jake Debenport  
Daniel Ramirez-Vital

