

# LOUISIANA CIVIL ENGINEER

Journal of the Louisiana Section

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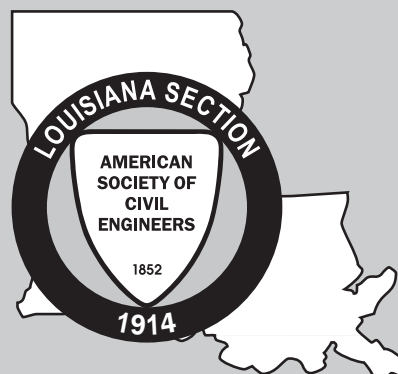


ChatGPT (DALL-E), "A high-resolution image depicting a construction site where prestressed concrete piles are being driven into the ground," generated August 31, 2024.

## FEATURES:

Development of Design  
Parameters of Prestressed  
Concrete Piles in Soft Clayey  
Soil of Louisiana

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**VOLUME 32 • NO 4**

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The Louisiana Section of the American Society of Civil Engineers was founded in 1914 and has since been in continuous operation. The Section consists of the entire state of Louisiana and is divided into four branches that directly serve over 2000 members. They are the Acadiana Branch centered in Lafayette, the Baton Rouge Branch, the New Orleans Branch, and the Shreveport Branch.

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# TABLE OF CONTENTS

AUGUST 2024 • Volume 32 • No. 4

<b>Section Roster</b> .....	<b>4</b>
<b>President’s Message</b> .....	<b>5</b>
<b>Development of Design Parameters of Prestressed Concrete Piles in Soft Clayey Soil of Louisiana</b> .....	<b>6</b>
<b>ASCE Region 5 News</b> .....	<b>9</b>
<b>Section News</b> .....	<b>10</b>
<b>ASCE-COPRI Louisiana Chapter News</b> .....	<b>13</b>
<b>ASCE-G-I Louisiana Chapter News</b> .....	<b>16</b>
<b>ASCE Government Relations Committee</b> .....	<b>17</b>
<b>ASCE-T&amp;DI Louisiana Chapter News</b> .....	<b>18</b>
<b>Branch News</b> .....	<b>19</b>
<b>ASCE-SEI New Orleans Chapter News</b> .....	<b>22</b>
<b>Student Chapter News</b> .....	<b>23</b>
<b>Calendar of Events</b> .....	<b>25</b>
<b>Professional Listings</b> .....	<b>25</b>
<b>Services and Suppliers</b> .....	<b>2, 28</b>



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The Louisiana Section is located in ASCE Region 5 that consists of the Louisiana, Mississippi, Alabama, Georgia, Florida Sections, and Puerto Rico.

# President's Message

By Marcus Taylor, PE, Section President

As I reflect on this past year as President of the Louisiana Section of ASCE, I am struck by the remarkable strides we have made as a community of civil engineers. From navigating the challenges posed by evolving industry standards to embracing innovative solutions that push the boundaries of our field, this year has been a testament to the resilience and ingenuity that defines our profession. In this message, I will share the highlights of our collective achievements, the invaluable contributions of our members, and the exciting opportunities that lie ahead. Whether you are a seasoned professional or a new member of our society, I hope this reflection offers both a sense of pride in what we have accomplished and inspiration for the future.

This past year has been one of the most fulfilling in my civil engineering career, serving as the Louisiana Section President. It's hard to believe how quickly the 2023-2024 ASCE year has flown by, and that my term is coming to an end. I want to thank the entire Section Board for their hard work and dedication to ASCE and the state of Louisiana. As past president, Kirk Lowery will be stepping down from the board, and Luke Haney from Shreveport will be joining as Secretary-Treasurer. I would like to thank Kurt for being instrumental in helping me throughout the year, ensuring that I did not miss a beat as Section President. I also want to congratulate Andrew Woodroof, who will be stepping into the Section President position at our officer installation meeting in New Orleans this October.

As mentioned in previous journals was the rollout of the next version of the Report Card. Currently, a draft of the various sections has been compiled and is being reviewed for the final version. We hope to have a final draft by mid-October.

The American Society of Civil Engineers (ASCE) in Louisiana has several events planned for 2024:

1. **2024 ASCE Leader Orientation and President & Governor Forum**

Dates: September 15–16, 2024

Location: Reston, Virginia

This event features interactive professional development sessions, best practice presentations, hands-on exercises for effectively running your groups, and opportunities for open discussions with ASCE leaders. It's a great opportunity for networking and gaining insights into leadership within the civil engineering community.

2. **34th Annual Louisiana Civil Engineering Conference and Show (LCECS)**

Dates: September 18–19, 2024

Location: Pontchartrain Convention & Civic Center, Kenner, LA  
Hosted by the New Orleans branch of ASCE and the Louisiana Chapter of the American Concrete Institute (ACI), this conference includes speakers from government, academia, regulation, and the private sector. Attendees can earn up to 12 professional development hours and participate in sessions covering a wide range of technical disciplines and engineering practices.

3. **2024 ASCE Convention**

Dates: October 6–9, 2024

Location: JW Marriott Tampa Water Street, Tampa, Florida  
This convention will feature a variety of programming experiences, including the annual ASCE members meeting, keynote presentations, invited panels, case histories, and research papers. It's designed to ignite innovation and forge the future of civil engineering, with sessions on AI, climate change, workforce issues,

and more.

These events offer excellent opportunities for professional development, networking, and staying updated on the latest trends and innovations in civil engineering. Attending these events is not just about fulfilling professional development requirements; it's an investment in your career and in the future of civil engineering. The 2024

ASCE Leader Orientation and President & Governor Forum offers a unique opportunity to learn from seasoned leaders and to enhance your own leadership skills through interactive sessions and hands-on exercises. The 34th Annual Louisiana Civil Engineering Conference and Show provides a comprehensive platform to deepen your technical expertise, with insights from leading experts across multiple disciplines. Lastly, the 2024 ASCE Convention in Tampa is where the cutting edge of civil engineering will be on full display, with sessions designed to tackle the most pressing issues of our time, from artificial intelligence to climate resilience. These events are designed to equip you with the knowledge, skills, and connections needed to advance your career and to contribute meaningfully to the field.

In this month's journal, we delve into a crucial aspect of geotechnical engineering that has significant implications for our state's infrastructure. Our feature article explores the development of design parameters ( $\alpha$ ) for the analysis and design of prestressed concrete piles in Louisiana—a topic that is not only technically rigorous but also vital for enhancing the durability and safety of our built environment. Whether you are directly involved in geotechnical projects or simply interested in the cutting-edge advancements shaping our field, this article offers valuable insights that you won't want to miss.

Lastly, I would like to thank everyone for their support this year and for the opportunity to serve as your President. Thank you to the Publication Chair Katherine Foreman, PE who did a fantastic job, as well as the editor, Nedra Hains, MA. As we transition into the next chapter of our journey, I am filled with optimism for the future of the Louisiana Section of ASCE. The challenges we face—whether in adapting to the accelerating pace of technological advancements, addressing the pressing needs of our infrastructure, or fostering the next generation of engineers—are indeed formidable. However, these challenges also present incredible opportunities for growth, innovation, and leadership within our profession. I encourage each of you to remain engaged, continue to push the boundaries of what is possible, and support our incoming leadership as they guide us through the exciting and transformative times ahead. I encourage you to continue supporting the Louisiana Section and our incoming board next year. Please take every opportunity to volunteer in ASCE activities and assist our incoming president, Andrew Woodroof. Together, we will continue to shape the future of civil engineering, not just in Louisiana, but across the nation.



Marcus Taylor, PE

# Development of Design Parameters of Prestressed Concrete Piles in Soft Clayey Soil of Louisiana

By Md. Nafiul Haque, PhD, PE,  
Murad Y Abu-Farsakh, PhD, PE,



Md. Nafiul Haque, PhD, PE

## ABSTRACT

This study analyzes twelve prestressed concrete (PSC) instrumented test piles (TPs) driven across various bridge construction projects in Louisiana as part of a load testing program. These piles were predominantly installed in cohesive soils. Comprehensive soil characterizations, including both laboratory and in-situ tests, were performed, to determine the soil properties. The test piles (TPs) were equipped with vibrating wire strain gauges to separately measure the distribution of skin friction and end-bearing capacities. Static load tests (SLTs) and dynamic load tests (DLTs) were conducted on each TP after the end of driving (EOD) to calculate the ultimate load capacity. Of the soil layers analyzed, fifty-six exhibited clayey behavior, while fifteen were dominated by sandy soil characteristics. Regression analyses were conducted on seventy-five percent of the data (forty-two soil layers) to develop an empirical model predicting the total stress parameter ( $\alpha$ ) as a function of undrained shear strength ( $S_u$ ).

## INTRODUCTION

Total stress approaches are fundamental approaches for calculating the shaft capacity of driven piles in clay. These methods were developed by various researchers using laboratory and field test results. A review of advancements in these approaches indicates that total stress methods, particularly for concrete piles, generally provide more accurate results than effective stress methods. The  $\alpha$  is crucial for estimating pile skin friction in clayey soils. Methods proposed by Tomlinson (1957), API (1974), and NGI (3) offer relationships for determining  $\alpha$  based on factors such as undrained shear strength ( $S_u$ ), overconsolidation ratio (OCR), plasticity index (PI).

### Total Stress Parameter ( $\alpha$ )

The skin friction of piles in clayey soils is mainly determined by  $S_u$  of the soil, expressed by the equation:

$$f_s = \alpha S_u \quad (1)$$

where  $f_s$  is the adhesive shear strength between the soil and the pile, and  $\alpha$  is the total stress parameter. The  $S_u$  can be measured through tests like the unconfined compression test, in-situ vane shear test, or unconsolidated, undrained triaxial test (UU). The total stress parameter  $\alpha$  adjusts  $S_u$  to estimate  $f_s$ . Different researchers (e.g., 1, 4, 5) have derived  $\alpha$  values from correlations based on static load tests on piles in multi-layer soil profiles with varying  $S_u$ . It has been observed that  $\alpha$  is not a constant but varies with factors like  $S_u$ , OCR, effective vertical stress ( $\sigma'_v$ ), and the distance from the pile's tip.

The  $\alpha$  is evaluated using several equations, primarily as a function of  $S_u$ . Tomlinson (1957) noted a nonlinear relationship between unit  $f_s$  and  $S_u$ , as shown in Figure 1. Subsequent research has extensively supported Tomlinson's equation using empirical data from pile load

tests. It is generally observed that the value of  $\alpha$  decreases as  $S_u$  increases. Similar correlations between  $S_u$  and  $\alpha$  have been developed by other researchers, as displayed in Figure 1.

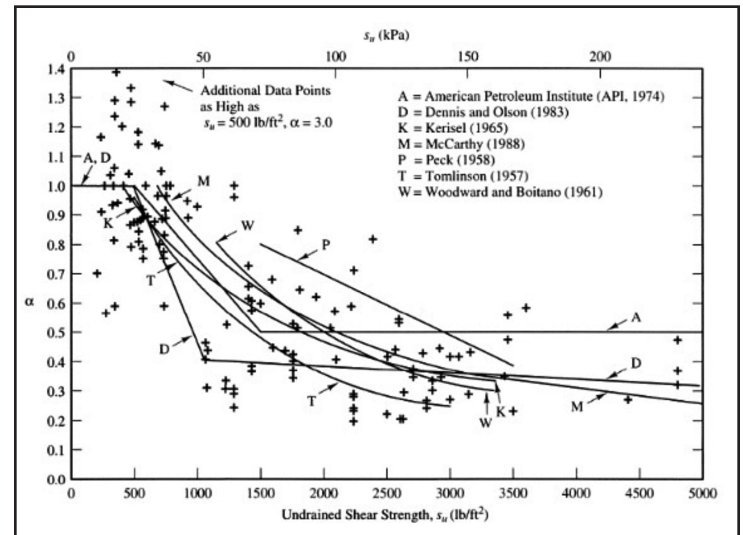


Figure 1 shows available models to estimate total stress parameter factor ( $\alpha$ ) from undrained shear strength ( $S_u$ )

The figure shows that the  $\alpha$  is typically assumed to be 1 for low  $S_u$  values. However, in the literature,  $\alpha$  ranges from 0.75 for low  $S_u$  to 0.2 for high  $S_u$ . Peck (1958) analyzed 36 pile load cases and found that friction was approximately equal to  $S_u$ . More precise analyses might yield different values. For instance, Seed and Reese (1957) and Coyle and Reese (1966) reported skin friction values in very soft clayey soil that were approximately 1.5 times  $S_u$ . These findings were based on instrumented pile data accounting for skin friction distribution with depth.

An extensive load testing program was on instrumented TPs in Louisiana, accompanied by laboratory soil investigations and in-situ testing to assess soil properties. The test piles (TPs) were equipped with instruments to estimate the skin friction of individual soil layers. The specific objectives of this study were to: (a) calculate the pile design parameters ( $\alpha$ ) for each soil layer, (b) correlate the  $\alpha$  with the  $S_u$  of individual layers, and (c) develop a model to estimate the  $\alpha$  based on the  $S_u$ .

### Test Sites and Test Piles (TPs)

An extensive load testing program by the Louisiana Department of Transportation and Development (LADOTD) was conducted at five bridge construction sites: LA-1, Bayou Lacassine, Bayou Zourie, Caminada Bay, and the KCS Railroad Bridge. This program involved

twelve instrumented PSCs, installed across the sites. At LA-1, six piles were placed. Additional piles were installed at Bayou Lacassine, Caminada Bay, KCS Railroad Overpass, and Bayou Zourie. The piles varied in width from 16 inches to 36 inches and in length from 55 feet to 210 feet.

### Subsurface Geotechnical Conditions

Both laboratory and in-situ conditions were tested at each TP location to evaluate the  $S_u$ . Shelby tube samples, 3 inches in diameter, of cohesive soils were taken from boreholes at various depths so that UU tests could be completed. The depth, strength parameters, and calculated  $\alpha$  for each soil layer are summarized. Detailed soil classifications and properties for all sites were documented by Abu-Farsakh et al. (2016). The subsurface soil profiles at Bayou Lacassine and Bayou Zourie revealed mostly cohesive soils with small interlayers of sand, similar to the LA-1 project sites. At Caminada Bay, the soil was predominantly sandy. In-situ tests, including piezocone penetration tests (PCPT), piezocone dissipation tests, and standard penetration tests (SPT), were completed alongside the laboratory tests. The SPT was particularly used to assess the relative density and frictional properties of the sandy soils.

### Instrumentation

To achieve this study's purpose, all TPs at each site were equipped with vibrating wire strain gauges (VWSG) to measure the skin friction of individual soil layers. The instrumentation details are described in Abu-Farsakh et al. (2016). The strain gauges (Geokon model 4911) were strategically placed along the TP length, targeting specific soil layers. The VWSGs were installed in pairs on opposite sides of the pile to eliminate bending stress, their average readings were used for analysis. Additional strain gauges were installed at the top of the pile for calibration.

### LOAD TESTING PROGRAM

The load testing program aimed to confirm pile capacity, study load transfer behavior, and assess drivability. It involved DLTs and SLTs at various intervals. A Pile Driving Analyzer (PDA<sup>®</sup>) in accordance with ASTM D 4945-89 for the DLTs, calculated the total capacity or resistance ( $R_t$ ) of the pile. The Case Pile Wave Analysis Program (CAPWAP<sup>®</sup>) was used to separate  $R_t$  into the estimated end-bearing ( $R_{tip}$ ) portion and the estimated skin friction ( $R_s$ ) portion of the pile. SLTs, performed 14 days after driving in line with ASTM D-1143 quick test standards, estimated the distribution of skin friction along the pile length using the embedded strain gauges. Reaction frames, supported by steel pipe piles arranged in a square pattern, were designed to bear loads up to three times the TP's design load. All TPs failed before reaching the maximum design capacity of the reaction frames, and pile head displacement was recorded using dial gauges. Load-settlement plots data are available in Abu-Farsakh et al. (2016), an example is presented in Figure 2.

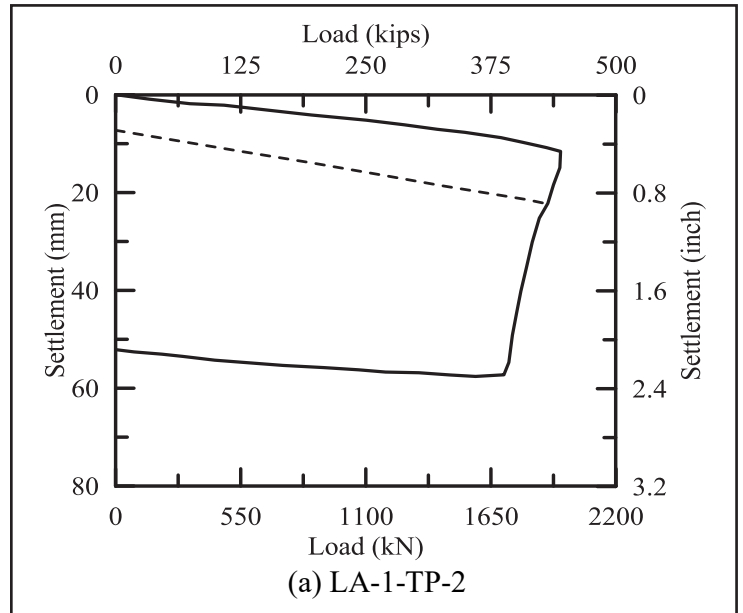


Figure 2: Example of load settlement plots from the static load test

### Unit Skin Friction ( $f_s$ ) Distribution

Most existing models for estimating the  $\alpha$  rely on correlations with  $S_u$ , and several researchers have developed these correlations using instrumented TPs during SLTs. In this study, the authors utilized data from their own load testing program of twelve instrumented TPs to develop a model relating  $\alpha$  and  $S_u$ . To achieve this, they calculated the  $f_s$  of individual soil layers, correlating it with  $S_u$ , as shown in Equation 1. An example of  $f_s$  along the length of TPs from the LA-1 site is illustrated in Figure 3.

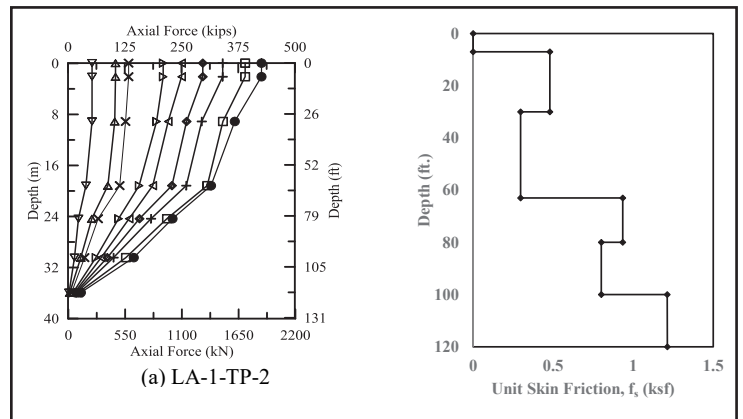


Figure 3: Example of load distribution and unit skin friction plots from the static load test

### CORRELATION AND MODEL

The back-calculated  $\alpha$  values for 71 soil layers across twelve TPs were analyzed, with clayey soils dominating 56 layers and sandy soils in 15. The maximum and minimum  $\alpha$  values were 1.80 and 0.22, observed in different layers. The study found an average  $\alpha$  of 0.96 for clayey soils. The results align with existing literature, showing an inverse exponential relationship (Figure 4) between  $\alpha$  and  $S_u$ , where  $\alpha$  decreases as  $S_u$  increases, especially in stiff clayey layers.

A comprehensive regression model between the  $\alpha$  and the  $S_u$  using data from 42 randomly selected clayey or cohesive soil layers out of 56 was statistically analyzed. The remaining 14 layers were used for model verification. Regression analyses, performed using SAS®, resulted in the model  $\alpha = 20.6 S_u^{-0.48}$ , where  $S_u$  is in psf. This model, with an  $R^2$  of 0.52, was statistically significant with p-values less than 0.0001 for both the F test and t test, indicating strong confidence in its application. The mean measured versus predicted data was 1.05 with a coefficient of variation (COV) of 0.29, and a mean square error (MSE) of 0.08.

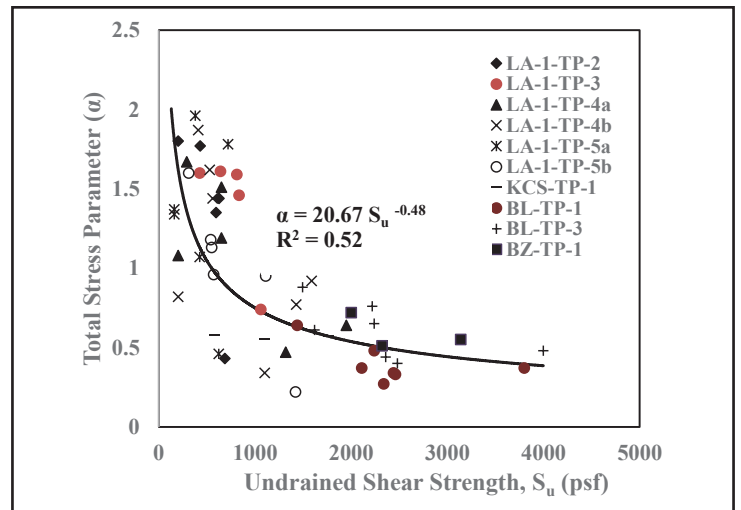


Figure 4: Correlation between  $S_u$  and  $\alpha$ . (Haque and Abu-Farsakh, 2024)

## SUMMARY AND CONCLUSIONS

A load testing program on twelve instrumented test piles across five Louisiana construction projects both static and dynamic load tests to determine ultimate load capacity, distribution of skin friction, and separate measurements of skin friction and end-bearing capacity. The static load tests facilitated the calculation of unit skin friction ( $f_s$ ) for individual soil layers, from which total stress parameters ( $\alpha$ ) were back-calculated using the measured  $f_s$  and undrained shear strength ( $S_u$ ). The  $\alpha$  values for clayey soil layers ranged from 0.22 to 1.80, with an average of 0.96. The study found good agreement between measured and predicted  $\alpha$  values, with statistical analyses indicating strong confidence in the developed models, as the mean measured-to-predicted  $\alpha$  ratio was close to 1.

## ACKNOWLEDGEMENT

This research is funded by the Louisiana Transportation Research Center (LTRC Project No. 17-1GT) and LADOTD. The comments and suggestions of Zhongjie Zhang, Pavement and Geotechnical Administrator, are gratefully acknowledged.

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**Nafi Haque, PhD, PE**, Nafi Haque is a Senior Geotechnical Engineer at WSP, specializing in deep foundation design, slope stability, and settlement issues in Louisiana's challenging soft soils. He earned his PhD. in Geotechnical Engineering from LSU in 2016 and has been contributing his expertise in the field ever since. Nafi received his professional engineering license in 2022, further solidifying his credentials and commitment to the profession.

**Murad Y. Abu-Farsakh, PhD, PE, F ASCE**, Dr. Murad Y. Abu-Farsakh is a professor at Louisiana State University and the Director of the Geotechnical Engineering Research Laboratory at the Louisiana Transportation Research Center. An expert in shallow and deep foundations, soil stabilization, soil improvement, and slope stability, he has published more than 100 research articles in the field of geotechnical engineering.



# ASCE Region 5 News

By Christopher G. Humphreys, PE

## Governor's Update: Enhancing Regional Collaboration and Innovation

As your ASCE Region 5 Governor, I am proud to share the progress we've made in fostering collaboration across our region. This past quarter, we've seen tremendous growth in our professional and student chapters, with new initiatives aimed at promoting sustainable engineering practices and enhancing community resilience.

Our focus continues to be on providing members with opportunities for professional development, networking, and leadership. The upcoming regional conference will spotlight innovative projects from across our states, highlighting the ingenuity and dedication

of our members. I encourage all to participate and share your work, as we continue to build a stronger, more connected engineering community.

Thank you for your ongoing commitment to ASCE and to advancing the profession. I look forward to seeing the remarkable achievements that we will accomplish together in the coming months.



Christopher G. Humphreys, PE  
Region 5 Governor

## Call for Donations

The William A. Brookshire LSU Military Museum is seeking artifacts from Louisiana State University alumni, faculty, or staff who served in the United States armed forces. The University, in partnership with Cadets of the Ole War Skule, has renovated Memorial Tower to house the LSU Military Museum. The museum is the repository for items reflecting the university's military history and heritage. The museum is looking for any items, to include but not limited to, uniforms and other clothing, trunks, luggage, maps, books, battle plans, photos, correspondence, plaques, medals, citations, flags, etc.

The William A. Brookshire LSU Military Museum will be a resource to students, researchers, and educators for generations to come. Our artifacts and documents are enormously important in helping to bring history to life. If you would like to contribute to preserving LSU military history, please contact us concerning any material that you wish to donate to the museum.

### Contact Information:

James Gregory  
Director  
William A. Brookshire LSU Military Museum  
Memorial Tower  
Louisiana State University  
Baton Rouge, La. Rouge, LA 70803  
[jgregory@lsu.edu](mailto:jgregory@lsu.edu)

# LSU

## William A. Brookshire Military Museum



# Louisiana

## CIVIL ENGINEERING

Conference & Show

### SAVE THE DATE!

#### Call for Potential Speakers and Exhibitors!

We are proud to announce the dates for the 34th Annual Louisiana Civil Engineering Conference and Show. This event, a joint effort from the New Orleans Branches of ASCE and ACI, is the premiere gathering for the Civil Engineering community in the Greater New Orleans Area. We are in the process of soliciting sponsors and exhibitors and establishing the technical program for the fall conference which will be held on September 18 & 19, 2024 at the Pontchartrain Center in Kenner, Louisiana.

**Note, this is a few weeks later than years past!**

For additional information on the conference, please visit our web site at  
[www.LCECS.org](http://www.LCECS.org)



# I'm Going to Take You to the Future!

Engineering Tomorrow: How AI is Shaping the Future of Civil Infrastructure

By Nedra Hains, MA, Editor



Nedra Davis Hains, MA

## Abstract

Artificial Intelligence (AI) is increasingly playing a pivotal role in the civil engineering industry. This article is a quick overview of AI applications in civil engineering, including machine learning, computer vision, and natural language processing. These technologies are transforming the way we design, build, and maintain infrastructure. AI enables civil engineers to optimize designs, anticipate maintenance needs, and improve sustainability, thereby addressing complex challenges more efficiently and effectively. As AI technology advances, its impact on civil engineering will continue to grow, fostering innovation and leading to smarter, more resilient infrastructure. This article aims to provide civil engineers with the insights and tools needed to stay at the forefront of technological developments in the industry.

## Introduction: The Role of AI in Civil Engineering

AI is transforming many industries, and civil engineering is no exception. AI's ability to process large amounts of data, perform predictive analysis, and automate tasks can greatly enhance the efficiency, accuracy, and innovation of civil engineering projects. This article discusses how civil engineers can leverage AI, focusing on its applications, benefits, challenges, and best practices.

## Understanding AI and Its Relevance to Civil Engineering

AI involves machines simulating human intelligence by learning, reasoning, and making decisions. In civil engineering, AI can analyze large datasets, optimize designs, predict outcomes, and automate repetitive tasks.

- **Machine Learning (ML):** Utilized for predictive modeling, recognizing patterns, and making decisions based on data.
- **Computer Vision:** Assists in image recognition and analysis, especially for monitoring construction sites and evaluating infrastructure.
- **Natural Language Processing (NLP):** Helps automate documentation and interpret technical documents.

## Applications of AI in Civil Engineering

**Design Optimization:** AI algorithms analyze multiple variables and constraints, leading to more efficient and cost-effective designs.

For example, AI-driven software can suggest the best design for a bridge, considering factors such as material strength, environmental impact, and cost.

**Construction Management:** AI can enhance project management by predicting potential delays, optimizing resource allocation, and ensuring safety compliance. For instance, machine learning models can predict project timelines based on historical data, allowing engineers to adjust plans proactively.

**Predictive Maintenance of Infrastructure:** AI tools predict when infrastructure components might fail, enabling proactive maintenance and reducing downtime. A time-series analysis comparing predicted vs. actual maintenance needs can demonstrate the accuracy and reliability of AI-driven maintenance models.

**Sustainability and Environmental Impact:** AI can evaluate the environmental impact of construction projects, optimizing designs for sustainability. For example, AI models can predict the carbon footprint of various construction materials, helping to select greener options.

**Geotechnical Engineering:** AI analyzes soil data to predict landslides, optimize foundation designs, and assess seismic risks. A machine learning model predicting landslide risks based on soil composition and rainfall data can illustrate how AI applies to geotechnical engineering.

**Traffic Engineering and Urban Planning:** AI optimizes traffic flow, reduces congestion, and improves urban planning by analyzing real-time data from traffic sensors and cameras. For example, AI systems can simulate traffic patterns under different scenarios, aiding cities in planning infrastructure upgrades.

## Challenges in Integrating AI into Civil Engineering

Integrating AI into civil engineering poses several challenges that must be addressed for effective implementation. One significant challenge is ensuring data quality and availability, as AI models depend on the data they are trained on. Poor-quality, biased, or incomplete data can lead to unreliable outcomes.

Another challenge involves ethical considerations. The use of AI in decision-making raises concerns about safety, privacy, and accountability. For example, if AI systems are used to make decisions about the structural integrity of a bridge, the ethical implications of those decisions must be carefully considered.

Additionally, many civil engineers may lack the expertise to effectively implement and utilize AI technologies. Continuous education and training programs are necessary to bridge this skill gap, ensuring that engineers can harness AI's full potential.

## Best Practices for Civil Engineers Using AI

To successfully leverage AI in civil engineering, it's important to follow best practices. Engineers should start small, initiating AI



**Opening Plenary Session with Dr. Ayanna Howard: How AI will Define the Future of Everything**

<https://convention.asce.org/>

Artificial intelligence (AI) has become a fixture in our daily lives, some facets of which we immediately recognize and some of which we don't. But the impacts AI will have on our future will be easily recognizable and widespread. In this revealing session, influential roboticist, practitioner, and leader Ayanna Howard, PhD, will shed light on the wide-ranging impacts AI will have. Robots and AI will touch everything from how humans learn to how we will be cared for in health care settings. She'll also explain the urgency of regulation and oversight, and the immediate need for data protection. Organizational leaders will gain up-to-the-minute insights into how AI and robotics will impact their businesses as well as the opportunities that will be opened as state-of-the-art technologies spread across industries.



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integration with smaller projects to understand the technology and its impact before scaling up.

Collaboration with AI experts is also crucial. Civil engineers should partner with data scientists and AI professionals who have the technical expertise to develop and interpret AI models accurately. These collaborations ensure that AI systems are robust and tailored to the specific needs of civil engineering projects. Continuous learning is essential to stay current in the rapidly evolving field of AI. Engineers should engage in ongoing education through workshops, webinars, and courses to stay up to date with the latest AI trends and tools. This commitment to learning helps engineers remain competitive and capable of effectively leveraging AI. Finally, ethical AI should be a priority. Civil engineers must implement AI systems with transparency, fairness, and accountability, ensuring that AI is used responsibly and ethically.

BEST PRACTICES	
<p><b>STARTING SMALL</b> WITH CIVIL AI PROJECTS</p>	<p><b>CONTINUE LEARNING</b> WITH AI PROJECTS</p>
<p><b>COLLABORATION</b></p>	<p><b>ETHICAL</b> AI PRACTICES</p>

*Best Practices for AI in Civil Engineering*

**Conclusion: The Future of AI in Civil Engineering**

Looking to the future, it's important to consider the emerging trends and potential directions for AI in civil engineering. While this article provides an overview of current AI applications, the field is evolving rapidly, and new technologies are on the horizon. AI-driven autonomous construction, for instance, is a trend where robots and AI systems work together to perform tasks like bricklaying and site monitoring with minimal human intervention. This not only increases efficiency but also addresses labor shortages in construction.

Another promising development is the integration of AI with digital twins—virtual replicas of physical structures. AI can analyze real-time data from these digital models to predict maintenance needs, optimize energy usage, and enhance infrastructure performance.

These emerging trends suggest that AI will play an increasingly important role in shaping the future of civil engineering. Civil engineers must stay informed and adaptable to these advancements to remain competitive in the industry.

### Resources for Further Learning

**Journal:** *AI in Civil Engineering* (AICE) is the first international and prominent journal to publish original research papers, reviews, comments, and perspectives on AI applications in civil engineering. <https://link.springer.com/journal/43503>

**Online Courses:** List of recommended online courses for civil engineers to learn AI basics.

1. “AI for Everyone” by Andrew Ng (Coursera) - A beginner-friendly course that provides a broad introduction to AI concepts without heavy technical details.
2. “Machine Learning for All” by University of London (Coursera) - This course covers the fundamental concepts of machine learning, designed for those without prior coding experience.
3. “Data Science and Machine Learning Bootcamp with R” by Jose Portilla (Udemy) - Focuses on using R for data science and machine learning, offering practical examples relevant to engineering.
4. “Artificial Intelligence for Engineering” by EIT Digital (Coursera) - A course that introduces AI techniques and applications specifically within the engineering context.
5. “Introduction to Machine Learning” by Udacity - A more technical course that dives into machine learning algorithms and their applications, suitable for engineers looking to deepen their technical skills.

This list is not exhaustive, and it is not an endorsement of any of these courses. These courses provide a strong foundation in AI,

helping civil engineers to understand and begin applying AI tools in their field.

**Books & Journals:** Suggested reading on AI applications in civil engineering. ASCE “AI and Civil Engineering,” The AI revolution is here and changing the way civil engineering gets done. Read the latest on artificial intelligence. <https://www.asce.org/topics/ai-and-civil-engineering>.

**Webinars and Workshops:** Don’t miss your opportunity to hear Dr. Anyanna Howard on the ethics of AI at the ASCE 2024 Convention!

#### IN-PERSON EVENT

## ASCE 2024 Convention

Get ready for Tampa, Oct. 6-9, for sessions on ethics of AI.

- Opening Plenary Session with Dr. Anyanna Howard: How AI will Define the Future of Everything | ↗
- Ethics of AI Use in the Profession | ↗
- Pro/Con AI Debate | ↗

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**Nedra Hains, MA**, Founder, COO of Atomic Blondeaux™. Hains is finishing her doctorate in Architecture and Historic Preservation at LSU (2025) and has recently started her Woman Business Enterprise (WBE). Our mission is to provide cutting-edge technology solutions to our clients and help them achieve their business goals. Atomic Blondeaux is a cutting-edge consulting firm specializing in ATOMIC - Adaptive Threat Operations Management in Cyberspace™. We provide expert services in security awareness, risk management, and proactive threat mitigation. Website: [www.Atomicblondeaux.ai](http://www.Atomicblondeaux.ai) For more information contact: [nedra@atomicblondeaux.ai](mailto:nedra@atomicblondeaux.ai).

## Request for Articles on AI and Engineering

We encourage Louisiana engineers to submit articles highlighting innovative uses of AI in hydraulic modeling, HEC-RAS, and other engineering applications. AI is becoming increasingly relevant in the engineering field, particularly in addressing complex problems in hydrology, coastal protection, and infrastructure design.

If you have experience using AI tools or have pioneered techniques in this area, we invite you to share your insights with the Louisiana Civil Engineer Journal. These articles can provide valuable information on AI’s practical applications and help foster a conversation among engineers about its role in the profession.

**Please submit your manuscript for consideration by the publication committee to  
Nedra Hains at [nedra@atomicblondeaux.ai](mailto:nedra@atomicblondeaux.ai) | 225-333-8234.**

**We look forward to hearing from the pioneers of AI-driven solutions  
in Louisiana’s engineering community.**

# ASCE-COPRI Louisiana Chapter News

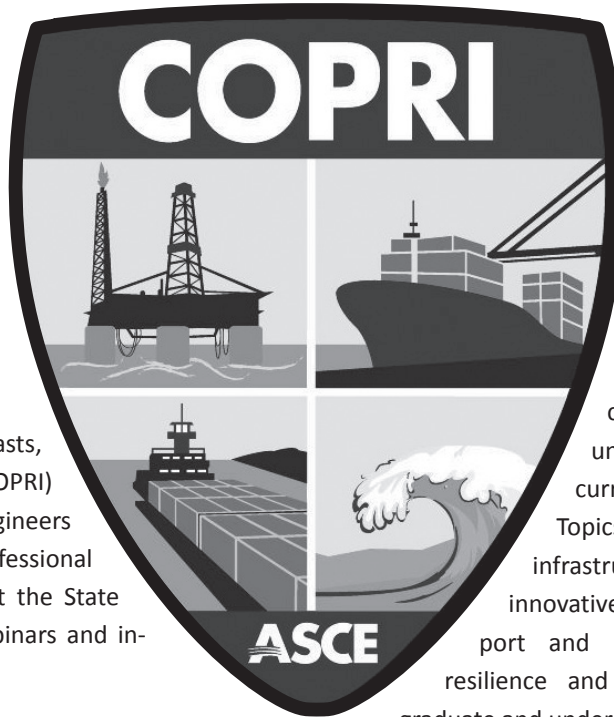
By Kiara Horton, EI, Director – Communications



COAST, OCEANS,  
PORTS AND RIVERS  
INSTITUTE  
Louisiana Chapter



**Kiara Horton, EI**  
**Director – Communications**



The Louisiana Chapter of the Coasts, Oceans, Ports, and Rivers Institute (L.COPRI) of the American Society of Civil Engineers (ASCE) promotes membership, professional development, and visibility throughout the State of Louisiana by conducting virtual webinars and in-person events.

## YPG and Student Chapter Updates

Please reach out to Hayden Franklin (Student Chapter President, [hfran15@lsu.edu](mailto:hfran15@lsu.edu)) and Yelitza Cedeno (YPG Director, [Yelitza.cedeno@hdrinc.com](mailto:Yelitza.cedeno@hdrinc.com)) for information on how to get involved as an LSU Student or Younger Member.

## Past Events

### Half-Day Spring Seminar

On Tuesday, April 23, 2024, COPRI held its annual Spring Half-Day Seminar at the Tulane River and Coastal Center in New Orleans. Heath Jones of USACE and Mar Drewes of Jefferson Parish spoke on topics related to the Mississippi Low Water Sill Construction and Water Intakes Risk Reduction. Scholarship recipients Anna “Katya” Opel and Sade Dennis were also acknowledged during this event.

### Summer Webinar

On Tuesday, July 30, 2024, COPRI hosted a Summer Webinar presented by Paul Miller, Assistant Professor of Department of Oceanography and Coastal Sciences at LSU, that focused on Louisiana’s 2023 two water crises. First, a historical drought that trapped residents in crippling heat and caused up to \$290 million in agricultural losses. Second, water levels of the Mississippi dropped so low saltwater began to travel up the river, threatening the water supply in New Orleans and forcing the Army Corps of Engineers to take measures to block its intrusion.

## Local Upcoming Events

Upcoming events include our annual full day Fall Seminar in Baton Rouge on Tuesday, October 22, 2024. Keep a look out for future event announcements via email and LinkedIn.

### LCOPRI Poster Competition

LCOPRI is sponsoring a poster competition that is open to ALL undergraduate and graduate students currently enrolled in universities in Louisiana. Topics can be related to resilient coastal infrastructure, climate change adaptation, innovative approaches to flood risk management, port and harbor infrastructure, or community resilience and engagement. 1<sup>st</sup> place winners for graduate and undergraduate will receive a cash prize and will be acknowledged at the Fall Seminar. Please be on the lookout for an email including more information. Please see important dates below.

- September 22, 2024: Deadline for submission of digital posters
- October 6, 2024: Finalists announced and notified
- October 22, 2024: Poster exhibition at LCOPRI Fall Seminar

If you have any general event questions, please contact Programs Director Molly Bourgoyne at [molly.bourgoyne@la.gov](mailto:molly.bourgoyne@la.gov).

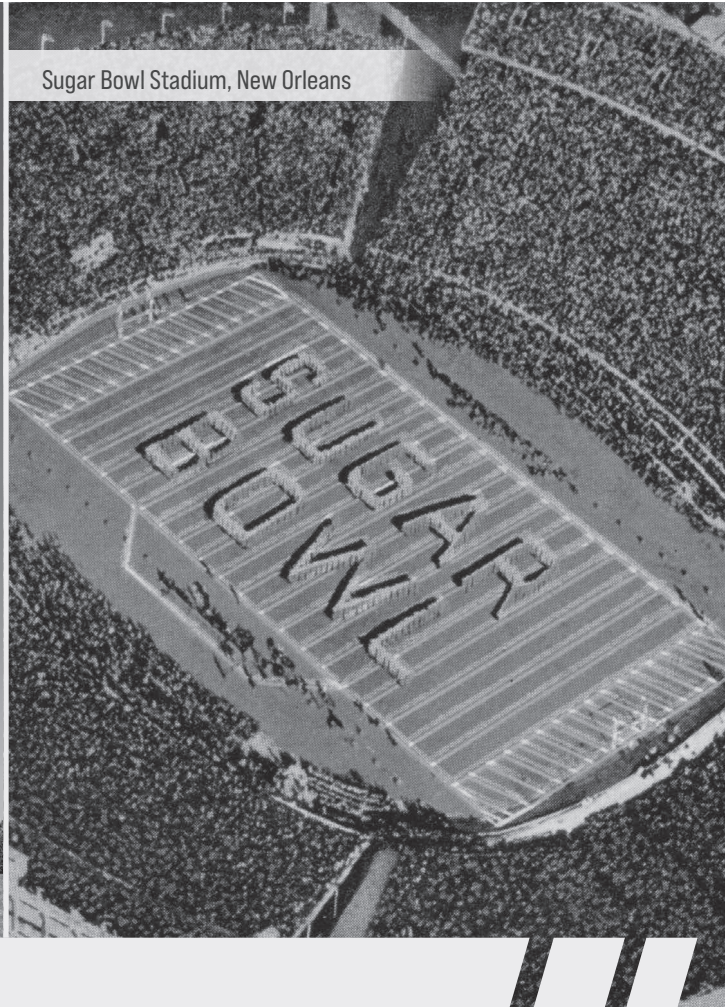
## Other Information

The activities of L.COPRI includes seminars, workshops, and other activities to benefit all ASCE and COPRI members. Members do not have to be engineers to join COPRI. The Institutes of ASCE are formed for the benefit of ASCE and non-ASCE members to participate and interact with other professionals interested in coastal, oceans, ports, and riverine efforts in Louisiana. We would like to extend an invitation to our members to submit feedback and ideas for upcoming webinars and events. Please submit these ideas to [kiara.horton@freese.com](mailto:kiara.horton@freese.com), and be on the lookout for emails and posts on our LinkedIn page for upcoming events.

Louisiana State Capitol, Baton Rouge



Sugar Bowl Stadium, New Orleans



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# ASCE-G-I Louisiana Chapter News

By George F. Segré Quilichini, PE, Chair

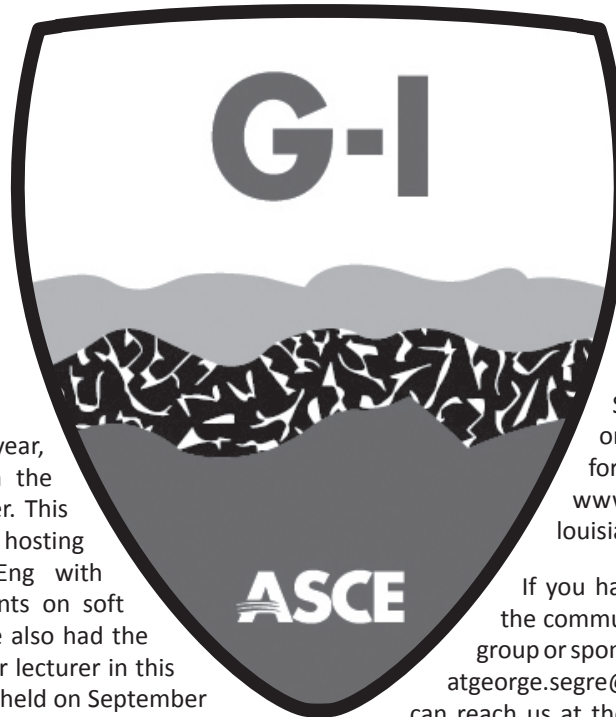


GEO-  
INSTITUTE  
LOUISIANA CHAPTER



George F. Segré Quilichini, PE  
G-I Chair

The GI-LA Chapter has had a great year, and hopes to continue forward with the transition to our new Board in October. This September we had the pleasure of hosting Dr. Alberto Ortigao, PhD, DICE, CEng with Terratek, who presented “Embankments on soft soils: Lessons learned”. In addition, we also had the pleasure of helping select the Buzz Hair lecturer in this year’s LCECS Conference, which will be held on September 18 & 19. This year, the Buzz Hair Lecture will be presented by David E. Lourie, PE, DGE, FGPA, who will present “Lessons Learned: Lessening Litigation Potential and its Effects”. We hope to see you there!



Looking forward, we will be hosting Dimitrios Zekkos Professor of Civil and Environmental Engineering at UC Berkeley in October, and Guoming Lin, PhD, PE, DGE, Principal with Terracon in 2025. Dr. Zekkos will be presenting about the use of artificial intelligence in geotechnical engineering.

Stay tuned for additional information, or feel free to follow our LinkedIn page for more up to date information (<https://www.linkedin.com/company/geo-institute-louisiana-chapter>).

If you have a topic that you think would benefit the community, or maybe you would like to join our group or sponsor a lecture, please contact George Segré [atgeorge.segre@terracon.com](mailto:atgeorge.segre@terracon.com) for opportunities, or you can reach us at the GI-LA gmail account: [geoinstla@gmail.com](mailto:geoinstla@gmail.com). We are actively looking for volunteers and opportunities to engage with the community.

## G-I LA Webinar

### Speaker:

**Alberto Ortigao,**  
Ph.D., FICE, CEng

Senior Geotechnical Consultant  
Terratek International, LLC



### WHEN:

Wednesday, **September 4<sup>th</sup>**  
from 12:00 pm to 1:00 pm CST

WHERE: Free Webinar on  
Microsoft TEAMS

### EMBANKMENT ON SOFT SOILS: LESSONS LEARNED

#### About the Presenter:

Dr. Alberto Ortigao is an experienced geotechnical consultant with a career spanning over five decades. His expertise encompasses a wide range of projects, including tailings and water dams, slopes, embankments, foundations, excavations, structures, and tunnels.

A Fellow and Chartered Engineer of the Institute of Civil Engineers, London, Dr. Ortigao combined a successful academic career at UFRJ (1978-2003) with industry experience as a researcher at the Building Research Establishment, UK (1982-1984) and offshore foundation designer at Fugro UK Ltd., working in projects across South America, the UK, Canada, Hong Kong, Malaysia and northern Africa.

#### About the Presentation:

This presentation will delve into nearly five decades of the speaker's experience designing and constructing embankments on challenging soft soil conditions. The talk will explore a range of proven techniques, including sand drains, wick drains, piled embankments, deep soil mixing, and vacuum consolidation utilized in projects around the world.



GEO-  
INSTITUTE

Louisiana Chapter







**Nedra Davis Hains, MA**  
Government Relations Secretary

Once Congress reconvenes in September 2024, ASCE members can build on the momentum established during the August recess by adopting a proactive and sustained approach to advocacy. Here are several strategies to continue the journey effectively:

### 1. Follow-Up on August Meetings:

>**Reconnect with Legislators:** Send follow-up emails or letters to the legislators or their staff, reiterating the key points discussed during the August recess meetings. Include any additional information or updates that may have emerged since the initial meeting.

>**Express Gratitude:** Thank them for their time and reinforce the importance of the issues discussed, making it clear that you are available for any further questions or clarifications.

### 2. Track Legislative Progress:

>**Monitor Relevant Bills:** Stay informed about the progress of key legislation, such as the Water Resources Development Act (WRDA) of 2024 and the Infrastructure Investment and Jobs Act (IIJA) funding appropriations. Use ASCE resources to keep track of any developments or changes in the legislative landscape.

>**Engage with ASCE's Government Relations Team:** Regularly communicate with ASCE's Government Relations and Infrastructure Initiatives Division to stay updated on priority issues and to coordinate responses to new legislative developments.

### 3. Maintain Communication Channels:

>**Regular Updates to Legislators:** Provide periodic updates to your legislators on how infrastructure investments are impacting your community or state. Share success stories, data, and local examples that demonstrate the tangible benefits of federal funding.

>**Offer Expertise:** Position yourself as a resource for legislators and their staff. Offer to provide technical expertise or data on infrastructure issues as they arise, making it easier for them to make informed decisions.

### 4. Engage in Public Advocacy:

>**Write Opinion Pieces:** Continue to engage with local and national media by writing op-eds or letters to the editor that highlight the importance of sustained infrastructure investment and the risks of underfunding key projects.

>**Participate in Public Forums:** Attend or speak at public forums, town halls, or community meetings where infrastructure issues are being discussed. Use these platforms to advocate for ASCE's priorities and to build public support.

### 5. Leverage ASCE Networks:

>**Coordinate with Local Sections and Branches:** Work with ASCE local sections and branches to organize events, workshops, or webinars that keep members and the public informed about ongoing legislative efforts and how they can contribute.

>**Advocacy Days:** Plan for future advocacy days, both in Washington, D.C., and at the state level, where ASCE members can meet with legislators to discuss ongoing and emerging infrastructure needs. The next Legislative Fly-in is March 2025.

### 6. Prepare for the Lame-Duck Session:

>**Anticipate Legislative Action:** Recognize that significant legislative activity often occurs during the lame-duck session after an election. Be ready to re-engage with legislators on unfinished business, particularly if key infrastructure bills are still pending.

>**Mobilize Support:** Work with ASCE to mobilize members to contact their representatives, urging them to support critical infrastructure legislation before the end of the session.

### 7. Document and Share Successes:

>**Report on Advocacy Efforts:** Document the outcomes of your advocacy efforts, including any legislative successes or progress made. Share these reports with ASCE's national leadership and fellow members to build a collective sense of accomplishment and to refine strategies for future advocacy.

>**Celebrate Wins:** Publicly celebrate legislative wins, whether through ASCE's communication channels or local media, to highlight the positive impact of ASCE's advocacy and to encourage continued support from the engineering community and the public.

By maintaining a consistent and strategic approach, ASCE members can ensure that the advocacy efforts initiated during the August recess continue to influence Congress and contribute to the passage of vital infrastructure legislation throughout the remainder of the year. If you have a legislative win to celebrate or want more information, please contact Jan Evans, PE, LASCE GRC Chair at [jan.evans@volkert.com](mailto:jan.evans@volkert.com) and Elisabeth 'Lizzie' Dorman, Sr. Manager, ASCE Grassroots Programs and State Advocacy at (202) 789 – 7845 | [edorman@asce.org](mailto:edorman@asce.org).

## Join ASCE's 'Best practices in advocating in your community' series Part 3: Running for public office as a civil engineer

You're invited to the final part of a special webinar series presented by ASCE's State Government Relations and Grassroots Committee. Learn how to mobilize your technical, on-the-ground expertise as a civil engineer to your public officials.

One of the most effective ways to promote your views on policy issues is to run for public office. This may be in an elected capacity such as for a councilperson or design review board or in an appointed position such as a workforce board. If you feel that critical issues in your community are not being addressed, such as the lack of needed infrastructure spending, running for office on these issues may be the best way to draw attention to them.

**REGISTER** [[https://zoom.us/webinar/register/WN\\_3gy-YG7mSC6YJdF5c7hVNw?utm\\_campaign](https://zoom.us/webinar/register/WN_3gy-YG7mSC6YJdF5c7hVNw?utm_campaign)]

Join us on Tuesday, September 17th at 3:00pm Eastern Time for an exclusive panel of ASCE members and professional engineers who ran and won a public office seat. Learn about their decision to run for office, their campaign and platform, and how they're implementing their priorities in office. Moderated by Jonathan Thrasher, PE, M.ASCE (Senior Project Manager/Client Developer, S&ME), featured panelists are:

- Nancy Cline, PE, F.ASCE (Mayor Pro Tem, Carrollton, TX)
- Carol Martsolf, PE, CPTD, LEED AP, PMP, F.ASCE (Councilperson, Lansdowne Borough, PA)
- Edward McGuire, PE, F.ASCE (Mayor, Dunes City, Oregon)

*We value your leadership and dedication to championing our nation's infrastructure systems.  
Please contact [govwash@asce.org](mailto:govwash@asce.org) with any questions.*

## ASCE-T&DI Louisiana Chapter News

By Elba Hamilton - Newsletter Editor



TRANSPORTATION  
& DEVELOPMENT  
INSTITUTE  
LOUISIANA CHAPTER



Elba Hamilton  
T&DI Chair

### Looking Ahead

The intent of T&DI is to promote transportation and development as a career path, and to provide training and networking opportunities for all professionals involved in the transportation industry. If you are interested in co-sponsoring a seminar at your branch, the T&DI Louisiana Chapter has prepared a Seminar Coordinator's Check List to assist you in your preparation. Contact Mike Paul at [MPaul@trccompanies.com](mailto:MPaul@trccompanies.com) for a copy of the checklist. Historically our seminars are two hours in length and are typically presented from 5:30-7:30 pm in either the New Orleans or Baton



Rouge areas. We have also presented outreach seminars with the ASCE Acadiana Branch and Shreveport Branch. We are open to co-hosting seminars in additional Louisiana cities if requested. In keeping with the intent of the Institute to provide training and networking opportunities for all professionals involved in transportation projects, the Chapter is planning the following future seminars:

- College Flyover Project in Baton Rouge
- Repairs from Fire on I-10 near I-310 & I-55
- New Orleans Ferries
- I-220 and I-20 Barksdale Air Force Base Interchange Access Project in Bossier City
- I-10 and Pecue Lane Interchange in Baton Rouge
- River District Beautification
- Vessel Collision/Protection

# Branch News



## NEW ORLEANS BRANCH

By Ayan Mehrotra, PE, Branch President

We are excited to share the latest updates from the New Orleans Branch through the summer of 2024. Over the past few months, we have organized a series of events aimed at developing and supporting civil engineers in our region.

Our monthly luncheons in June and July were a great success. We were

honored to host distinguished speakers who presented on critical infrastructure topics, providing our members with a comprehensive understanding of these important issues. Here are the speakers we had the pleasure of welcoming:

- **June 2024 Luncheon** – Jessica L. Watts, PE, CFM, D.WRE, ENV SP, CDM Smith
- **July 2024 Luncheon** – Rick Hathaway, Director, Department of Public Works, City of New Orleans

Another highlight for the New Orleans Branch was our Annual Award Luncheon held in August. We celebrated our distinguished award winners, who have all significantly contributed to the success of our Branch and the civil engineering profession. The New Orleans Branch 2024 award winners were:

- **Outstanding Civil Engineer:** Newell Schindler, PE, Highway Section Manager, Modjeski and Masters, Inc.
- **Outstanding Young Civil Engineer:** Kiara Horton, PE, Water Resources Engineer, Freese & Nichols
- **Outreach Award:** Matt Salmon, PE, Coastal Engineer, Freese and Nichols
- **Outstanding Government Civil Engineer:** Chris Dunn, PhD, PE, New Orleans District Chief of Engineering Division, USACE
- **Outstanding Educator:** Gianna Cothren, PE, Associate Professor in Civil Engineering, University of New Orleans
- **Lifetime Achievement Award:** Dr. Norma Jean Mattei, PhD, PE, Emeritus Professor in the Department of Civil Engineering, University of New Orleans
- **Wall of Fame:** Silas Cunningham, PE (d)
- **Undergraduate Student Scholarship Award:** Henry Mieczkowski, Tulane University

We also installed our new Board at the Awards Luncheon for the upcoming 2024–2025 year. More on our new board will be presented in the November journal.

To stay updated with the New Orleans Branch, we encourage you to follow ASCE New Orleans on Facebook or LinkedIn (@asceneworleans) and visit our website at [www.asceneworleans.org](http://www.asceneworleans.org). You can always reach out to us at [ASCEneworleans@gmail.com](mailto:ASCEneworleans@gmail.com) with any inquiries or suggestions.



May 2024 Luncheon – Jessica L. Watts, PE, CFM, D.WRE, ENV SP, CDM Smith



June 2024 Luncheon – Rick Hathaway, Director – Department of Public Works, City of New Orleans



## BATON ROUGE BRANCH

*By Robb Jewell, PE, Branch President*

This summer has been an active one, with ASCE continuing to engage its members through various luncheons and “Bridging-the-Gap” events. In partnership with the Louisiana Engineering Society (LES), we co-hosted the Joint Crawfish Boil at Walk-Ons, where Chris Knotts, PE, delivered an insightful Ethics Presentation beforehand. The event, led by LES with support from ASCE, was well attended and a great success.



ASCE co-hosted a younger member social with LES and APWA at The Bulldog in Baton Rouge in late June. The event was highly successful, attracting over 100 attendees and providing an excellent opportunity for networking, including with students.

The ASCE June Luncheon, held at Drusilla Seafood Restaurant, featured a presentation by Occie Norton, PE, from Worley. The presentation offered valuable insights into leadership and management principles, providing a refreshing change from our usual types of presentations. The event was well attended and well received.



*June Luncheon presentation by Occie Norton, PE on leadership*

In July, the ASCE Baton Rouge Branch’s Vice President, Joshua Olivier, PE, organized and moderated our “Bridging The Gap” event held at LSU’s Museum of Art in the Shaw Center for the Arts Building in Downtown Baton Rouge. We extend a special thanks to BR Branch member Nedra Hains, MA, of the LSU Museum, for graciously hosting this event. The evening featured a distinguished panel comprising Rhaoul Guillaume, PE (Gotech), Whitney Thompson, PE (Southern Shores Engineering), and Joey Coco, PE (Forte & Tablada).

The panel discussion, titled “Founders Panel,” offered invaluable insights into how each panel member successfully launched and grew their own companies.



*ASCE Bridging the Gap Panel Left to Right: Rhaoul Guillaume, PE (Gotech), Joshua Olivier, PE, ASCE Baton Rouge Branch VP, Whitney Thompson, PE (Southern Shores Engineering), and Joey Coco, PE (Forte & Tablada)*



*Joshua Olivier, PE, ASCE Baton Rouge Branch VP, moderates the ASCE Bridging the Gap Panel at the LSU Museum of Art, Baton Rouge, LA*

Our upcoming events include the Passing of the Gavel and Awards Luncheon in September. More details on these and other events will be shared soon, and we hope you can join us! Additionally, our next ASCE luncheon is scheduled for October and will be a joint event with LES. ASCE will take the lead for this luncheon, which will be held at Drusilla Seafood Restaurant. We are honored to have U.S. Congressman Garret Graves as our speaker, who will provide the latest legislative updates and discuss project funding during the ASCE-LES joint luncheon. For up-to-date information please see our Facebook page at <https://www.facebook.com/ASCEBatonRougeBranch>.



## ACADIANA BRANCH

*By Rhett Hebert, EI, CFM, Branch President*

In July, we were privileged to have Cliff Vanicor, PE, and Nick Johnson, PE, from the Calcasieu Parish Police Jury, share insights on the ongoing projects across the Parish. They provided an informative overview of their current initiatives, future goals, and the innovative strategies they are employing

to enhance the community.

Looking ahead, I am eagerly anticipating our September luncheon, which will feature our annual awards ceremony and officer installation. On behalf of the Acadiana Branch, I extend my heartfelt congratulations to all award recipients, both within our branch and across the state. I also wish to express my deep gratitude for the unwavering support our membership has shown over the past year. With a dynamic group of engineers advancing on our Board and the enthusiastic participation of new members, the future of our branch is indeed promising.

I'm also excited to announce that registration and sponsorship opportunities are now open for our annual golf tournament at Les

Vieux Chenes in Youngsville on October 11. Given the outstanding support we've received in previous years, we are confident this year's tournament will be another great success. For more information about the event, including registration and sponsorship details, please visit: [Golf Tournament Information](https://birdease.com/28848). [<https://birdease.com/28848>]

Please keep an eye on your emails for updates on upcoming events and other exciting news within the Acadiana region. Thank you, as always, for your continued support. I look forward to celebrating our collective achievements in the months ahead.



*Cliff Vanicor and Nick Johnson presenting at the July Luncheon*



## SHREVEPORT BRANCH

*By Victor Bivens, PE,  
President of Shreveport Branch*

The Shreveport Branch wrapped up our Spring meetings with a special site visit to the McNeill Pumping Station (Shreveport Water Works Museum) in early June, celebrating its recognition as a National Historic Civil Engineering Landmark. Our visit included a brief presentation from an onsite tour guide

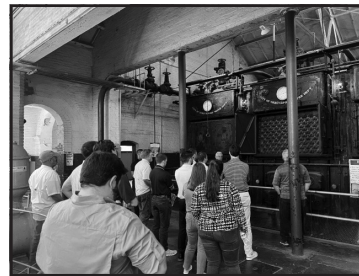
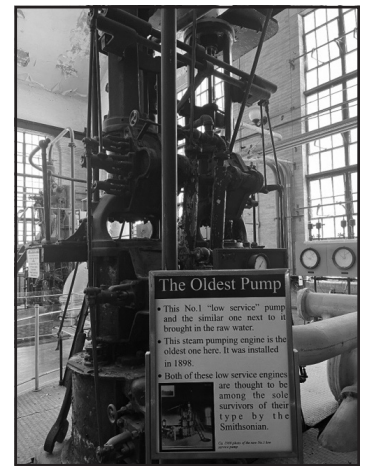
who shared the rich history of the pumping station, followed by a guided tour through the museum. It was a wonderful experience, and we were pleased to have many members of the engineering community join us, including students and a professor from Louisiana Tech University. For more information on the McNeill Pumping Station: Learn more about the McNeill Street Pumping Station [<https://www.asce.org/about-civil-engineering/history-and-heritage/historic-landmarks/mcneill-street-pumping-station>]. Plan your visit: <https://shreveportwaterworks.org/>. Shreveport Water Works Museum, 142 N Common St., Shreveport, LA 71101 | phone: (318) 221-3388.



*Left: National Historic Civil Engineering Landmark Right: City of Shreveport McNeill Pump Station*



*Historical McNeill Pumping Station, Shreveport LA*



*Left: Shreveport at the McNeill Pumping Station Right: Shreveport Branch listens to tour at the McNeill Pumping Station*

Looking ahead, our September meeting will be the first after the summer break. We have an exciting lineup of speakers prepared to present throughout late 2024 and early 2025. This meeting will also serve as an opportunity to introduce our new officers and announce our upcoming golf tournament fundraiser—an annual event that supports scholarships and conference expenses. More details will be shared soon! <https://www.facebook.com/ASCEShreveport>

# ASCE-SEI New Orleans Chapter News

By Daniel Bobeck, PE



Daniel Bobeck, PE



with the provisions as set forth in the Constitution and Bylaws of the New Orleans Branch of ASCE.

## FUNCTION

The primary function of ASCE SEI-NO will be the organization and presentation of technical sessions and programs. ASCE SEI-NO will arrange meetings, seminars and workshops dealing with the analysis, design and construction of structures. Sub-committees may be formed to deal with specific material such as steel, concrete or timber.

ASCE SEI-NO may review Structural Engineering practice related to current events, regulations, policies and proposals set forth by governmental, educational and regulatory bodies, and policies being developed by the American Society of Civil Engineers. The purpose of such review would be to identify the consensus opinion of practitioners and formally communicate such opinions with appropriate recommendations to the ASCE New Orleans Branch Board of Directors.

An ASCE SEI-NO goal is to raise the awareness of the general public to the role and accomplishments of the Civil/Structural Engineer.

Please stay tuned for our upcoming seminars. If you have an interesting topic to propose or if you would like to get on our mailing list to receive advance notifications of our upcoming seminars, please email us at [asceseinola@gmail.com](mailto:asceseinola@gmail.com). Finally, the Chapter is currently looking for new members to join the Executive Committee, please reach out to us if you are interested in joining the committee. We are always in need for volunteers for outreach, topic & speaker recruitment for seminars, in addition to other roles.

## HISTORY

ASCE Structural Engineering Institute, New Orleans Chapter, (ASCE SEI-NO) started in 1989 as a Structural Committee of ASCE New Orleans Branch. In 2002 ASCE SEI NO also became the New Orleans Chapter of ASCE Structural Engineering Institute. It was founded by Om P. Dixit, First Chairman and the original Executive Committee members were Robert Bruce, James Danner Michael Folse, David Hunter, Subhash Kulkarni, and Herbert Rousel.

## STATEMENT OF PURPOSE

The purpose of ASCE SEI-NO is to foster the exchange of the professional and technical knowledge and enhance structural engineering practice and the professional interaction between structural engineers, architects, and other related technical disciplines. ASCE SEI-NO shall also interface with the general public on matters relating to industry practice and public safety where applicable. The objective of ASCE SEI-NO shall be to serve and promote the structural engineering professional locally within the State of Louisiana in a manner consistent with the purpose of the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE). The actions of ASCE SEI-NO shall be consistent

## Help celebrate a peer – nominate them for an ASCE award

ASCE proudly honors civil engineers who advance the profession through their work. You can help recognize the best of the profession and identify those who could lead the Society forward. If you know someone who may be qualified, nominate them for one of the following Society awards and/or leadership positions:

J. James R. Croes Medal: due Oct. 1

Norman Medal: due Oct. 1

Walter L. Huber Civil Engineering Research Prizes: due Oct. 1

Distinguished Membership: due Dec. 15

Learn more about [Society awards](#) and [ASCE leadership](#). Deadlines for nominations vary throughout the year. So be sure to encourage your members to recognize their diverse, talented colleagues through your local newsletters and at upcoming meetings.

# Student Chapter News

## MCNEESE

*By Kallie Broussard, Student Chapter President*

McNeese ASCE is eager to start the new academic year with enthusiasm and determination. Last semester, our club dedicated significant effort to preparing for the 2024 Gulf Coast Student Symposium at The University of New Orleans, which took place in March. Our hard work paid off, earning us several accolades, including:

- **1st Place** in Concrete Canoe Projects Proposal
- **3rd Place** in Overall Concrete Canoe Competition
- **3rd Place** in Concrete Canoe Technical Presentation
- **3rd Place** in Topographic Maps (Surveying Competition)

We are already looking forward to participating in the 2025 Gulf Coast Student Symposium at Mississippi State in March 2025. Additionally, five of our members traveled to the NPCA Precast Show in Denver, Colorado, to compete in the NPCA Student Design Competition, where they proudly earned 2nd place.

McNeese ASCE is also excited to continue partnering with fellow McNeese engineering organizations and faculty for STEM outreach throughout Southwest Louisiana. Last semester, we hosted guest speakers from industry leaders such as Gainey's, Fenstermaker, LA DOTD, Alfred Miller, and Dunham Price. These sessions provided our students with valuable insights into the civil engineering industry and guidance on how to achieve and surpass personal and professional goals after graduation. We plan to continue inviting industry leaders to speak to our chapter this academic year.

Our club meetings will be held regularly to plan for the 2025 Student Symposium and to discuss fundraising, recruiting, and volunteering opportunities. This semester, we will actively participate in tabling events to recruit incoming civil engineering students to join our student chapter and continue their journey of learning and success in the civil engineering profession.



## LSU STUDENT CHAPTER

*By Brennan Smith, President Student Chapter*

Although classes have paused for the summer, the ASCE chapter at LSU remains active and committed to progress. Our officers have been hard at work, preparing for the upcoming academic year. The three primary areas of focus have been organizing our annual fall career fair, planning the event calendar for the fall semester, and gearing up for the competition season. To ensure efficiency and foster teamwork, subgroups of officers have been assigned to each of these key areas.

We would like to extend our sincere thanks to our advisors and industry professionals who have already contributed to these efforts. The chapter greatly values the continued support of its partners and looks forward to collaborating to achieve even greater success. As we move forward, LSU ASCE is dedicated to increasing engagement and enhancing communication within the chapter. We are excited about the activities and successes that lie ahead in the coming months!

## Construction Suicide Prevention Week

The industry will focus on the mental health challenges of construction workers during Construction Suicide Prevention Week, Sept. 9-13. The suicide rate among workers is four times the national average. The ASCE Library has assembled a free six-paper collection on mental health challenges in the industry, and please, if you know someone who may be struggling, reach out and show them support. The national suicide prevention hotline is 988.

RESOURCES FOR ADDITIONAL INFORMATION AND GUIDANCE

**Suicide Prevention Lifeline**  
1-800-273-TALK (8255)

**National Alliance on Mental Illness**  
NAMI.org / 800-950-6264

**Carson J. Spencer Foundation**  
CarsonJSpencer.org / 302-219-5042

**National Action Alliance for Suicide Prevention**

ActionAllianceForSuicidePrevention.org / 202-572-3784

**Man Therapy - Using humor to engage men to manage mental health**  
ManTherapy.org

# UNIVERSITY OF LOUISIANA AT LAFAYETTE

By Emily Delcambre, UL Public Relations Chair Student Chapter

As the Fall semester approaches, our student chapter eagerly anticipates continuing the cherished traditions established by members in previous years. Events such as the Fall BBQ and Get On Board Day will provide a warm welcome to prospective members and help strengthen the bonds within our chapter among current members.

We are committed to upholding our public service standards with events like Clean the Coast, and we also aim to broaden our community outreach efforts. The Gulf Coast Conference remains a top priority, and with competition leaders already assigned, we are

excited to bring forward competitive and innovative ideas to the conference.

Our leadership team for the 2024-2025 academic year is dedicated to enhancing outreach to engineering professionals, helping bridge the gap between academics and industry. Additionally, we will emphasize the importance of professional development throughout our members' academic journeys.

We are looking forward to a fun and productive year for our chapter!

# Southern University

By Kalani Jones, Student Chapter President



It is an exciting time for our ASCE chapter as we enter the upcoming semester with a dynamic new executive board! This year's president is Ms. Kalani Jones, a rising senior and former membership chair. Serving as vice president is Braylon Gregory, another driven rising senior. Our treasurer is senior Destiny Hardy, who also holds the presidency of the Society of Women Engineers. The positions of corresponding secretary, public relations chair, fundraising chair, and membership chair are held by Edgar Atkinson III, Morghan Radcliffe, Donald Foulcard, and Javante Martin—all of whom were previously active members and have now stepped into these vital leadership roles.

This year marks a pivotal continuation of our chapter's vibrant resurgence. Our overarching goal is to increase the visibility, recognition, and activity of our chapter on campus, within the Baton Rouge community, and throughout Region 5. Our executive board is fully committed to taking the necessary steps to achieve this goal. We aim to produce more E.I.T. licensed civil engineers from Southern University upon graduation, facilitate visits to various job sites, and offer greater opportunities for engagement with professionals.

Planning for the upcoming school year is already well underway. In our first executive board meeting, we discussed the responsibilities of each committee, and the steps required to propel us forward this year. The membership committee has proactively worked toward increasing engagement by establishing a LinkedIn page, which will serve as a platform for effectively documenting and managing all activities and connections.

We are excited to keep you updated and look forward to having you join us on this inspiring journey!



# — Calendar of Events —

2024

## September

- 5 Board of Direction meeting
- 9-13 Construction Suicide Prevention Week
- 15-16 Presidents and Governors Forum and Leader Orientation

## October

- 6-9 ASCE 2024 Convention <https://convention.asce.org>
- 8 Annual Meeting and Society Awards
- 8 OPAL Awards <https://www.asce.org/career-growth/awards-and-honors/opal-awards-gala>

Let us know about your upcoming ASCE events to be featured here.

Email: [nedra@atomicblondeaux.ai](mailto:nedra@atomicblondeaux.ai)

Events are constantly being updated online:

For ASCE Society events please see online:  
[https://www.asce.org/conferences\\_events/](https://www.asce.org/conferences_events/)  
[https://www.asce.org/student\\_conferences/](https://www.asce.org/student_conferences/)

For ASCE Baton Rouge events please see online:  
<http://branches.asce.org/baton-rouge/events>

For ASCE Shreveport events please see online:  
<https://www.facebook.com/ASCEshreveport/>

For ASCE Acadian events please see online:  
<http://branches.asce.org/acadiana/events>

For ASCE NOLA events please see online:  
<http://asceneworleans.org/events/>

For more events visit the ASCE Events Calendar: <http://www.lasce.org/calendar.html>

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