GEAUX BUILD

SPRING 2021 • VOLUME 22







Bert S. Turner Department of Construction Management

LSU Construction

Management

Alumni

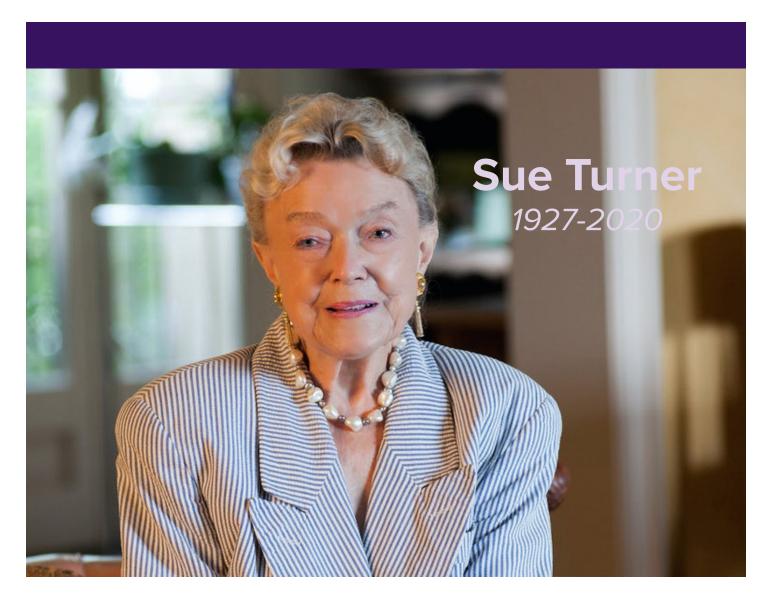
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GEAUX BUILD is published for the benefit of the Louisiana State University (LSU) Construction Industry Advisory Council (CIAC), the LSU Construction Management (CM) Alumni Chapter, and the Bert S. Turner Department of Construction Management.

Do you have news, updates, or information to share with us? Please direct your alumni updates to jmiller4@lsu.edu or to Jessica Miller, 3319 Patrick F. Taylor Hall, Baton Rouge, LA 70803. We love to know what great things our alumni, CIAC members, and supporters are up to!



THE BERT S. TURNER DEPARTMENT OF CONSTRUCTION MANAGEMENT IS SADDENED TO HEAR OF THE PASSING OF SUE TURNER

On December 27, 2020, Suzanne Pauline Wilbery Turner peacefully passed away. Suzanne, or Mrs. Sue as she was widely known, was the devoted wife of Turner Industries' late founder Bert Turner and CM Department namesake; a loving mother, grandmother, and great grandmother, and the matriarch of the extended Turner Industries family. Mrs. Sue had a lifelong passion for giving back and was an avid supporter of the arts and education. Mrs, Sue received an honorary doctorate from LSU College of Art & Design in 2017. The department sends our condolences to the Turner family and friends.



Dr. Sue Turner receiving an honorary doctorate from LSU College Art & Design in 2017

FROM THE CIAC PRESIDENT

A letter from Marc Bourgeois

Whether it be a survival instinct that keeps us going when inevitable challenges present themselves or something more divine, I believe most construction professionals prescribe to the adage that every cloud has its silver linings. If the silver lining value is based on the cloud's size, our cups runneth over in the current storm.

The circumstances of the last year have provided us with ample opportunities for reflection and improvement. The hope is that we emerge from these challenges as better individuals and organizations than we were when movies like Contagion and Outbreak were just entertaining, fictional storylines. I can confidently say that the CIAC has done just that.

It has indeed been an honor and privilege to serve as the president of the board of directors this year. I've found it incredibly rewarding and humbling to witness the extensive time and talent that our many members voluntarily contribute to the organization. Though our board and committee remain active with many ongoing initiatives, I'd like to acknowledge the many accomplishments and milestones that have been achieved in the first three quarters of this fiscal year:

- Despite headwinds created by tighter overhead budgets, total membership in CIAC has increased by more than 10%.
- The CIAC has donated \$586,000 to the CM department, including the LA Licensing Board, for the contractors' contribution.
- Activity on CIAC's social media platforms has increased more than 1,000%, with many more exciting developments to come.
- The board recently created a new standing committee that will be tasked with more thorough, hands-on oversight of the department's use of the growing funds donated through the CIAC.
- This year's golf tournament will be the most well-attended and heavilysponsored event in our history, with 30 teams, 10 primary sponsors, and more than a dozen on-course vendors currently registered.
- Programs previously predicated on face-to-face interactions, including the guest lecture series and mentorship program, have successfully pivoted to virtual settings.
- Operational improvements have been made, including the first annual joint committee workshop and an SOP manual development.
- A team of 10 CIAC members representing the industry will participate in the forthcoming ACCE master's program accreditation.

WHAT IS CIAC?

The purpose of the Construction Industry Advisory Council (CIAC) is to enhance the construction industry through our support of the Bert S. Turner Department of Construction Management at LSU.

WHO ARE CIAC MEMBERS?

Recent LSU CM graduates, leaders in the construction industry, and organizations who work in and support the construction industry both locally and across the world.

WHO CAN JOIN LSU CIAC?

Anyone who is passionate about giving back and enhancing the construction industry. It is also always recommended that recent LSU CM alumni get involved to share their input on how the program can be improved.

• CIAC assisted the CM department in its recent efforts to evaluate candidates to fill a new faculty position.

Though we remain optimistic that 2021 will bring about an improved economy, the CIAC board recognizes that the impact of the COVID pandemic on the construction industry is far from over. In response, the board recently voted unanimously to extend the reduced membership fee structure implemented at the beginning of this fiscal year to the 2021-2022 fiscal year. We are excited about carrying the momentum created by the organization's dedicated members into 2021 and beyond.

On behalf of the board of directors, please accept our gratitude for your current and future support of the Bert S. Turner Department of Construction Management. #GeauxBuild



Sincerely,

Marc Bourgeois, 2020-2021 CIAC President

2020-2021 BOARD OF DIRECTORS

Marc Bourgeois, President, Regal Construction

Chris Thompson, President-Elect, ISC

Michael Demouy, Treasurer, Louisiana AGC

Stephen Fertitta, Secretary, Great River Industries

Ryan Day, Past President, Primoris Service Corp

Dr. Gerrad Delatte, Turner Industries

Rudy Comeaux, The Lemoine Company

Lauren Champagne, EXCEL USA

Chris Newton, Cajun

Scott Couper, Pala Group

Jason Creech, Performance Contractors

Josh Rounds, Performance Contractors

Travis Blair, Pala Group

Art Favre, Performance Contractors

Kenny Freeman, Petrin Corporation

Lane Grigsby, Cajun

2020-2021 COMMITTEE CHAIRS

Marc Bourgeois | Personnel

Michael Demouy | Finance and Governance

Ryan Day & Anthony Gulino | Curriculum & Accreditation

Review

Jason Creech & Justin Craig | Department Enhancement

Stephen Fertitta & Stephen Breaux | Student Enhancement

Rudy Comeaux & Ross Miller | Membership & Fundraising

Lance McCann & Lauren Champagne | Publicity & Promotion

Josh Rounds | Research

Kyle Hebert | New Orleans Ad-Hoc

Scott Couper | PTH Equipment Procurement

LSU ADVISORS TO THE BOARD

Dr. Charles Berryman | Department Chair

Stephanie Heumann | Faculty Representative

Jonathan Dyer | LSU Alumni Representative

Ritchie Goebel | LSU Foundation Representative

CIAC RECEIVED MORE THAN \$530,000 FROM THE LA STATE BOARD OF CONTRACTORS

In October 2020, CIAC received \$536,960.20 from the LA State Board of Contractors. CIAC gives the money to the CM Department to spend with its oversight. In turn the department uses the money to outfit laboratories, train faculty, support student operations, etc.



From L to R - Art Favre, Lee Mallett, Dr. Charles Berryman, Marc Bourgeois, Victor Weston

CONGRATULATIONS TO CIAC MEMEBERS, TRAVIS BROUSSARD & DAVID HELVESTON FOR BEING NAMED TO GREATER BATON ROUGE BUSINESS REPORT'S FORTY UNDER 40 CLASS OF 2020



Travis Broussard, vice president of Business Development at Alliance Safety Council, is a member of the 2020 class of Forty Under 40.

As Vice President of Business Development for Alliance Safety Council, Travis Broussard is responsible for revenue generation, business intelligence, marketing, sales, and membership retention and acquisition. He works collaboratively with the full leadership team to create detailed plans and strategies to further grow Alliance's business and partnership opportunities nationally and abroad.

Prior to joining Alliance, Travis was a serial entrepreneur launching three startups, both in Louisiana, as well as in Cape Town, South Africa. Most recently, he was founder and CEO of Impression Works, an innovative software as a service (SAAS) provider in the photo merchandise and job recruiting industries.

Travis brings more than two decades of high-performing sales management and marketing experience to Alliance. He holds a degree in computer network engineering from Southeast College of Technology, is a Microsoft Certified Professional, and is a certified expert in the leading outbound and inbound marketing automation tools.

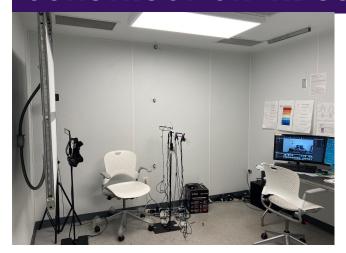
David Helveston is the current president and CEO of Associated Builder and Contractors-Pelican Chapter. His professional achievements include leading a passionate team that educates more than 3,000 craft professionals each year and advocates for nearly 400 construction companies to improve Louisiana's economy. David served as chef external affairs officer of the Louisiana Community and Technical College System, helping to grow student enrollment and align education programs to meet the state's workforce demands.

As director of the Louisiana Workforce Investment Council, David authored a strategic plan prior to Louisiana's industrial construction boom that led to more education offerings to prepare residents for the upcoming job opportunities.



of the 2020 class of Forty

Congratulations gentlemen, CIAC and the department are very proud of the both of you.



UPDATE ON CIAC'S CLIMATE CHAMBER

The climate chamber has been used to conduct experiments for a research project funded by the U.S. National Science Foundation. The project title is "Exploring Thermally-Driven Occupant Behavior in Immersive Virtual Environments to Enhance the Design and Engineering of Sustainable Buildings." This project examines if immersive virtual environments (IVEs) integrated within a climate chamber are useful for observing thermally-driven occupant

behavior and improving models of human-building interactions. The findings will result in an effective

experiment protocol for collecting reliable data using IVEs. So far, more than 80 people have completed experiments. Each participated in both virtual and in-situ experiments with cooling and heating sequences controlled by the chamber. The project team has shared findings with the research communities through presentations and publications. In addition, based on this work, course materials on extending building information modeling (BIM) by incorporating human experience into the design are under development. It is anticipated that the course materials will be ready when CM 7220, Building Information Modeling and Applications in Construction, is offered next time. Microsoft has recently hired an LSU CM Ph.D student that worked on this project to develop mixed reality applications.



Yimin Zhu, Ph.D, Professor over Climate Chamber

THANK YOU TO THE PELICAN CHAPTER OF ASSOCIATED BUILDERS AND CONTRACTORS (ABC) FOR THEIR ANNUAL CLAY SHOOT BENEFITING THE BERT S. TURNER DEPARTMENT OF CONSTRUCTION MANAGEMENT

Thank you to ABC Pelican for putting on this event and its sponsors. Thank you to the approximately 150 ABC Pelican members who came out on October 16, 2020, for the annual clay shoot; and it did not disappoint! The Clay

Shoot brings together future and current industry professionals to network and enjoy some friendly competition. The funds raised from the fundraiser benefit the LSU CM competition team at the ABC nationals. With the funds, student have their travel, lodging and meals covered while at the competition. The department appreciates everyone for coming out and investing in the future of the construction industry. The department would also like to say a big thank you to our LSU CM students who volunteered!

Congratulations to the winners:

First Place: The Newtron Group

Second Place: Breazeale, Sachse & Wilson LLP

Third Place: Patriot Construction Top Shooter: Newtron Group





CIAC SPRING GOLF CLASSIC

Four-Man Scramble -\$700/team

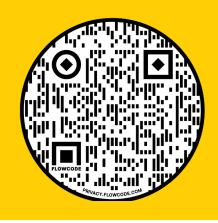
Registration/Lunch - 7:00 A.m. Shot Gun Start-8:00 A.m.

Sponsorship opportunities are available!

FRIDAY, APRIL 9, 2021
CARTER PLANTATION, SPRINGFIELD, LA

Question?

rudy.comeaux@lemoinecompany.com



2020-2021 MEMBERSHIP ROSTER

Alliance Safety
Council

Sheri Bankston Renee Barbier Travis Broussard Joelle McGehee Jennifer Scripps Kathy Trahan Nick Verdigets Kim Woods

America's Home Place

Doug Higgins

Associated Builders And Contractors Inc. New Orleans-Bayou Chapter

Jeb Bruneau

Associated Builders and Contractors, Pelican Chapter David Helveston

B & K Construction

Company LLCBo Markovic

Baker Gulf Coast Industrial

Steven Fleury

Barber Brothers
Contracting Co. LLC
Doug Barber

Boh Bros. Construction Co. LLC

Jeff Plauche

Bottom Line Equipment Jeremiah Johnson

Broadmoor LLC Steven Michel

Burns & McDonnell Sasha Fischer **Cajun Industries LLC**

Mike Barber Lane Grigsby Brent Guthrie Madison Jackson Eric D'Aquin Gregory Graugnard Byron "BJ" Lato Scott Swindler Chip Dupuy Todd Grigsby Chris Newton

CenterPoint Energy

Keri Burke

Chaffe McCall LLP Scott Barney

ConocoPhillips
Tim Martin

Contractors
Educational
Trust Fund
Ken Naquin
Vic Weston

DR Horton Inc. Michael Cascio

DURR Heavy

Construction LLC.Phillip LeBlanc
Robbie Wooderson

EXCEL USA

Lauren Champagne Chad Pierce

Fluor Corporation
Michael Culotta
Donald Monk

Five S Group LLC
Trent Davis

Grady Crawford Construction

Trey Crawford

Great River IndustriesStephen Fertitta

GROUP Contractors

Shane Kirkpatrick

Hensel Phelps
Construction Co.

Steven Jesulaitis

Iberia Bank Barry Kilpatrick

Instrument Piping Technologies LLC Keith Kaiser

Insulations Inc.Richard Reese

ISC Constructors LLC

Stephen Breaux Blake David Anthony Gulino Thomas Hill Scott McDaniel Chris Thompson

Justin J. Reeves LLCDonnie LaCombe

Kent Design Build Adam Martin

Louisiana AGC Michael Demouy

Manson
Construction Co.
Kyle Allen

Massad Olinde Benefits Consulting

Don Massad

Merit Electrical Christopher Guidry

MMR Group
Douglas Holder
Amber Leach
Chris Scheumack

Moore ConstructionSteve Moore

Pala-Interstate LLC

Travis Blair Scott Couper

Pat Williams
Construction Inc.
Jason Williams

Performance

Contractors Inc.

Chad Courville
Justin Craig
Jason Creech
Art Favre
Weylin Guidry
Lance McCann
Josh Rounds

Petrin LLC

John Freeman Kenny Freeman

Primoris Services Corporation Ryan Day

Regal Construction LLC

Marc Bourgeois Ross Miller

Ryan Gootee General Contractors

Ryan Gootee

Schneider Construction & Restoration

Larry Schneider

Sealevel Construction

Jacques Duplantis Tyler Glaze Richard Roth

Shavers-Whittle
Construction
Gerard Whittle

Shields | Mott LLP Andrew Vicknair

SITECH LouisianaJames Thompson

Stuart & Company General Contractors

Tyler Tramonte

Summit Industrial Construction LLC

Josh Johnson

The Brandt
Companies LLC
Greq Chandler

The Lemoine Company LLC Rudy Comeaux

The McDonnel GroupJeffrey Proctor

Theresa B. Jones Consulting

Theresa Jones

Triad Electric & Controls
Brian Hooks

Turner Industries
Group LLC

Troy Bergeron Chad Bradley Gerrad Delatte Carlos Guidry

United RentalsBruce Magee

US FusionDustin Miller
Andrew Nuzzolillo

Waskey Jon Gary

Wesley Construction Company Inc Bryan Wesley

Woodward Design+Build

Stephen Scallan

CONSTRUCTION INDUSTRY

BERT S. TURNER DEPARTMENT OF CONSTRUCTION MANAGEMENT WOULD LIKE TO SEND OUR BEST WISHES TO THOMAS TURNER ON HIS RETIREMENT

His retirement was effective December 31, 2020, according to a statement the company issued to employees.

Turner, 65, joined the company, then Nichols Construction Co., in 1980 as a trainee and served in a variety of capacities and executive positions during his 40 years of service, the statement said.

"Spanning the 40 years of his significant career, Turner has realized unprecedented growth and expansion in all divisions," says Turner Executive Chairman Roland Toups. "Thomas has certainly left his special personal mark on the company and its employees."

Thomas Turner's decision to retire was his alone and had been planned since last year, but the announcement was delayed because of the death of his mother, philanthropist Sue Turner, in late December, according to company President Stephen Toups.

Thomas Turner has been honored with the designation of CEO-emeritus and will remain an active shareholder. He will not remain a member of the company's executive committee, however. Because Turner Industries is privately owned, it does not have a board of directors. Stephen Toups says the executive committee has not decided whether to name a new CEO. The company's leadership team, in addition to Roland and Stephen Toups, includes COO David Franks and CFO Jimmy Sylvester.

Thomas Turner released a statement saying, "Turner Industries has been a central part of my life for as long as I can remember. As a small child, I watched my mom and dad work daily to grow Turner Industries from a small construction company to Louisiana's largest employer, with nearly 20,000 employees and over \$2 billion in annual sales. And for four decades, I've had the opportunity to contribute to its success—to my parents' dream. For these reasons, Turner Industries represents far more than a business. The people involved in Turner Industries—our employees and their families, our clients, our vendors, and our industry partners—have been, and always will be our family. Rest assured, the Turner Family is committed to ensuring this company continues to operate in a culture of integrity and loyalty, providing our clients with unparalleled customer service. These values are at the success of Turner Industries and our promise to our clients, employees, and community."

Story Reported by Greater Baton Rouge Business Report and written by Stephanie Riegel



Pictured from left to right: John Turner, Robert Svendson, Jeanne Svendson Campbell, Mary "Moo" Turner Svendson, Suzanne Turner Purdin, Thomas Turner, Roland Toups, Jerry Fischer

CONSTRUCTION INDUSTRY

PRIMORIS SERVICES CORPORATION NAMED ONE OF FORBES' BEST SMALL COMPANIES IN AMERICA

Primoris has been recognized by Forbes as one of America's Best Small-Cap Companies. Gaining a ranking position on one of the company's lists is an honor and quite an accomplishment. Congratulations, Primoris!



CONGRATULATION TO MMR AND ISC CONSTRUCTORS FOR BEING NAMED IN THE TOP 25 ELECTRICAL CONTRACTORS IN THE NATION



According to recent reports released by Engineering News Record (ENR) and Electrical Construction and Maintenance Magazine (EC&M), MMR is the 11th largest electrical contractor in the nation, and ISC Constructors is the 19th. The annual reports rank contractors based on annual revenue earned. MMR's revenue (domestic and international) totaled \$806 million in 2019. ISC's revenue was \$498 million, with a 36% increase from 2018.

THANK YOU TO MR. PEPPER RUTLAND AND MMR FOR HOSTING THE BERT S. TURNER DEPARTMENT AND CSA LAST SEMESTER

Thank you to Mr. James "Pepper" Rutland (LSU CM alumnus, Class of 1972) and his company MMR Group for hosting the department and CSA last semester. The student visited MMR's campus and learn more about his company. If your company wants to schedule a campus visit for our students, please contact CSA at csa@lsu.edu.



CONSTRUCTION INDUSTRY ALUMNI

THREE BERT S. TURNER DEPARTMENT OF CONSTRUCTION MANAGEMENT ALUMS PROMOTED AT PALMISANO TO THEIR NEW ORLEANS MARKET

Palmisano recently promoted three LSU CM alumni to its market leadership in New Orleans Nick Moldaner will lead the Palmisano New Orleans office as market leader, Brad Shannon as operations leader, and Joe Yenni as preconstruction leader.



Nick Moldaner

As Palmisano's market leader, Nick Moldaner (pictured left) works to ensure the success of the commercial division's construction projects and strategic operational initiatives. One of Palmisano's earliest employees, Nick's expertise extends through many departments within the organization, including business development, preconstruction, project execution, strategy, and talent development.

Nick is driven by the opportunity to be a part of something bigger than himself-working with an organization that challenges tradition, builds lasting landmarks, and gives back to the community. His favorite aspect of working at Palmisano is collaborating with a team of renegades who are uniquely qualified to deliver high-quality services and who relentlessly pursue value for the customer. His personal motto is: "Work hard. The rest is in God's hands."



A Palmisano renegade since 2014, Brad Shannon (pictured right) leads Palmisano's commercial project management teams and oversees the division's operational process and procedures. He is responsible for implementing the company's proven approach on construction projects, ensuring teams are driving the most value each step of the way, and leading strategic operations initiatives. Cool under pressure, Brad brings a "whatever it takes" mentality to solving complex construction Brad Shannon challenges and finds reward working alongside this band of renegades.

A native of Metairie, Louisiana, Brad graduated from LSU with a degree in construction management, and has worked in commercial operations since 2006. Brad was named to the Excellence in Construction and Real Estate Class of 2019 by New Orleans CityBusiness and is a member of the Lean Construction Institute New Orleans Community of Practice.

Joe Yenni (pictured below) leads Palmisano's Relentless Pursuit team, developing creative strategies to drive the most value before a project ever breaks ground. He closely engages with clients, designers, trade partners, and internal teams to ensure that preconstruction efforts maintain forward, positive progression and goals are achieved. A skilled problem solver who challenges traditional construction practices, Joe analyzes all options to ensure no stone is left unturned and that projects are set up for success.



Joe Yenni

The tangible results of Palmisano's approach serve as a key motivator for Joe. He enjoys working with a solutions-focused team and never rests until the job is done right. A Palmisano renegade since 2014, Joe is from New Orleans, Louisiana, and holds a degree in construction management from LSU. He was named to the New Orleans CityBusiness Excellence in Construction and Real Estate class of 2019 and is a member of the Associated Builders and Contractors, New Orleans/Bayou Chapter Board of Directors.

Congratulations gentlemen, The Bert S. Turner Department of Construction Management are very proud and wish you all the best in your new positions.

FROM THE DEPARTMENT CHAIR

A letter from Dr. Charles Berryman

Despite world and national events during 2020, the Bert S. Turner Department of Construction Management thrived. Finally, after three years of red tape, we will have a Doctor of Philosophy in Construction Management. It will replace our old CM Ph.D program in Engineering Science. Students will now have the CM degree designation on their transcripts. It is one of only three programs in the nation that offer a Ph.D in Construction Management and the only one of its kind that can be offered through an online delivery format.

The graduate faculty currently supervises 40 Ph.D students, with most of them funded either as teaching or research assistant. Comparatively speaking with other College of Engineering departments, as it relates to faculty to Ph.D student ratio, CM is one of the top performers. This is made possible by the perseverance of the graduate faculty and gifts from the industry to outfit research/teaching laboratories and leverage matching funds to win grants for federal centers, competitively. This has caught the attention of other universities and was demonstrated recently by the number of applicants for CM's tenure track faculty position. The department received almost 100 qualified applications (several years ago, we typically received only 35-40). Currently, the industry and faculty have selected one that would fit well within our team. At the time of this writing, HR is working to secure a contract. If all goes well, I should be able to announce a new CM faculty by late February.

The Bachelor of Science in Construction Management (BSCM) continues to grow through two different delivery systems at the undergraduate level. One is on campus, and the other is online. The campus student population continues to grow steadily with each passing semester, with around 900 students seeking an undergraduate CM degree. The online version is gaining steam with more than 300 applicants accepted to date and more applying each passing week. The Master of Science in Construction Management is the largest master's program in the College of Engineering with 100+ students enrolled. In addition, the department added two other programs to the list. Working with the LSU E. J. Ourso College of Business College, a dual degree program was approved where a CM undergraduate could use some of their coursework towards a Master of Business Administration (MBA), and some of their MBA coursework counts towards their BSCM degree. This effectively provides the opportunity to finish the two degrees in five years instead of the typical six. The newest degree program is a Post-Baccalaureate certificate in Facilities Management (CFM). It is

designed to serve the industrial and manufacturing sectors. Many of our graduates end up in facilities management departments but do not possess the skills and knowledge to be an effective leader. This new program fills that void and allows students to use some of their CFM coursework towards an MSCM degree if they so choose.

Yes, we are growing in enrollment and degree programs. The department has been able to do this (and we aren't done yet) with the support of CIAC, the Louisiana Licensing Board for Contractors, industry, faculty, and staff. I'm looking forward to a bright new year for 2021 as we continue our quest to be the best.

Geaux Build, Charles Berryman, Ph.D, CPC



ACCOLADES



CONGRATULATIONS
DR. HUSAM SADEK,
PH.D, P.E, for earning his
OLC Online Teaching Certificate.
He is one of many CM faculty that
have made great strives to give our
students the best online education.
Way to Geaux Dr. Sadek



CONGRATULATION TO LAUREN ZABASKI ON THE BIRTH OF HER SON, OWEN

Our program manager Lauren Zabaski welcomed Owen Quinn Zabaski on Friday, January 15, at 6:01 p.m.. He weighed 7 lbs., 8 oz., and was 21 inches long. Congratulation again to Lauren and her husband, Jeremy.

CONGRATULATIONS DR. YONG-CHEOL LEE, PH.D, LEED AP, FMP. & HOLDER OF THE ROLAND AND KAY TOUPS PROFESSORSHIP

The Contractor's Educational Trust Fund committee has selected his proposal for one year of funding. Thank you again to the Contractor's Educational Trust Fund committee, and congratulations to Dr. Lee.



NEW FACES



SAMANTHA PILCHER, MS, JOINS STAFF AS ACADEMIC ADVISOR

The department welcomes Samantha Pilcher as our new academic advisor! Before LSU, Samantha was a teacher/ educator for 10 years in the Central Community School

System. Samantha received her undergraduate degree from Belhaven University in Jackson, Mississippi, and her master's degree from Louisiana College in Pineville, Louisiana. Welcome, Samantha!



CONGRATULATIONS
DR. CHAO WANG,
PH.D, who was invited to join
the Manufacturing and Industry
Committee of the Governor's
Climate Initiatives Task Force.

BIONIC MAN: LSU CM, IE PROFESSORS TO DESIGN WEARABLE EXOSKELTETON

According to the Occupational Safety and Health Administration (OSHA), one in 10 construction site workers is injured every year, while 21 percent of worker fatalities are in construction. Hoping to improve worker safety and efficiency, LSU Bert S. Turner Department of Construction Management Assistant Professor and Graduate Coordinator Chao Wang and LSU Professor of Industrial Engineering Fereydoun Aghazadeh are collaborating with Rutgers University to develop an integrated, multidisciplinary approach to bring emerging robotic technologies, such as a wearable exoskeleton, to the construction industry that will save lives and time. As this project is closely tied to the industry, it will not be successful without valuable feedback and insights from the local industry and community. Through the application for this project, extensive support has been received from the LSU Construction Industry Advisory Council (CIAC), the Pelican Chapter of Associated Builders and Contractors (ABC Pelican), Alliance Safety Council, Louisiana Associated General Contractors (AGC), the Louisiana Economic Development (LED) Workforce Initiatives, etc.

Wang, Aghazadeh, and Rutgers recently received a \$150,000 planning grant from the National Science Foundation as part of NSF's 10 Big Ideas—Future of Work at the Human-Technology Frontier (FW-HTF) program to develop an exoskeleton. The award gives LSU and Rutgers one year to create a research team to compete for a \$3 million research grant in March. So far, their project is ahead of the game since there are few, if any, construction companies that have actually adopted exoskeleton technology.

This FW-HTF project has three goals: developing lightweight, flexible, high-performance, personalized wearable exoskeletons for construction workers; develop machine learning-based human skill modeling and training in construction; and initiating new cross-disciplinary collaboration and foster engagement with industry partners and stakeholders.

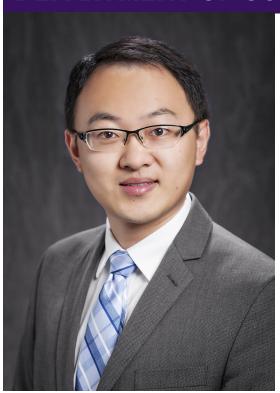
"Construction workers get hurt for three reasons," Aghazadeh said. "Number one, they are tired. Number two, the task is beyond their capacity. Number three, they are not properly trained. If they don't have the capacity to do the physical work, how can we enhance their physical capability? We can give them more power. This project is all about that."

Wang, who serves as the project's principal investigator, says there are a few exoskeleton products currently available on the market, but they mainly target the industrial/manufacturing setting. The exoskeleton is still a new concept in construction because the construction site is more dynamic and complicated.

"We're seeing how we can explore personalized exoskeleton or robotics technology," Wang said. "In a manufacturing facility, a worker probably does the same thing 1,000 times a day. It's repetitive, which is perfect for an exoskeleton because they design it just for that one task. A construction site is a lot different. You must be able to climb stairs, walk, squat, and reach out to different levels depending on what trade you are in.

"That makes it difficult to design an exoskeleton because you need something that can help with all of these tasks. We are investigating how to make the exoskeleton smart enough to recognize what task the construction worker is doing and adjust its power level and control strategy to more effectively assist with the work."





Dr. Chao Wang, Ph.D

Wang and Aghazadeh will study what tasks each construction crew member performs in order to develop and train an exoskeleton that fits different construction tasks. They will consider if the robotic exoskeleton should support the upper or lower body and how much power should be given.

"In medical and military applications, you wear a lower limb exoskeleton to prevent you from falling while giving support from the bottom," Wang said. "However, on a construction site, when you frequently kneel or squat, you will have a lot of resistance from the exoskeleton if the power level and control strategy is not properly set. The robot must be smart enough to know what you're trying to do and what your next move is, so it must be adjusted accordingly."

The robotic metal framework exoskeleton would not only promote construction workers' safety but also longevity in their job.

"With the help of robotics, these older workers can still perform," Wang said. "That way, when younger workers come in, they can learn from the older, more experienced workers who have more knowledge that can be passed on."

"People are living longer and longer, so society must support them so they can keep working," Aghazadeh said.

The team says its motivation for this project comes from the workforce shortage in the United States. There are plenty of construction jobs along the Gulf Coast but not enough workers. Wang said what caused the workforce shortage is construction workers aging or retiring due to an injury and a decrease in young people doing construction work.

With an exoskeleton to alleviate risk of injury, more construction workers could perform for more years and do so safely and efficiently. The team said it would also open the door to more women being able to do jobs that were once solely for men.

There are some issues the team is trying to work out, such as the cost of the exoskeleton and how it could work safely in different weather conditions since it would be powered by battery.

"The idea down the line is that anyone can buy this in a Home Depot or Lowe's, and they'll come in different sizes," Wang said. "We want one product that can be smart enough to fit anyone with different tasks."

The team is currently collaborating with industry companies and trade schools who are not yet aware of this technology but will help them develop a better product.

"It takes industry and society working together to make this happen," Aghazadeh said.

Contact: Libby Haydel

CM ONLINE IS NOW OFFERING CONSTRUCTION TECHNOLOGY MANAGEMENT MICROCRED®

Starting in Fall 2021, the Bert S. Turner Department of Construction Management will offer a Project Management in Residential Construction MicroCred®. Upon completion of the three-course series, students will receive a digital badge from LSU Online & Continuing Education that can be used for online résumés, personal websites, or social media. In addition, these are college courses and can be fully transferred into LSU's online Bachelor of Science in Construction Management (BSCM). These seven week courses also can be used for continuing education units/credits required by some certifications and licenses.





MEET BERT S. TURNER DEPARTMENT GRADUATE STUDENT SEDDIGHEH (TALA NOROUZIASL

Tala is a Ph.D student under the supervision of Dr. Navid Jafari at LSU. She got her BSC in Architectural Engineering in 2013 from the University of Tabriz, Iran, and her MSc in Architectural Engineering in 2016 from Seraj Higher Education Institute, Iran. She also has a few years of working experience as an engineer at the municipality of Tabriz City. She has joined Dr. Jafari's research team as a volunteer researcher since august 2018, and she had started her Ph.D in the CM department in summer 2019. Also, Tala has been working as an online teaching assistant with many faculty members. Currently, her research focuses on simulating occupant behavior and building energy performance using agent-based modeling. Her research is divided into two sections: (1) Conducting a systematic literature review of studies focusing on modeling and simulation of occupant behavior and (2) Simulating occupant behavior in a case study of an office building using lighting energy consumption to determine the energy saving of installing lighting occupancy sensors and the impact of different office layouts on the lighting energy consumption. She has published her research in prestigious conferences, including International Conference on

Computing in Civil Engineering in 2019 and Construction Research Congress in 2020. She also published her study in the Journal of Building and Environment in 2020. Tala also was a member of the Iranian Student Association (ISA) in 2019-2020. Tala has received a Leadership in Energy & Environmental Design (LEED) Workshop Certification from the University of Toronto.

CONSTRUCTION MANAGEMENT STUDENT LIFE



FROM THE PRESIDENT

It's time to lay the foundation for an exciting 2021 by helping Construction Student Association (CSA) recruit members by hosting events. CSA is open to all LSU students who are interested in construction management. CSA advances our members' experience by fostering networking opportunities, strengthening professional education, and engaging with the construction management industry.

This year, as president, COVID-19 provided a new challenge to how we usually do business. We're up for it and ready to geaux with programming to help our members become successful beyond the classroom. This past fall, CSA had the opportunity to volunteer at the ABC skeet shoot. We were also invited to MMR's corporate office to learn more about what they do as an electrical and instrumentation contractor. Thank you, MMR, for inviting CSA!

For our member's health and safety, our meetings will be virtual for now. We are looking forward to our next CSA meeting hosted by The Lemoine Company on February 20 and a site visit to Cajun's fabrication shop on February 26. We are currently planning our annual CSA banquet. The CSA banquet will hopefully take place on April 15. Other events planned for the Spring 2021 semester include a campus tour of MMR, CSA crawfish boil, a Top Golf event, and an educational seminar by the vice president of governmental relations at ABC, John Walters. We will also be volunteering at the CIAC Golf Tournament on April 9th. CSA is looking forward to preparing our members for Construction Interview Day and expanding your knowledge of companies worldwide this spring.

I want to thank the Construction Industry Advisory Council (CIAC) for all its support and commitment. Its dedication to

the students goes above and beyond to prepare them for life and careers after graduation.

CSA is committed to providing students opportunities throughout the school year, even one that feels like it was wacked with a 2x4. I look forward to seeing everyone at our events. For more information about CSA, please contact csa@lsu.edu and follow our Instagram @_lsucsa_.

Geaux Tigers!

Elizabeth Marchand, 2020-2021 CSA President

Contact Info: csa@lsu.edu



Jan. 26th	1st CSA Meeting with DR Horton
Feb. 23rd	2nd CSA Meeting with The Lemoine Company
Feb. 26th	Cajun Site Visit in Port Allen
March 4th	MMR Campus Tour
March 9th	CIAC Interview Panel & 3rd CSA Meeting with ISC
March 11th	Construction Interview Day
March 12th	Potential CSA Crawfish Boil
March 30th	Get into Politics or Get out of Business by ABC VP of Legal Affairs
April 6th	4th CSA Meeting with Turner Industries
April 8th	Potential Volleyball Night at Oasis
April 9th	CIAC Golf Tournament
April 15th	CSA Banquet











CONSTRUCTION MANAGEMENT STUDENT LIFE

COMPETITION TEAMS

THANK YOU TO THE LOUISIANA HOME BUILDERS ASSOCIATION (LHBA) FOR THEIR CHECK DONATION TO THE LSU NAHB RESIDENTIAL CONSTRUCTION MANAGEMENT STUDENT COMPETITION TEAM



Back Row: LHBA 3rd VP, Bobby Park, LHBA 1st VP Willie Martin, LHBA Past President Curtis M. Loftin

Front Row: LHBA President Dodie Adams; LSU Construction Management Competition Advisor Stephanie Heumann; LSU Student Competitors Sam Grey, Caroline Panepinto, Jake LeBlanc; and LHBA 2nd VP Tommy Pinion

THE PHOTO BELOW WAS FROM A TEAM BUILDER AND CHECK PRESENTATION FROM AMERICA'S HOME PLACE.

America's Home Place supports the LSU NAHB Residential Construction Management Competition Team. Thank you to American's Home Place for donating their time and money and hosting the Top Golf event for the team last semester.



3319 Patrick F. Taylor Hall Baton Rouge, LA 70803

> ADDRESS SERVICE REQUESTED

#GEAUXBUILD

CIAC and Bert S. Turner Department of Construction would like to thank our Top Level Sponsors for this year's tournament!

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