

# CIVIL & ENVIRONMENTAL ENGINEERING

## SUCEE Newsletter



## Chairman's Welcome

Dear Southern University Civil and Environmental Engineering (SUCEE) families and supporters,

This is Alex Hak-Chul Shin, Professor and Chair of the SUCEE. Since the launching of SUCEE newsletter last November, we have received a lot of positive feedback to enhance the quality of the publication. With new faculty and staff members, SUCEE is trying to improve in teaching students, enhancing research capability and productivity, and serving our community.

**Dr. Alex Hak-Chul Shin**

To better serve students we are implementing Watermark and Degree Works. Watermark is a tool which will better assess students' outcome and prepare accreditation for SACS and ABET. All faculty members are participating in workshops to use the tool in course assessments and accreditation visits. Degree Works is a software which will better advise students in their academic progress to finish their degree timely manner. Each faculty should know how to assess students' academic progress and advise to follow curriculum and maintain a good GPA.

In the faculty highlights, we had several research activities in the department. Dozens of research proposals were submitted to the federal and state agencies last Fall semester. Some of them were not successful, and we are still waiting for the other results. Similar funding opportunities are coming again in near future, so the efforts to get research funding will be continued. During the E-week award, Dr. Hang Yin received Outstanding Faculty award.

All faculty members are servicing local, state, and federal agencies with their expertise. Many are involved as panel member of East Baton Rouge Parish, LTRC Policy Committee, journal paper reviewer, committee members of the professional organizations. Many faculty members are helping local k-12 schools to support STEM activities.

With team efforts of SUCEE, a new Construction Management (CM) program is developed within the College of Sciences and Engineering. With the partial overlapping of the teaching of classes, it is expected to have synergy effects in Civil Engineering and CM program. Details of the CM program will be shared by Ms. Whitmore soon.

## Research Activities and Publications

by **Dr. Chiquan Zhang**



Dr. Zhang Chiquan joined the Department of Civil and Environmental Engineering at Southern University and A&M College in August 2022 as an Assistant Professor. His current research focuses on phytoplankton assessment in large freshwater streams. He recently proved that quantitative chain reaction (qPCR) is a promising tool to assess phytoplankton and indicate the trophic status of freshwater streams. The research finding is based on a large-scale, multiple-year study in twelve large inland and coastal freshwater rivers in the United States. The study appears in *Water Research*, which is one top scholarly journal in Environmental Engineering. He is the lead author of that paper. This is the

first time that a faculty member from the Southern University system publishes an article in that journal. Dr. Zhang Chiquan has also actively collaborated with scientists from other institutions and published three additional articles as the second or third author.

Please scan the QR codes to access D. Zhang's recent works.

Dr. Chiquan Zhang has recently obtained a grant from the Board of Regents of Louisiana (\$100,000). The proposal is entitled "Constructing an Environmental Microbiology and Biotechnology Laboratory to Augment the Research and Education in the Department of Civil and Environmental Engineering at SUBR." Dr. Chiquan Zhang will use the funds to conduct cutting-edge research in safe drinking water supply and develop a new course for the Department. This grant will significantly enhance the research, teaching, and education of the Department.



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## Congrats to our LES and ASCE Scholars



Congratulations to our Engineering Scholars who were "Shining Stars" at the Louisiana Engineering Society (LES) and American Society of Civil Engineers (ASCE) 2023 E-Week Awards Luncheon

Eight \$1,000.00 cash awards were given to engineering students at Southern, LSU, Southeastern, and ULL. Four of our very own Civil Engineering students took home four of those awards. They represented us well with

approximately 150 LES and ASCE members in attendance. Our student awardees were:

**JaPorcha Joubert**, Civil Engineering Senior  
**Tinna Amarsdottir**, Civil Engineering Senior  
**Zuri Watts**, Civil Engineering Junior  
**Kalani Jones**, Civil Engineering

## Published works from SUCEE Professor

- Dr. Dongkeun Lee

Dr. Dongkeun Lee has expertise in structural engineering. Dr. Lee has recently published a journal paper in *Composite Structures* with a high impact factor of 6.603. The article is about the long-term performance of 15-year-old full-scale reinforced concrete (RC) beams strengthened with fiber-reinforced polymer (FRP) composites. The figure below depicts one of the strengthened beams at failure. Even though 15 years passed, there was no debonding at the interface between the FRP and beam, and the rupture of the FRP was observed. Dr. Lee recently submitted two manuscripts to *Journal of Constructional Steel Research* with a high impact factor of 4.349. The research is about the efficient and reliable modeling for the progressive collapse resistance of steel moment frames. Dr. Lee's full paper has been accepted for the 6th International Conference on Protective Structures (ICPS6) which will be held at Auburn University in May 2023. The proceeding paper is about the effective resistance of masonry walls strengthened with FRP composites under high-velocity impact loading. This research was the outcome of collaboration with Dr. Alex Shin. Dr. Lee's research proposals are under review by federal and state agencies. Dr. Lee has been devoted himself to the success of the Department of Civil and Environmental Engineering at SUBR.



Figure. 15-year-old RC beam strengthened with FRP composites at failure