ENGINEERING MATTERS
UNIVERSITY OF SOUTH ALABAMA
COLLEGE OF ENGINEERING

Engineering Makes a World of Difference Vol. 3 No. 1



From the left, William J. "Happy" Fulford III, Dr. Joseph F. Busta Jr., Brian J. Cuccias, Merceria Ludgood, John T. Crowder Jr., William B. Burnsed Jr. and James J. "Jake" Gosa.

Mechanical Engineering Alum, William B. Burnsed Jr. Honored as Distinguished Alumni

The University of South Alabama National Alumni Association honored five alumni, a retired University employee, and a Mobile County commissioner for their outstanding accomplishments during the 16th annual Distinguished Alumni & Service Awards on March 5, 2020 at USA's MacQueen Alumni Center. For the full article, please select Distinguished Alumni & Service Awards 2020.

40 Under 40 - Mobile Bay



Jake Parker, P.E., EE Alum 2005 - Mobile Engineering Leader, Hargrove Engineers + Constructors

Jake is a licensed professional engineer in six states and is also a LEED (Leader in Energy Efficient Design) accredited professional. He leads a team of nearly 350 direct-report engineers and designers in project execution. In 2015, Jake was recognized as Electrical Engineer of the Year by the Mobile Council of Engineers. His project leadership, which spans multiple industries, earned him an invitation to become one of Hargrove's associate owners. Jake is an active member of Tau Beta Pi, the oldest engineering honor society in the nation, a lifetime member of the University of South Alabama's Alumni Association and his church, Christ United Methodist. For the full article, please select 40 Under 40 Mobile Bay.



CHE Alum Helps Develop COVID-19 Test

USA BSChE Alum, Richard Cullum, now an Auburn University doctoral candidate, works for Assurance Scientific Laboratories in Birmingham as a member of the research and development team that created the test. For the full article, please select COVID-19 Test.

MACE "Individual of Special Recognition" Award

Dr. John Steadman, Dean Emeritus and Professor in the Electrical & Computer Engineering Department was selected for "Individual of Special Recognition" at this Spring's annual MACE banquet. Congratulations Dr. Steadman!





Congratulations to Educator of the Year!

Dr. Brooks Rabideau, Assistant Professor in the Chemical & Biomolecular Engineering Department was recognized this Spring as Educator of the Year at the annual MACE Banquet.

College of Engineering: Excellence in Teaching Award

Dr. Eric Steward, Associate Professor in the Civil, Coastal, & Environmental Engineering Department was selected for the "College of Engineering: Excellence in Teaching" for 2019-2020.





College of Engineering: Excellence in Research Award

Dr. Saeed Latif, Assistant Professor in the Electrical & Computer Engineering Department was selected for the "College of Engineering: Excellence in Research" for 2019-2020.



College of Engineering: Staff Award

Mrs. Ronda Girardeau, Administrative Assistant in the Dean's Office was selected for the "College of Engineering: Staff Award" for 2019-2020.

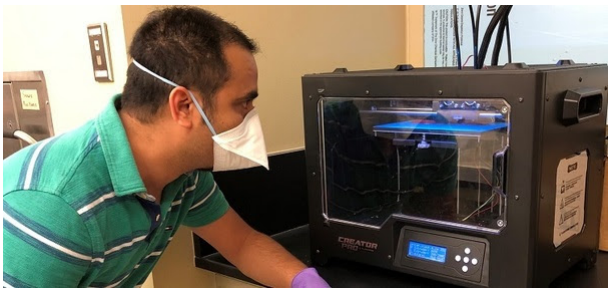


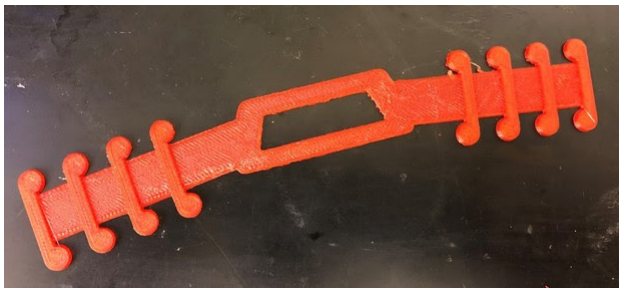
College of Engineering: Student of the Year Award

Alysa San Filippo, graduating Senior in the Electrical & Computer Engineering Department was selected for the "College of Engineering: Student of the Year" award for 2019-2020.

College of Engineering 3D Printing for COVID-19

Several faculty in the College of Engineering have been using their 3D printers to manufacture tension relief straps made of flexible plastic for protective facial masks. These straps prevent irritation behind the ears caused by the usual elastic straps. These are urgently needed by healthcare professionals working to contain the spread of the COVID-19 virus. For the full article, please select USA College of Engineering 3D Printing.





Innovative Composite Materials Research

New materials and manufacturing are essential driving forces for many new technologies. Dr. Kuang-Ting Hsiao, a Pr⁷ofessor in the William B. Burnsed, Jr. Department of Mechanical, Aerospace and Biomedical Engineering at the University of South Alabama, is leading his research group towards the future of manufacturing using lightweight high-strength composites employing carbon fiber reinforced polymer (CFRP) and additive manufacturing. Dr. Hsiao's research has enabled the University of South Alabama to obtain six patents and four patents-pending in these two technologies.

Dr. Hsiao uses electrical and micro-fluidic forces to manipulate carbon nanofibers so that they interlock conventional carbon fibers to produce "Z-threaded CFRP" (ZT-CFRP). This new material outperforms conventional composites with 7 times higher thermal conductivity, 100 times greater electrical conductivity, and up to 35% increase in mechanical toughness.

Dr. Hsiao's group is currently working on further performance enhancement and tailoring the material to various industrial applications. He is working with private-sector partners to commercialize the research via process refinement and advanced simulations.

ZT-CFRP is also an excellent material for the next generation of high-performance 3D printing. Dr. Hsiao is working with Dr. Clive Woods, Professor of Electrical Engineering, to develop robot-based advanced manufacturing technology exploiting electromagnetic attraction to shape and compress the material. This new technology, called magnetic compaction force assisted additive manufacturing, is expected to give significant energy-efficiency advantages while producing composites that are stronger and cheaper than CFRP materials currently produced by other conventional and 3D printing processes. Design-manufacture-repair-on-demand (i.e., using a 3D printer to re-manufacture broken high-performance components) and in-situ certification will soon become routine using these processes.

Society of Women (SWE) Merit Scholars - Spring 2020

Congratulations to the nine SWE members who were selected to receive Merit Scholarships for all of their efforts and involvement in the SWE Student Chapter.

Thank you to the following companies for sponsoring a merit scholarship during the annual SWE Career Fair held each Spring: Airbus Americas, AM/NS Calvert, Austal USA, Chevron, Evonik, Hargrove Engineers + Constructors, HDR Engineering, Inc., SSAB Americas, and Thompson Engineering.



Top Row, left to right: Kaileigh Rowell, Jordan Blackmon, Amanda Green, Dr. Tambe (faculty advisor), Darcey D'Amato, Rachel Chai. Bottom Row, left to right: Keira Ross, Adrianna Bailey, Jenny Pham, and Caroline Franklin.

Mobile County Roadbuilders Association Awards Scholarship

Each year, a Civil Engineering student is awarded the Civil Engineering Alabama AGC Scholarship. For the academic year, 2020-2021, the College of Engineering had the pleasure of hosting Michael Weaver (President of asphalt company H.O. Weaver) to present the award to BSCE student, Kenneth Jackson.



Left to right: Dr. Cleary, Dr. Wu, John Whitman, Kenneth Jackson, Michael Weaver, Dr. Usher, and Dr. White

Outstanding Society of Women Engineers (SWE) Scholarship

Jordan Blackmon (junior) and Rachel Chai (senior), both students in the Department of Civil, Coastal, and Environmental Engineering, were selected by the Birmingham section of the Society of Women Engineers (SWE) to each receive an Outstanding SWE Member Undergraduate Scholarship. The scholarship was established to support and recognize deserving undergraduate SWE members at ABET accredited engineering programs in the state of Alabama who have demonstrated academic excellence and committed involvement in SWE and their community. Rachel Chai graduated May 2020 with a BSCE degree. Jordan Blackmon is entering her final year in the BSCE program. Congratulations to both of these outstanding young women.



DoD SMART Scholarship

Congratulations to Ifezue Obiako (Ivy to his friends) for landing a prestigious SMART scholarship. The Science Mathematics and Research for Transformation (SMART) scholarship was created over 10 years ago to identify talented and innovative scientists, engineers and researchers. For the full article, please select, DoD SMART Scholarship.

Engineering Alumni Society Golf Tournament

June 26, 2020: The 14th Annual College of Engineering Alumni Society Golf Tournament
The tournament will be held at the Robert Trent Jones Golf Trail at Magnolia Groves. More information on how to participate can be found at Engineering Alumni Golf Tournament 2020.

Save-the-Dates

September 24-27, 2020: Alumni Reunion 2020: The University of South Alabama will host our first Alumni Reunion weekend September 24-27, 2020. We hope you will join us! To learn more, please visit Alumni Reunion 2020.

College of Engineering Alumni Polos

College of Engineering Alumni polos are currently for sale! If you're interested in ordering a polo, orders can be made through this link: Alumni Polo Online Ordering. We will place the full order in September 2020. Proceeds from sales will go towards the College of Engineering Alumni Society Scholarship. The polos are priced at$39.50 (includes shipping/handling).
Polos are a performance material and are offered in men's and women's sizes in the following colors: navy blue, black, white, red, charcoal gray.
An example is below of a red polo and the USA alumni approved logo.



Available Colors: black, charcoal gray, navy blue, red, & white

South Alabama
COLLEGE OF ENGINEERING
ALUMNI SOCIETY

USA Alumni Approved logo

Interested in giving to the College of Engineering?Click the "Give Today" button to learn how.

Give Today!

Follow the College of Engineering for updates on activities and events taking place throughout the year.