

CAIN DEPARTMENT OF CHEMICAL ENGINEERING

Chemical Engineering Alumni Newsletter

is published for the benefit of the LSU Cain Department of Chemical Engineering's alumni and students.



Comments and suggestions should be directed to:
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LSU

College of
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Chemical Engineering

Alumni Newsletter • Volume 28 • Fall 2013

Letter from the Chair



Dear Alumni/ae and Friends:

Greetings from the LSU Cain Department of Chemical Engineering!

As the hot, humid days of August always remind us: A new academic year at LSU is beginning!

Indeed the 2013-2014 academic year is upon us, and there are lots of things to get excited about in the LSU Chemical Engineering Department. First of all, three new faculty are joining the Department! Two of the three are new assistant professors: Dr. Ye Xu, most recently a research associate at Oak Ridge National Laboratory, and Dr. Adam Melvin, most recently a postdoctoral fellow at the University of North Carolina. The third new member of our faculty, a full professor with joint appointment in LSU's Center for Computation and Technology, is Dr. William Shelton, who comes to us from Pacific Northwest National Laboratory, where he was an Associate Director of Computing. These three new professors will greatly strengthen and expand the Department's capabilities in the areas of materials science, catalysis, biochemical engineering, environmental engineering, surface chemistry, and computation. To learn more about these three new faculty members, please see Page 5.

Second, congratulations are in order for several Department faculty. Prof. K. T. Valsaraj, the former Chair of our Department, is now LSU's Vice Chancellor of Research and Economic Development. Dr. Francisco Hung and Dr. Mike Benton, the two faculty who joined the Department as assistant professors in 2007, have been promoted to associate professors and awarded tenure. In addition, Dr. Hung is a 2013 recipient of the prestigious CAREER Award from the National Science Foundation. Please see Pages 3-5 to learn more about these outstanding faculty achievements.

Third, thanks to many of you as well as companies, friends, and alumni from across the LSU College of Engineering, the Breaking New Ground campaign is marching full steam ahead: So far, approximately \$33 million has been raised toward the goal of \$50 million in private donations, to be matched by the State of Louisiana's additional \$50 million. Please see Pages 7-8 for more on recent developments.

So you see, indeed there are lots of things to get excited about in the LSU Cain Department of Chemical Engineering. To feel some of the excitement first hand, please feel free to stop by the Department the next time your travel plans bring you to Baton Rouge.

Best Wishes,

Mary Julia (Judy) Wornat, Sc.D.
Robert Hughes Harvey Professor,
William G. Raymond Professor, and
Department Chair



On the Cover

We at the LSU Gordon A. and Mary Cain Department of Chemical Engineering are committed to educating the very best engineers and to breaking new ground in education and research.



A Word of Thanks

We would like to thank the following individuals and corporations for their generous support of the LSU Department of Chemical Engineering over the last 2 years.

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Faculty Highlights



Francisco R. Hung, associate professor, Cain Department of Chemical Engineering; adjunct, Center for Computation and Technology, Molecular modeling of solidification of nanoconfined ionic liquids (NSF CAREER Award, \$400,000 over five years)

Hung's proposed research involves computer simulations at the molecular level of detail to fundamentally understand the behavior of ionic liquids (ILs) confined in nanoporous materials. ILs are organic salts that are in liquid state near room temperature. ILs have been proposed as alternative electrolytes for several energy-related devices (e.g., electrochemical double-layer capacitors and dye-sensitized solar cells, where the IL is in contact with nanoporous electrodes). Furthermore, inserting organic salts inside nanoporous materials is one step in the synthesis of nanomaterials based on organic salts, which have potential applications in sensors, biomedical applications, energy storage and CO₂ sequestration. The education component of this proposal involves a close collaboration with the Pre-College Programs of the LSU College of Engineering, specifically targeting students in grades 6-12. In addition, and due to his Hispanic background, Dr. Hung is fully committed to influencing and encouraging underrepresented Hispanic students majoring in engineering.

About the NSF CAREER Award:

The Faculty Early Career Development, or CAREER, Program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization. Such activities should build a firm foundation for a lifetime of integrated contributions to research and education. NSF encourages submission of CAREER proposals from junior faculty members at all CAREER-eligible organizations and especially encourages women, members of underrepresented minority groups, and persons with disabilities to apply.



John Flake, Jay Affolter professor, associate professor, Cain Department of Chemical Engineering, was awarded a Small Business Innovation Research grant from the National Science Foundation (NSF) for Electrochemical Materials LLC of Baton Rouge. The SBIR and Small Business Technology Transfer (STTR) programs are the largest

federal research and development programs for small businesses. The programs allow small businesses to compete for a portion of federal research dollars in order to help the agencies meet their many missions from areas of health and environment to national defense and agriculture, and move the ideas from lab to market, whether for the government or commercial purposes.



Kalliat T. Valsaraj Named Vice Chancellor of Research & Economic Development

LSU's Kalliat T. Valsaraj has been selected to serve as the university's vice chancellor of research & economic development. Valsaraj, formerly associate vice chancellor of research & economic development, has been at LSU for more than 27 years. He assumed the responsibilities of his position on July 1.

He replaces Interim Vice Chancellor of Research & Economic Development and Boyd Professor Thomas R. Klei, who will return to his research role at the LSU School of Veterinary Medicine. Klei has served the university for more than 38 years.

"I feel honored to be asked to lead the LSU Office of Research & Economic Development as its next vice chancellor. I plan to focus on creating an environment at LSU that will emphasize multidisciplinary research in the areas of energy, environment, coast, computation, biological, social sciences, arts and the humanities," said Valsaraj. "Fostering and improving various economic development activities and industrial ties will be another of my strategic goals. My aim is to help elevate the LSU research profile that will positively impact the lives and well-being of all the citizens of the state of Louisiana whom we serve."

In addition to his current administrative role at ORED, Valsaraj also holds several prestigious professorship titles, including the Charles and Hilda Roddey Distinguished Professor of Chemical Engineering and the Ike East Professor of Chemical Engineering. He also served as chair of the Cain Department of Chemical Engineering in LSU's College of Engineering for several years.

"After reviewing a strong pool of applicants, the search committee conducted campus interviews of five highly qualified candidates, and Dr. Valsaraj stood out from the others because of his distinguished academic research and teaching record, his proven administrative and leadership abilities, and the strategic plan for research & economic development at LSU that he has championed," said Joel

Tohline, director of the search committee and director of LSU's Center for Computation & Technology.

Valsaraj arrived at LSU in 1986. He has a background in biology and chemistry, with an M.S. degree in chemistry from Indian Institute of Technology in Madras, and a Ph.D. in chemistry from Vanderbilt University. He received the Charles E. Coates Award, which is jointly awarded by the American Institute of Chemical Engineers and the American Chemical Society professional chapters in Baton Rouge. He is a Fellow of both the American Association for the Advancement of Science, or AAAS, and the American Institute of Chemical Engineers. He has also been recognized as a Distinguished Research Master and a Rainmaker at LSU.

During his time at the university, Valsaraj has played a large role in improving industrial relations in the Cain Department of Chemical Engineering. He has procured more than \$19.5 million in research support, and is currently funded by the Gulf of Mexico Research Initiative, or GoMRI, for his research on oil dispersants.

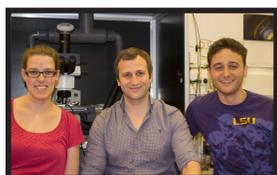
"We are excited to see the vision Dr. Valsaraj has for LSU's Office of Research & Economic Development come to life," said Executive Vice Chancellor & Provost Stuart Bell. "His experience as an administrator and as one of the university's preeminent researchers will serve the office – and the university – in good stead as we move forward to meet the challenges facing higher education and research today."

The Vice Chancellor for Research & Economic Development serves as the Chief Research Officer for the university, reporting to the Executive Vice Chancellor & Provost. The position provides a leadership role in national and international activities regarding research policy and guides LSU in defining, prioritizing and energizing emerging research opportunities.



Prof. James J. Spivey's Research Group Hosts Dr. Prieto during Spring 2013 Semester

Dr. Gonzalo Prieto, postdoctoral fellow at Department of Chemistry, Group of Inorganic Chemistry and Catalysis, University of Utrecht has been selected to participate in the upcoming 63rd Lindau Nobel Laureate Meeting. Dr. Prieto was at LSU during Spring 2013 semester with Dr. James J. Spivey's research group, and carried out research with then-



graduate student Miranda Smith as part of LSU's Center for Atomic-level Catalyst Design. This meeting will be held from June 30 to July 5, 2013, in Lindau (Germany). Only the most qualified young researchers worldwide can be given the opportunity to enrich and share the unique atmosphere of the Lindau Nobel Laureate Meetings. Others in the picture are Evelien van Schrojenstein Lantman, PhD student and Javier Ruiz Martinez, postdoctoral fellow and VENI laureate are also selected. They are all with the Inorganic Chemistry and Catalysis group.



Mike Benton was announced as the recipient of this year's DOW Chemical Excellence in Teaching award at the Senior Awards dinner hosted by DOW on April 23 (see Senior Awards, elsewhere in this issue). The date was especially noteworthy for Mike, who had been notified earlier that

afternoon of his final approval for promotion to associate professor with tenure! **Associate professors Francisco Hung and David Wetzel** were also recognized as the other two finalists for the teaching award.



The Excellence in Teaching award was started in 1988 with financial support from DOW Chemical USA, and is intended to recognize the Chemical Engineering professor that graduating seniors consider to be the most outstanding teacher in courses they have taken from the Department during their time at LSU. In 2010 the selection procedure was modified to include recognition of three finalists for the award.

Balloting was conducted earlier in the semester. All seniors who expected to graduate during 2013 were eligible to vote. Voters were instructed to identify their top three choices from the list of full, associate, and assistant professors. The ballots were then tabulated anonymously and the top three selections in order of overall preference were determined.

The dinner was sponsored by DOW Chemical and organized by the student AIChE chapter, and was open to all faculty and undergraduates. DOW Chemical was represented by David Mongrue, Jenny Champion, and

Department News

Josh Spahn (all three are LSU ChE alumni!). Each of the finalists was introduced by a student who recounted several of their experiences with the faculty member. The final results were then announced, with each finalist receiving a plaque noting the event. In addition, the overall winner receives a monetary award, and their name is placed on the list of previous winners that is displayed in the main hallway of the ChE building.

Welcome new faculty! We are delighted to announce that three new faculty members have joined our department in Fall 2013. New assistant professors, **Ye Xu** and **Adam Melvin**, and new professor **William Shelton** (joint appointment with LSU Center for Computation and Technology).



Prof. Ye Xu received his BS in Chemical Engineering at Massachusetts Institute of Technology in 1999 and his PhD in Chemical Engineering from University of Wisconsin-Madison in 2004. His previous position was research and development associate at the Center for Nanophase Materials Sciences at Oak Ridge National Laboratory. Dr. Xu's research interests include heterogeneous catalysis and

electrocatalysis, surface chemical thermodynamics and reaction kinetics, and computation of material properties.



Prof. Adam Melvin, received a BA in Chemistry at University of Arizona in 2004, and his Chemical Engineering degrees from University of Arizona (BS, 2004) and North Carolina State University (MS, 2006; PhD, 2010). His previous position was as postdoctoral fellow in Chemistry & Biomedical Engineering at the University of North Carolina. Dr. Melvin's research interests include environmental engineering

and systems biology.



Prof. William Shelton, received his BS in Physics at University of Cincinnati in 1983 and his PhD in Theoretical Condensed Matter Physics from University of Cincinnati in 1989. His previous position was associate director of computing at the Environmental Molecular Sciences Laboratory in Pacific Northwest National Laboratory. Dr. Shelton's research interests include materials (alloy theory) and chemistry (surface science).



Prof. Francisco Hung, assistant professor, was awarded tenure and promoted to associate professor. Dr. Hung earned his BS and MS from the Universidad Simón Bolívar, Venezuela in 1996, and a PhD from North Carolina State University in 2005. Dr. Hung's research interests include molecular modeling of ionic liquids confined in nanoporous materials, manipulation, alignment

and organization of carbon nanotubes and other anisotropic particles using liquid crystals, adsorption of polycyclic aromatic hydrocarbons (PAHs) and reactive oxygen species (ROSs) on water and ice surfaces, and adsorption of hydrocarbons and dispersants on atmospheric air/salt water interfaces.



Prof. Michael Benton, assistant professor, was awarded tenure and promoted to associate professor. Dr. Benton earned his PhD from University of Wisconsin-Madison in 2007. Dr. Benton's research interests include the role of the DNA damage response in cancer prevention, biosensors for the enhanced detection of carcinogens, and metabolic

engineering of yeasts for increased ethanol production.



On Monday, May 13th, staff member **Melissa Fay** graduated from the LEAD...Emerge class here at LSU. Out of numerous applications, Melissa was one of 25 distinguished staff members invited to join this program.

LEAD...Emerge is LSU's leadership development program for supervisors desiring professional and personal development. The program focuses on building and enhancing leadership skills which support the University's Flagship Agenda. Using self-awareness as a catalyst for professional improvement, the program incorporates a combination of individual and group experiential exercises to further build participants' competencies.

"Participating in the LEAD...Emerge program has been an extraordinary experience. The knowledge shared and lessons learned are invaluable, and have provided me with self-confidence and self-assurance for both professional and personal situations. This program has impacted my outlook as a leader, helped me establish relationships with wonderful people around campus, and given me a more solid connection to the LSU Community." -Melissa Fay

Thanks to upgrades in recent years, spearheaded by Dr. Jose Romagnoli and Dr. Kalliat Valsaraj, the Cain Department of Chemical Engineering boasts a world-class unit operations laboratory. The unit operations course, ChE 4162, requires students to draw on the knowledge learned in all of their prior chemical engineering coursework to successfully complete three intense experiments over the course of the semester. The students work in two person groups and complete one process controls experiment, one kinetics experiment, and one separations process. The students solve open-ended problems and submit their findings in both written and oral reports which are evaluated by a team of chemical engineering faculty.



Pictured above: Bill Elmore (left) and Harry Toups (right)

The excellence of the facility has not gone unnoticed by our colleagues from other universities. Dr. Bill Elmore, the Hunter Henry chair and associate director of the Swalm School of Chemical Engineering at Mississippi State University, was impressed during a recent tour of the laboratory. “Upon entering the Unit Operations laboratory, one immediately senses an ‘industrial’ atmosphere to the place. I believe this is essential for students—giving them not only a perception that the laboratory course is “serious business” but also providing critical emphasis on the need for process safety in all aspects of our profession,” said Dr. Elmore. “Individual unit operations are professionally designed and constructed (as is the Unit Ops website)—clearly demonstrating the high level of professional expertise brought to the laboratory experience by Dr. Harry Toups”.

Dr. Harry Toups spearheads the unit operations course. Dr. Toups retired after 30+ years with Exxon and has brought that vast experience to LSU to serve our students. Dr. Toups is a firm believer in active learning and has modified the course in recent years to increase student involvement and increase their learning. Harry has developed an excellent website (<http://www.uolab.lsu.edu>) and Twitter account for the course to keep students up to date on the latest lab news.

Dr. Toups is truly an expert in Unit Operations instruction and fellow professors from other universities have visited LSU to learn from him. Dr. Katie Cadwell, an assistant professor in the Biomedical and Chemical Engineering Department at Syracuse, recently used her spring break to visit LSU and find out what makes our Unit Ops lab so great. Dr. Cadwell had the following observations after her visit: “When I first became a professor of chemical engineering, I was given the daunting task of improving and teaching our lab courses. I’d heard what a great Unit Ops lab and instructor LSU has. Although the equipment itself was indeed amazing (props to the entirety of the LSU Unit Ops team!), it is the open-ended teaching approach that Harry uses to allow students to assemble knowledge in a realistic scenario that inspired me. Harry shared his philosophy and many of his teaching materials, let me sit in on some student meetings, and gave me the motivation that I needed to reformat my own lab class to be open-ended. In my opinion and my students’, our own lab has been greatly enhanced thanks to his help!”

Dr. Toups’ focus on real-world, open-ended problems have drawn rave reviews from communications and teaching experts as well. Dr. Boz Bowles, a technical communications instructor with the Engineering Communication Studio, has admired Dr. Toups’ novel techniques for years. “In my role with the Engineering Communication Studio, I have worked with Dr. Toups since 2006. I am intensely impressed by his enthusiasm and fearlessness as a teacher. He brings an engineer’s pragmatism to his teaching, but he isn’t shy about trying something new either. Once he sees that a new technique works, he throws himself into it, all the while looking for even more ways to sharpen his message and engage his students.”

“He has increased the depth of student learning by employing problem-based, group projects that culminates in presentations to the class for peer review. Students are given the same “real world” problem involving a fictional chemical plant, but they then get to see a dozen or more ways to address this problem and describe their solutions. As a result, the students’ investment in their projects as well as how they explain them is improved, starting on day one,” states Bowles.

Clearly, great things are happening in the Unit Operations Laboratory. The equipment available to our students is first rate. Additionally, they receive world class instruction while working on everyday problems. This prepares our students to be immediate contributors once they enter the workforce and gives them the communication skills needed to effectively demonstrate what they know.

Dr. Elmore summed it up well. “Having a laboratory director with such an extensive industrial practice background is the envy of chemical engineering programs across the county”.

Please stop by the UO website (<http://www.uolab.lsu.edu>) or Twitter page to learn more.

Breaking New Ground



President F. King Alexander and Mrs. Phyllis Taylor

Phyllis M. Taylor Commits \$15 Million to Expansion of LSU College of Engineering **April 20, 2013**

Phyllis M. Taylor, LSU College of Engineering Breaking New Ground campaign co-chair, announced a \$15 million gift commitment to honor the legacy of Patrick F. Taylor and accelerate the momentum of the \$100 million public/private partnership to support the renovation of Patrick F. Taylor Hall and construction of a chemical engineering facility. The pledge represents the largest private donation to the College of Engineering in its history.

LSU with a petroleum engineering degree in 1959. He founded the Taylor Energy Company in 1979, which became the only solely owned independent company to explore for and produce oil and gas in the Gulf of Mexico. It was eventually named as one of the top 100 private employers in New Orleans, LA, due to Taylor's practice of hiring and contracting with Louisiana companies.

In 2007, LSU formally named the Center for Engineering and Business Administration building in honor of Patrick F. Taylor, who graduated from

“From a very early age, Patrick was determined to become an ‘oil man,’” said Mrs. Taylor. “The College of Engineering at LSU provided him with the education to see that ambition become a reality. Immediately after graduation from LSU, Patrick began helping others to attend college and realize their goals. I can think of no more appropriate means of furthering his desires to help others and our society than by assisting in the funding of the much needed renovation of the building known as Patrick F. Taylor Hall.”

Through their private foundation, the Patrick F. Taylor Foundation, the Taylors have provided countless students with the opportunity to earn a college degree. Mr. Taylor was instrumental in the establishing of Louisiana's Taylor Opportunity Program for Students, or TOPS. Through their efforts, similar programs have been introduced in 23 other states.

Mr. Taylor once said, “The way I want to be remembered is by the young people of this nation and my ties to them. I tell them that, like me, they can dream. I talk about hard work, integrity and guts. I demand that of them and they respond.”

“Today's economy needs engineers now more than ever,” said LSU President-Elect F. King Alexander. “This project shows the significance of the role this University will play now and in the future to entice students to enroll and encourage them to stay and graduate in STEM majors. On behalf of the University, we thank Mrs. Taylor for her commitment to jump-start this project and push it to fruition as we educate generations of the future.”

Launched publicly on April 20, 2013, the Breaking New Ground campaign will support the next generation of engineering education at LSU and holds great promise for a stronger College of Engineering. The campaign website, www.lsubreakingnewground.com, offers information on elevating the level of engineering excellence in Louisiana.

On Oct. 2, 2012, Gov. Bobby Jindal committed that his administration will support \$50 million in capital outlay funding for the project and the remaining funds will be covered by private donations. Donors have generously committed \$25.4 million toward the private funding for the LSU College of Engineering in support of the Breaking New Ground campaign.

“This \$100 million public/private partnership will allow the college to bring leading-edge educational experiences to our students,” said Rick Koubek, Dean, LSU College of Engineering.

The new and renovated engineering complex will include expanded, modern laboratory space for teaching, as well as translational research, enhanced and expanded space for student services, updated graduate student space, an academic support center, and dedicated capstone project space and other multi-disciplinary space for student projects. The architectural design phase will start in December of this year; construction is slated to begin in the fall of 2014 and is estimated to be completed by the fall of 2017.



RoyOMartin Pledges \$2 million to LSU College of Engineering Expansion

Jonathan E. Martin, chairman and CEO of Martin Companies LLC, and Roy O. Martin III, president and CFO of Martin Companies LLC, have announced a \$2 million gift commitment to support the renovation of Patrick F. Taylor Hall and engineering expansion for LSU's College of Engineering. RoyOMartin's gift bolsters the private funding in support of the college's "Breaking New Ground" campaign, to which donors have generously committed more than \$30 million.

It is important for our family to carry on my grandfather's values of integrity, commitment, and stewardship," said Jonathan E. Martin. "The Martin family is honored to support both Louisiana and LSU through this contribution."

"LSU has served our family for three generations, and we are thrilled to be a part of the success of the LSU College of Engineering," said Roy O. Martin III. "As our company celebrates its 90th year in business, we reflect on the positive impact LSU has had on our family, employees, and community. We trust that others will join us in this effort of support. This is a great day for the future of LSU."

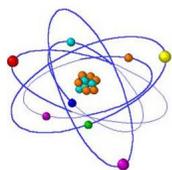
"We thank the Martin family for their generous commitment to the LSU College of Engineering, as well as their years of support to LSU in so many ways," said LSU President and Chancellor F. King Alexander. "Meeting the demand for high-quality engineers is a priority for our state and for LSU. This expansion will provide a first-class facility for our students and will ensure continued success."

The new and renovated engineering complex will include expanded, modern laboratory space for teaching and research, enhanced and expanded space for student services, updated graduate student space, an academic support center, dedicated capstone project space and other multi-disciplinary space for student projects. The architectural design phase will start in December 2013; construction is slated to begin in the fall of 2014, with an estimated completion scheduled for fall 2017.

"With this gift, I thank the Martin family for answering the governor's challenge to transform LSU's College of Engineering into one of the most competitive engineering programs in the country," said Rick Koubek, dean, College of Engineering. "It is innovative public/private partnerships, such as ones with IBM, the state of Louisiana and our generous donors that enable us to continually improve lives, transform Louisiana, and change the world."

The LSU College of Engineering currently confers approximately 625 bachelor's degrees per year, ranking it in the top 10 percent nationally for graduates. LSU is the largest degree-granting engineering program in Louisiana, accounting for more than 50 percent of all the state's engineering and construction management graduates.

RoyOMartin is the brand name of Martin Companies LLC, a group of family-owned, professionally managed forest-products and forestland-management companies based in Alexandria, La. Founded in 1923 as Roy O. Martin Lumber Co., the company operates three manufacturing facilities in Central Louisiana and Alabama. RoyOMartin also owns 582,000 acres of timberland in Louisiana, making it one of the largest private landowners in the South. RoyOMartin's family-owned forestlands are certified as well-managed according to the principles and criteria of the Forest Stewardship Council™, or FSC®, an independent, nonprofit conservation organization. RoyOMartin's wood products are also available FSC®-certified. For more information about RoyOMartin, visit www.royomartin.com.



AIChE

American Institute of Chemical Engineers

Louisiana State University, Cain Department of Chemical Engineering's ChemE Car Team (**Robert Schoen, Amit Mishra, Amiel Kirtikar, Jen-Peng Chiao and Dr. Hung** (faculty advisor), with help from **Paul Rodriguez and Joe Bell** (ChE shop) placed 4th for the Southern region and 23rd in the national competition with the AIChE 2012 Chem-E-Car "The Base Bullitt."

Press Release from AIChE



ALTERNATIVE FUELS POWER TEAM TO VICTORY AT CHEM-E-CAR COMPETITION

Colleges from the U.S., Mexico and Qatar use ingenuity, everyday materials, and complex science in fun and enlightening competition.

PITTSBURGH – The American Institute of Chemical Engineers (AIChE) today announced that Cornell University won first place in the 14th Annual Chem-E-Car competition, an international, collegiate competition featuring 35 cars - ranging in size from shoeboxes to fire hydrants - running on creative alternative fuels. The winning car, called Zapdos, runs on a zinc air battery.

The competition, held in conjunction with AIChE's Annual Meeting, highlights the important role chemical engineers have played in the creation of today's existing fuels and the role they will continue to play in developing alternative fuels in the future. The ultimate goal of the competition is to teach students – our future scientists -- to think creatively about alternative fuel technology.

"The Chem-E-Car competition is a great way for our future engineers to apply chemical engineering principles in a creative way, in a team setting – much as they will in the 'real world' once they graduate," said David Rosenthal,

AIChE president. "These students show real creativity and promise, and some day, these technologies could be used commercially."

In the competition, students create load-carrying cars using a variety of materials and fueling methods. The designs showcase the teams' creativity, ranging from a car made of LEGO® components powered by hand warmers and dry ice to a hydrogen fuel cell powered vehicle modeled after a MarioKart car. Teams qualify by placing at regional competitions throughout the year.

The student engineers do not know the size and weight of the load their car has to carry or the distance it must travel until the competition begins. The students then scramble to calculate how to get their car as close to the distance goal as possible. This year, the cars had to carry 300 milliliters of water for 21 meters, and Cornell University was dead-on the finish line, managing to carry the load for 21 meters exactly and taking the \$2,000 first place prize.

This is the third time Cornell placed first in the National Chem-E-Car competition. They also won in 2008 and 2010.

The second place award went to the University of Puerto Rico, Mayaguez for their car using a motor powered by a hydrogen peroxide reaction. They also won the Spirit of Competition award. Oklahoma State University took third with a car using a baking soda and vinegar reaction. The Inherent Safety in Design Award (SACHE) went to the University of Tennessee – Chattanooga. The University of Washington won honors for the most creative drive system, chosen by the judges, and the Golden Tire Award, which is the most innovative design as chosen by the Chem-E-Car teams.

Images of the cars may be obtained by contacting Danielle Gross at 717.418.9001 or gross@thebravogroup.com.

About AIChE

AIChE is a professional society of nearly 45,000 chemical engineers in 92 countries. Its members work in corporations, universities and government using their knowledge of chemical processes to develop safe and useful products for the benefit of society.

Through its varied programs, AIChE continues to be a focal point for information exchange on the frontier of chemical engineering research in such areas as energy, sustainability, biological and environmental engineering, nanotechnology, and chemical plant safety and security. More information about AIChE is available at www.aiche.org.



Isaiah Woodson, who will conduct research in Grenoble, France, this summer, is one of three LSU students participating in an international summer research opportunity through the LSU-HHMI International Research program. Courtesy of LA-STEM

LSU-Howard Hughes Medical Institute International Researchers

Three LSU students will participate in an international summer research opportunity through the LSU-HHMI International Research program. The following students are participating in the program this summer:

Zachary Fitzpatrick, a native of Holden, La., will conduct research at the Pasteur Institute in France. Fitzpatrick is a biochemistry junior who is also in the Honors College and a LA-STEM Research Scholar.

Arielle Nabilan, a native of Baton Rouge, will conduct research in Grenoble, France. Nabilan is a **chemical engineering sophomore** who is also in the Honors College and a LA-STEM Research Scholar.

Isaiah Woodson, a native of Woodbridge, Va., will conduct research in Grenoble, France. Woodson is a **chemical engineering senior** who is also a LA-STEM Research Scholar.

LSU-HHMI International Research program is supported in part by a grant to LSU from the Howard Hughes Medical Institute through the Precollege and Undergraduate Science Education Program. Advanced LSU undergraduates with a strong research background and students beginning graduate school in fall semesters are eligible for international research opportunities. Possible placements include laboratories in Pasteur-Lille, Leuven, Grenoble or other locations identified with the LSU-HHMI program faculty and staff.

Financial support for this award includes a summer stipend, international travel expenses, and travel within the U.S. to the relevant embassy.



Engineering Students Introduce Girl Scouts to Engineering

In an effort to make girls more aware of what engineering does to improve the quality of life and to inspire them to

become engineers, the LSU student chapters of Engineers Without Borders and Society of Women Engineers

collaborated to create an event for fourth to eighth grade Girl Scouts.

The two organizations teamed up with Baton Rouge Girl Scouts to show them a day in the life of an engineer. EWB and SWE prepared an interactive presentation for the Girl Scouts to demonstrate how much water is used in the United States every day and how that compares to the amount of water people use in other countries. They also exhibited how much work goes into cleaning and distributing that water.

“It made the girls aware of how lucky we are here in the U.S. with our amazing water quality and distribution systems as opposed to a developing country where they have to walk miles every day just to get a couple gallons of water,” said **Duyen Nguyen**, chemical engineering senior and the EWB Louisiana State Representative.

The Girl Scouts then participated in a competition where they were broken into teams to design a water filter using a two-liter bottle and materials such as sand, gravel, cotton balls, soft and rough sponges, duct tape, rubber bands, coffee filters and paper clips. Their goal was to clean dirty water, which was a mixture of dirt and oil, as best they could with the materials given. The different materials were priced, and the girls had to work on a budget, which helped teach them that engineers have to produce both creative and cost-effective designs. The EWB and SWE volunteers acted as judges and handed out prizes.

“I was so impressed by the water filter designs, because some of the girls filtered the dirty, dark-brown, greasy water into virtually clear water!” Nguyen said. “It was refreshing to see how free the girls’ minds were. We’re so wrapped up in technical information that we sometimes forget how to let our minds roam and just be creative.”

“It doesn’t fail to amaze me how creative these girls are,” said **Kalpanee Gunasingha**, chemical engineering senior and president of SWE. “I forget that when you are so young, even if you don’t have all of the technical knowledge that college students have, you are still able to think outside the box.”

“This was our first collaborative outreach event,” Gunasingha said. “It worked so well because both organizations were able to infuse their mission and messages into the event.”

The organizations aimed to develop an interest in STEM fields for the Girl Scouts and to allow them to ask questions about college and engineering. Gunasingha said that SWE members looked forward to serving as mentors for the girls.

“We wanted to show the girls that we have the power to go out and help those who are less fortunate than us, which is what [EWB] is all about,” Nguyen said.

Student Awards & News



LSU's 280th commencement exercises honored seven engineering students with LSU's Distinguished Communicator Award. LSU's Distinguished Communicator program, the first of its kind in the nation, recognizes students who demonstrate exemplary levels of communication skills during their undergraduate years. Along with these

College of Engineering students, 25 additional students representing numerous majors earned the distinction.

Students honored from the College of Engineering include: Ashley Barker, Theresa Garcia, **Kalpanee Gunasingha**, Kori Lutembacher, Joe Poynot Jr., Marcus Toussaint and Melvin Triay IV.

Kalpanee Gunasingha received her Bachelor of Science in Chemical Engineering, and she graduated with honors. She was a member of the Society of Women Engineers, the Communication across the Curriculum Student Advisory Board, and she was a Diversity Ambassador in the College of Engineering. She served as President of SWE for the 2012-2013 school year. She received several awards including the William E. McFatter Undergraduate Scholarship in Chemical Engineering (2011-2012), the Sophomore Honors Distinction (fall 2011), AIChE Donald F. Othmer Sophomore Academic Excellence Award (LSU recipient, fall 2011) and the BP Award for Achievement. She was on the Chancellor's Honor Roll from fall 2009 to fall 2012. After graduation,

she will attend medical school at Duke University. Faculty Adviser: Michael Benton.

HONORS COLLEGE
EXCELLENCE. COMMUNITY. LEADERSHIP.

C h e m i c a l
Engineering students

received recognition at the Fall 2012 LSU Honors College Awards and Recognition Ceremony on October 28, 2012.

Kalpanee Dhanushika Gunasingha was given the Honors College Outstanding Students 2012. Each year, the LSU Honors College selects two freshmen, two sophomores, two juniors, and two seniors for this award.

Brian D. Mickey was given Sophomore Honors Distinction, along with 57 other LSU students. They were awarded this honor by completing significant Honors credit hours with grade point averages of 3.5 in Honors courses and in all coursework.

Nathan Carl Grotte was given the Shell Honors Student Leaders award along with three other LSU freshmen. The Shell Corporation's generous gift provides students with an annual four year stipend.

Thomas Mark Rockwell was one of eighteen to receive the Tiger Athletic Foundation Study Abroad Scholarship.

Congratulations all these students for their outstanding academic achievements to date. We wish them continued success in their scholarly pursuits.



ASEE annually publishes the leading data on engineering colleges in the United States including both individual college statistics and national trends.

The College progressed to the top eight percent nationally in both enrollment and degrees conferred, CoE was ranked 26th nationally in the number of undergraduate students enrolled out of 343 schools reporting and 30th nationally in the number of undergraduate degrees granted out of 348 schools reporting.

The LSU Chemical Engineering program ranked number 25 out of 159 schools reporting for bachelor degrees conferred.

LSU CAREER SERVICES

Based on salary data engineering graduates provided to LSU Career Services, four of the CoE's disciplines exceeded the national averages while staying on par with electrical engineering. Other disciplines taught in the CoE, but not included in the survey, include: biological, industrial and petroleum.

The four highest-earning undergraduate LSU College of Engineering degrees include:

Discipline	LSU Average	National Average
Chemical	\$73,867	\$59,600
Mechanical	\$75,216	\$62,900
Civil	\$61,607	\$57,600
Computer Science	\$66,000	\$64,400

"The starting salaries of those with an LSU engineering degree have consistently exceeded the national average, once again reflecting the industry's perceived value of the LSU degree," said Rick Koubek, dean, LSU College of Engineering.



Most LSU fans will tell you that the familiar taps of the drumline as the Golden Band from Tiger Land takes the field sends chills down their backs. As fans stand alongside 93,000 of their closest friends, Tiger

Band members treat them to a pregame show that fosters a sense of camaraderie that rival teams fear.

Jay Rewerts, a chemical engineering senior from Lake Charles, LA, and a fourth-year trombone player, finds the time to make it all work, balancing a 15-credit hour work load, band and a campus job.

“College without band would probably be boring,” Rewerts said.

Band allows Rewerts to connect with people and make friends. He studies with other chemical engineering majors who are in band and his classes. Balancing work and Tiger Band also teaches him responsibility – being held accountable to be in a certain place at a certain time to do the job he’s been assigned to do.

Rewerts said the biggest challenge is finding time to do it all. Even though members aren’t required to go to a certain number of away games, he enjoys going. It adds to the camaraderie of the band experience, he said.

Away trips also require members to miss classes and tests, as the trip almost always consumes Friday, Saturday and Sunday. Rewerts has to collaborate with professors to make up work, and he studies on the bus to make the most of his time. But he wouldn’t have it any other way.

“I wouldn’t be who I am today without Tiger Band and chemical engineering,” Rewerts said. “It’s a fantastic experience.”



Michael Thomas received the 2012-2013 Clayton Engineering Excellence Award for Outstanding Graduate Students.

Thomas is a graduate of Vanderbilt University where he earned a Bachelor of Engineering in chemical engineering. He is now pursuing a PhD in chemical engineering at LSU. He spent a summer

in Beijing, China where he attended Beijing College for a comprehensive Chinese language program. He currently works as a graduate research assistant at LSU where he tutors undergraduates in the chemical engineering

fundamentals course. He is also involved in designing an intelligent process monitoring framework based on artificial intelligence techniques. He plans to become a university instructor upon graduation.

The Clayton Engineering Excellence Award for Outstanding Graduate Student is granted each year to an outstanding graduate student(s) who exhibits extraordinary character, scholastic achievement and evident leadership in the College of Engineering. This award entails a stipend of \$10,000 to the recipient and a \$2,000 stipend to the graduate student’s principal advisor/faculty member.

The awards were founded in 2004 through a generous donation by Donald W. Clayton (BS PETE, 1959), who was inducted into the College of Engineering Hall of Distinction in 1993, and Gloria Pichon Clayton.



Nimesh Poddar, December 2012 Chemical Engineering PhD Graduate, received the 2012-2013 Outstanding Dissertation Award from the Baton Rouge Section of the AIChE, for his PhD thesis entitled, An Experimental Investigation of the Role of Small Hydrocarbons and Combustion-Generated Nanoparticles on the Formation and Growth Reactions of

Polycyclic Aromatic Hydrocarbons during the Pyrolysis of a Model-Fuel and Hydrocarbon Gases. The award was presented at the Coates Award Banquet in May.



In March 2013, we held the Department’s Annual Graduate Recruiting Weekend.

Many thanks to all the Graduate Students who took time out of their schedules to greet and inform potential graduate

students on what it is like to be a Chemical Engineer at LSU. The event was immensely successful, and five of the eight students that visited campus decided on LSU as their choice for graduate school. They are now here as part of the new class of incoming graduate students.

BASF Awards \$10,000 in Scholarships to LSU Engineering Students

BASF has awarded \$10,000 in scholarships to four students of Louisiana State University in Baton Rouge, LA, as part of the BASF Team Chemistry Scholarship Fund.

“We see education and academic success as essential to the

Student Awards & News

future of science and engineering,” said Tom Yura, Senior Vice President and Manager of the BASF site in Geismar, LA, “BASF’s Team Chemistry Scholarship Fund is part of our investment in the next generation of leaders by supporting math and science education.”



The winning students, who each received a \$2,500 scholarship from BASF, have displayed academic success in their fields of study and are active members on the LSU campus and in the community.



Amanda Dembski, a junior studying chemical engineering, is a resident of

Houston, Texas. She is a member of the National Society of Collegiate Scholars, Phi Sigma Theta National Honor Society and Pi Beta Phi Sorority, and was named to the Dean’s List in spring 2011 and 2012. Her languages include French and Polish, and she puts this skill to use volunteering at cultural events such as the Polish Festival. Amanda’s academic recognitions include the Tiger Scholars Award and the Gail Wilbur Scholarship.

Fredrick Smith is a senior majoring in chemical engineering with minors in chemistry and business administration and plans to graduate in May 2014. He is a resident of Denham Springs, LA. Fredrick enjoys part-time work at the YMCA as sports coordinator and was recognized with the Part-Time Service Ambassador of the Year Award in 2011. He is also a member of Beta Kappa Gamma (a multi-cultural service fraternity), having served as national secretary and national ambassador for the fraternity. Fredrick has been named twice to both the Chancellor’s Honor Roll and Dean’s Honor Roll.

Emily Walker is a senior majoring in chemical engineering with biomolecular concentration with a May 2014 graduation date. She is from Katy, Texas, and is employed by the LSU Student Union as gameroom supervisor. Emily is a member of the American Institute of Chemical Engineers and Zeta Tau Alpha sorority. Through her sorority, Emily has served as a mentor, coordinated fall recruitment as an LSU Pan-Hellenic Council representative, and participated in philanthropic events that support breast cancer awareness and education. Emily’s academic honors include the Bengals Legacy Scholarship, LSU Family Association Scholarship and three-time Dean’s List honoree (fall 2009 and spring 2011 and 2012).

“Corporate partners such as BASF are an integral component to the growth of the College of Engineering in graduating engineers who are prepared to be immediately successful in their career,” said Ryan W. Cooney, Director, Corporate Relations and Economic Development, LSU College of Engineering. “Through BASF’s support of the Team Chemistry Scholarship Fund, four College of Engineering students will receive assistance to succeed both in the classroom and the workplace.”

Engineering graduates lay foundations for strong careers with Solvay June 14, 2013

CRANBURY--- June 11, 2013 --- Global chemical company Solvay welcomes 15 young engineers this month to its very selective Foundations for the Future program, a career development track designed specifically for high achieving engineering graduates.

The new engineers come from choice colleges and universities and are placed in roles at manufacturing plants across the country. Each engineer rotates to a new assignment approximately every 18 months over the next three years.

“Solvay’s Foundations for the Future is a unique program that gives young engineers exposure to a variety of disciplines and businesses,” explains Marcus Lewis, Solvay industrial vice president for North America. The company’s chemistries range from plastics and commodity chemicals to consumer chemicals like surfactants, a foaming agent commonly used in shampoos. Lewis says the range of experience is a perk for the young engineers who, in most cases, are still deciding which areas of chemistry and manufacturing they prefer.

Solvay Human Resources Manager Margie Consiglio adds, “Unlike other rotational programs at peer companies, Foundations for the Future puts new engineers in real jobs right away and young graduates like that.” She says mentorship, networking and training are other major draws. “Each engineer is paired with a mentor in addition to his or her supervisor. That way they have a great support system.”

Program participants also attend leadership development workshops, technical training sessions and networking events with Solvay’s manufacturing

and commercial business leaders once or twice a year.

“Our engineers are part of a family here. They build a network of peers and mentors. They learn what’s going on at other facilities across the country and what’s happening on the commercial side of the business. They belong to a community. Our hope is that with the right guidance and experience these talented young people will become Solvay’s future leaders,” Consiglio says.

Congratulations to LSU Chemical Engineering’s Drew Goodwin, who is part of the Foundations for the Future “Freshman Class”



Drew Goodwin – Louisiana State University – Class of 2013

Drew Goodwin graduated from LSU with a degree in chemical engineering. As an intern at a major refinery, Goodwin implemented an equipment tracking system that resulted in a 70 percent increase in product value. He will begin his career as a process engineer at Solvay Novecare in Vernon, Texas. The Vernon plant manufactures derivatized guar products for the oil and gas industry and for personal care products like conditioning shampoos.

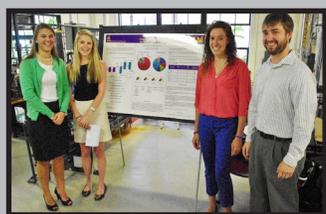


E i g h t e e n ROTC Cadets Commissioned on May 16

BATON ROUGE – Eighteen graduates were commissioned during the LSU Spring Commissioning Ceremony on Thursday, May 16, in the Bo Campbell Auditorium at the Cox Communications Academic Center for Student-Athletes. Retired Maj. Gen. James W. Graves, who culminated a long and distinguished career of military service to his country as the assistant to the chairman of the Joint Chiefs of Staff for Reserve matters at the Pentagon, was the guest speaker for the ceremony.

Three of the graduates were from the LSU Army ROTC program, 11 of the graduates were from the LSU Air Force ROTC program and four were LSU students who participated in Southern University’s Navy ROTC program.

St. Amant – 2nd Lt. Jonathan Scofield Delatte commissioned in the United States Marine Corps. He received a Bachelor of Science degree in chemical engineering from the College of Engineering. His first assignment is at the Basic School in Quantico, Va.



The Department is enormously grateful to the many individuals and companies for taking the time to volunteer with the 2013 Junior/Senior Poster Presentation this past April. Because of the great turnout, the event was a success. The students enjoyed getting to meet with industry professionals regarding employee prospects as well as the faculty and staff being able to meet with chemical-engineer business professionals.

Chemical engineering juniors and seniors presented their design poster presentations on April 30, in the ChE laboratory. Nineteen design groups worked during the spring semester on the assignment.

Juniors in the ChE optimizations and economics course used computer software to address the issue of combustible dust. The senior capstone project required students to synthesize the information they learned from all of their ChE courses. Seniors designed and conducted an economic evaluation of the production of cumene, a constituent of crude oil and refined fuels.

About 30 local industry professionals evaluated the design posters. They assessed the students’ projects based on criteria, such as environmental safety and compliance, ethical considerations, and budget. The engineering professionals recognized the group projects as beneficial to the students’ future careers.

The ChE students used information acquired over the course of their ChE matriculation at LSU. These skills included material and energy balances, computer simulation of chemical processes, economic evaluation, design alternatives to reduce costs, and safety and environmental design components.

Commencement

2012-2013 Scholarship Recipients

Clara & Frank R. Groves, Sr. Undergraduate Scholarship in Chemical Engineering
Dustin J. Mahler

Chevron/Texaco Chemical Engineering Scholarship Engineering
Dylan J. Parker
Renee L. Fogarty

Eugene R. Cox Scholarship
Thomas A. Goodwin
Amiel R. Kirtikar

Floyd S. Edmiston, Jr. Memorial Scholarship
Chaning E. Simmons
Ramzy A. Muhsen

Gene Perdue Lowe Chemical Engineering Scholarship
Katherine A. Frederickson
Dalton J. Choiniere
Jada E. Bates
Sami G. Marchand

Gerard Family Undergraduate Scholarship
Joshua H.V. Nguyen
Peter K. Ottsen

Marathon Petroleum Scholarship in Chemical Engineering
Kurt A. Ours

O. Dewitt Duncan Scholarship in Chemical Engineering
Amit Mishra
Steven G. Nguyen
Kurt A. Ours

Paul M. Horton Memorial Undergraduate Scholarship in Chemical Engineering
Tate R. Stumper

Paul N. Howell Memorial Scholarship in Chemical Engineering
Stefan A. Wojkowski

R.L. Hartman Scholarship
Connor J. Reaux

Southwest Chemical Association Scholarship
Courtney Rome

Walter G. Middleton Jr. Scholarship in Chemical Engineering
Alexander J. Nadler

William E. McFatter Scholarship
Drake D. Tassin



Summer 2012 Commencement

Master of Science in Chemical Engineering
Ashwin Sanampudi

Doctor of Philosophy in Chemical Engineering
Shivkumar Shankar Bale
Sarthak Gaur
Paritosh Kumar Sharma
Miranda Louise Smith



Fall 2012 Commencement

Bachelor of Science in Chemical Engineering

Jacob Ryan Allen
Lane Daniel Carrier
Cy Joseph Gaudet
Nithin Isaac George
Kushal Ghale
Brandon Michael Harper
Nicholas Joseph Hingle
Caleb Thomas Hunt
Austin Strate Lieux
Max Alexander Miller
Daniel Felipe Osorio



Master of Science in Chemical Engineering

Muddathir Muhammed Amin
James Edward Bruno
Andrew Marshall Madrid
Neng Wang
Zenghui Zhang

Doctor of Philosophy in Chemical Engineering

Nimesh Bharat Poddar



Spring 2013 Commencement

Bachelor of Science in Chemical Engineering

RosaGale Schuster Abella
Jonathan Okey Aganekwu Jr.
Willy J. Alvarenga
John Tyler Ashby
Kayla Ann Beams
Adam Michael Beary
Zachary Scott Bergeron
Jordan Michele Boudreau
Joseph Randall Bridges
Madeleine Walsh Brown
Mollie Catherine Burke
Austin Trent Clarke
Dominique G. Dangerfield
Jonathan Scofield Delatte
Minhtrang Hoang Do
Flavia Mariana dos Santos
Scott Andrew Dufour
Jenessa Laura-Anne Duncan
Paige Lauren Efferson
Eliana Teresa Figueiredo
Matthew Stephen Fury
Michael Evan Gauthier
Thomas Andrews Goodwin
Rathnayaka M. Kalpanee D. Gunasingha
Jason Matthew Haddad
Taylor De'Andre James-Lightner
Robert Patrick Johnson
Lauren Ashley Joyce
Olivia Grace LeBlanc
Jaren Lee
Jeremy Freeman Lee
Thad Davey Lycan
Dustin Joseph Mahler
Jonathan Michael Maurin
Spencer Allan McKone
Scott Paul McLennan
Amy Elizabeth Miller
Amit Mishra
Hieu Trung Nguyen
Joshua Hoang-Vinh Nguyen
Steven Hiep Nguyen



Kurt Alan Ours
Jessica Lee Owens
Roshan Pandey
Keary Michelle Ragusa
Jay Murphy Rewerts
Christopher Brandon Rolfsen
Christopher Michael Schneider
Robert Taylor Schoen
Christopher Warren Simoneaux
Dustin Michael Specht
Ryan Patterson Stiles
Thanh Van Tran
William Edward Verrett
Carrie Xaisongkham



Master of Science in Chemical Engineering

Yuehao Li
Guoying Qu

Doctor of Philosophy in Chemical Engineering

Rong Bai
Thilanga Prabhath Liyana Arachchi
Nav Nidhi Rajput
Qiang Sheng
Bing Zhang

Departmental Awards

Rathnayaka M. Kalpanee D. Gunasingha received the University Medal (Highest GPA in the University), the McLaughlin Medal (Highest GPA in the College of Engineering), Distinguished Communicator, Chemical Engineering Senior Award for highest senior GPA, Chemical Engineering Junior Award for the highest junior GPA, and the 2013 recipient of the Department's Jesse Coates Award. The Coates Award is voted on by all ChE faculty and is given to a student who not only exemplifies excellent academic integrity but also leadership in extracurricular endeavors.

Jordan Michele Boudreau received the American Institute of Chemists Award for outstanding scholastic achievement, leadership, ability and character.

Peter Kenneth Ottsen received the Chemical Engineering Junior Award for the highest GPA at the end of the semester in which 90 hours are completed.

Khietlethanh Mai received the Paul M. Horton Award for a BS of LSU Chemical Engineering entering the graduate program directly from undergraduate school and having the highest GPA of those who meeting the first two criteria.

The Senior Award for finishing in four years with no drops goes to the following students:

Jordan Michele Boudreau
Madeleine Walsh Brown
Jenessa Laura-Anne Duncan
Paige Lauren Efferson
Thomas Andrews Goodwin
Kalpanee D. Gunasingha
Lauren Ashley Joyce
Jonathan Michael Maurin
Spencer Allen McKone
Joshua Hoang-Vinh Nguyen
Kurt Alan Ours
Jay Murphy Rewerts
Carrie Xaisongkham

Alumni News & Updates



David Constant named Head of Department of Biological and Agricultural Engineering September 5, 2012.

W. David Constant, PhD, CHE, has been named head of the Department of Biological and Agricultural Engineering, a joint position shared between the LSU AgCenter and the LSU College of Engineering.

Constant, who was most recently dean of the LSU Graduate School, has been on the LSU faculty since 1984. He holds the Humphreys T. Turner Professorship in the Department of Civil and Environmental Engineering and has served as associate dean and then interim dean in the College of Engineering.

In addition to Constant's appointment in biological and agricultural engineering, the department's faculty teaching appointments previously in the College of Agriculture have been moved to the College of Engineering, according to John Russin, vice chancellor for research at the LSU AgCenter.

Faculty research appointments in the AgCenter will remain.

"This move will increase our efficiency, provide additional opportunities for research and offer increased services to the citizens of Louisiana," said LSU AgCenter Chancellor Bill Richardson.

"We are pleased to have an individual of Dr. Constant's caliber leading the department into the future," said College of Engineering Dean Richard Koubek. "His background is ideally suited to expand the collaboration between the AgCenter and the College of Engineering."

The LSU AgCenter research and extension activities are internationally renowned, and this partnership holds promise to deliver great outcomes to Louisiana, he added.

"The research focus and emphasis will remain the same for the faculty," Constant said. "The bulk of their research funds come through the AgCenter."

With 25 years in environmental engineering, Constant has seen the technology and state of the art changing.

"We need to take a risk-based approach to addressing agriculture," he said. "With agriculture facing water issues such as total maximum daily loads, the AgCenter, Engineering, the state and LSU are all more engaged in the water business. And there are contributions we can make."

The departmental change increases the diversity of research opportunities in the AgCenter, Russin said. "We now have the opportunity to look at agricultural research programs from a new perspective."

Constant also cited the importance of the connection between the AgCenter and the College of Engineering.

"The Cooperative Extension Service is a wonderful resource," he said. "It shows how collaboration can be used in engineering to benefit the state. It's a real plus for the department and the college. Collaboration from engineering to the people through extension is a strong asset."

Collaborating more closely with the College of Engineering will be extremely beneficial to the LSU AgCenter mission, said Paul Coreil, LSU AgCenter vice chancellor for extension. "Expanding engagement beyond traditional agriculture will be beneficial for stakeholders and businesses in all 64 parishes, which will now be connected to the engineering college."

Constant also sees potential for increased collaboration among the college, the AgCenter, Pennington Biomedical Research Center and LSU Health Systems.

"I think we have some excellent biomedical-type faculty in this department," Constant said. "We have potential to go after some significant funding with faculty who can bridge between programs very nicely."

On the teaching side, Constant said biological and agricultural engineering is "a good program, a growing program." Student enrollment has been growing and now numbers about 260 undergraduates.

Undergraduate students primarily focus on biological engineering while graduate students' research mostly focuses on more traditional agricultural issues.

"Opportunities for students in this department are diverse," Constant said. "They have a broad understanding of engineering and the chance to work in a variety of fields."



The LSU Engineering Hall of Distinction proudly welcomes **Dr. William A. Brookshire**.

In 1979, the College of Engineering established the Hall of Distinction to recognize individuals who have made significant contributions to the engineering profession. Seven charter members were elected in 1979, and generally, two achievers in engineering

have been added each year since.

Dr. William A. Brookshire is co-founder and chairman of the board of S & B Engineers and Constructors, Ltd., a privately owned company based in Houston, Texas, but with offices all around the world.

Brookshire received a Bachelor of Science degree in Chemical Engineering from the University of Houston in 1957. He then enrolled in graduate program at LSU, where he earned his Masters of Science and PhD in Chemical Engineering in 1959 and 1961 respectively.

From 1960 to 1966, Brookshire was employed by Exxon Corporation in Houston, Texas, where he was a process engineering supervisor.

In 1967, Brookshire invested his life savings of \$7,000 and borrowed an additional \$3,000 to start S & B Engineers and Constructors with James Slaughter, Sr. The business grew from those two employees to more than 7,500 employees globally.

He is a registered professional engineer in Texas and Louisiana as well as a member of the American Institute of Chemical Engineers and National Academy of Construction. Brookshire has been recognized by the American Institute of Chemical Engineers, receiving its Engineering and Construction Contracting Division Award in 1998.

His professional honors include: past member, Government Programs Steering Committee of the American Institute of Chemical Engineers; past vice chairman of the ECC Executive Board (Engineering and Construction Contracting Division of the American Institute of Chemical Engineers; former member, Rice University Engineering Board of Review; former member, Board of Industrial Advisors, University of Houston, College of Technology, Distinguished Engineering Alumni Award and member of the Engineering Hall of Distinction, University of Houston; and member, National Academy of Construction.

Brookshire has contributed greatly to both his undergraduate and graduate alma maters, in addition to high schools and

community colleges. In LSU's College of Engineering, the William Brookshire Scholarship in Engineering rewards numerous full-time undergraduate students who have a combined work and course work schedule of 30 hours or more. It is his hope that, through this scholarship, students will have the opportunity to better balance work and coursework to ensure a bright and successful future. Also, the William A. Brookshire Graduate Assistantship in Chemical Engineering provides support to doctoral students and assists the Cain Department of Chemical Engineering in attracting some of the best postgraduate students in the field. His concern for LSU engineering students' education is further evident in his contribution to the LSU Engineering Student Crisis Fund.

He has spent the majority of his life in east Texas and the Houston area. In his free time, Brookshire enjoys photography, skeet shooting, hunting, fishing and spending time with his grandchildren.



AIChE Baton Rouge Chapter hosts ChE Alumnus Dr. Philip Westmoreland

Dr. Westmoreland received his Masters in Chemical Engineering at Louisiana State University in 1974 under Dr. Doug Harrison, he then went on to earn an Doctorate from MIT in 1986. He currently serves as Professor in the Chemical and Biomolecular Engineering

Department at North Carolina State and Executive Director, NCSU Institute for Computational Science and Engineering. Dr. Westmoreland is also the 2013 President of the AIChE, and the current board member of the Combustion Institute and of the educational nonprofit CACHE Corporation.

In April he hosted the AIChE Baton Rouge chapter's monthly meeting, giving a presentation on, "Entering a Golden Age of Chemical Engineering."



In Memoriam



The Cain Department of Chemical Engineering has lost a distinguished Alumnus. Otha (Charles) Roddey, age 89, of Carlsbad, California, passed away on Sunday, May 12, 2013. He was born January 7, 1924 in Arkansas to his parents, Otha and Anna Roddey.

He married his first wife Hilda Blaine Roddey on October 7, 1951 in Darling, Mississippi. They had three children. He held two degrees in Chemical Engineering, a Bachelor of Science from Louisiana State University and a Master's

Degree from Massachusetts Institute of Technology. During World War II he was a Captain in the U.S. Army and served 3-1/2 years in several assignments ending in the Philippines.

Charles began his business career as a process development engineer with ESSO Standard Oil Company before joining The Ralph M. Parsons Company in 1961. From his initial assignment as a Business Development Engineer, he went on to serve as a Vice President in charge of Parson's Petroleum & Chemical Process and Precontract operations from 1965 through 1973. In January 1974 he was named Senior Vice President and Manager of the Company's Petroleum & Chemical Division.

He was elected to the Board of Directors of The Ralph M. Parsons Company in 1977, President of the company in January 1979, and President of the Parsons Corporation in 1983. He was also a Director of The Parsons Corporation. He retired from the Corporation in 1988.

His civic activities included service with United Way, the Parson's Tournament for Life golf event to benefit the American Cancer Society, and the San Gabriel Valley Council of the Boy Scouts of America.

Charles will be remembered by his loving second wife, Rose Marie Roddey and his daughters from his first marriage, Leah Pringle and Robin St. Clair, his grandchildren Mick Criscione, Jessica Coon, Joanna St. Clair, Anna Freitas, Olivia Pringle and David Pringle and his great grandchildren Jonathan Coon, Jordyn Coon, Liana Freitas and Isabella Freitas. He is also survived by his step children, Stephen Harvey, Marilyn Dronenburg, Maureen McMahon and Robert Harvey, 10 step grandchildren and 10 step great grandchildren.

Predeceased in death by his loving wife, Hilda Roddey and his son, Chuck Roddey

We were saddened to learn of the passing of the following alumni. We extend our belated condolences to their families and friends.

- Mr. Otha C. Roddey (BS, 1947)
- Mr. Lionel J. Fourrier (BS, 1949)
- Mr. James K. Land (BS, 1943)
- Mr. Freeman L. Morgan Jr. (BS, 1954)
- Mr. Murray F. Hawkins, Jr. (BS, 1938)
- Mr. Thomas C. Coerver (BS, 1944)
- Mr. Marvin E. Whatley (BS, 1948)
- Dr. Marc F. Fontaine (BS, 1950)
- Mr. James E. Hundemer (BS, 1949)
- Mr. Donald R. Sams (BS, 1956)
- Mr. Hubert M Berthelot (BS, 1967)
- Mr. William B. Seale (MS, 1971)
- Mr. Francis C. Schaffer (BS, 1951)
- Mr. Jerry G. Moffett Jr. (MS, 1955)



WE WOULD LOVE TO HEAR FROM YOU!

Please complete and return the following information to:

Gordon A. & Mary Cain Department of Chemical Engineering / Melissa Fay / 110 Jesse Coates Hall / Louisiana State University / Baton Rouge, LA 70803

You may also submit the information electronically to mfay@lsu.edu.

FULL NAME		NAME WHILE AT LSU, IF DIFFERENT	
YEAR GRADUATED		LSU DEGREE(S)	
ADDRESS		CITY, STATE, ZIP	
HOME TELEPHONE	WORK TELEPHONE	EMAIL	
OCCUPATION	WORK ADDRESS		
CURRENT ACTIVITIES			

LSU Chemical Engineering Campaign

Our alumni, friends, and other supporters are critical to the success of the Department of Chemical Engineering. We are grateful for the generous gifts that we continue to receive in support of the academic programs in the Department of Chemical Engineering.

Chemical Engineering at LSU offers many opportunities for alumni and friends, individuals or private organizations, to support the teaching and research efforts underway and planned in the future. Scholarships, fellowships, chairs, and laboratory equipment funds are just a few examples.

Giving is easy. You can make a gift online through the LSU Foundation's secure online giving site, www.lsufoundation.org/contribute. Designate your gift by selecting "College of Engineering" and then Chemical Engineering.

To mail a contribution, make check payable to LSU Foundation and mail to Gift Processing, LSU Foundation, 3838 West Lakeshore Dr., Baton Rouge, LA 70808.

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1930's

Congratulations and happy birthday to Mr. Earl Turner (BS, 1936) on his 100th birthday!

1950's

Dr. Virgil Orr (MS, 1948; PhD 1950) retired from Louisiana Tech, where he received his undergraduate, as a Chemical Engineering faculty member. He has since been a consultant for 3 years to the Board of Regents working with a State Supported Research Program. Also after retirement, he served a term in the Louisiana Legislator.

1970's

Dr. Robert Anding (BS, 1975; MS, 1978) currently serves as an instructor of the Department of Obstetrics and Gynecology at Baylor College of Medicine after attending Louisiana State University School of Medicine, completing an internship and fellowship at Baylor College of Medicine Affiliated Hospitals, Houston, TX, and a fellowship at the Society of Reproductive Surgery, Woman's Hospital of Texas, Houston, TX. Dr. Anding's special interests include general obstetrics and Gynecology, as well as reproductive surgery. Dr. Anding and his wife are the parents of three children.

Mr. David E. Rosenberg (BS, 1975) was our 1975 Coates Award winner. He is currently a retired Exxon Process Control Engineer.

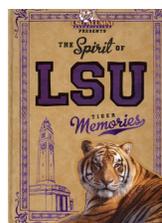
1980's

Jay Zimmer (BS, 1981) has recently completed 30 years with Cabot Corporation. He has traveled, spent some time in Australia, obtained three

process and product patents, designed new carbon black plants in the Asian region, and is now working capital management. Jay also has a son in Mechanical Engineering at LSU.

2000's

Dr. Nimesh Poddar (PhD, 2012) and Ms. Catherine Grubb (current ChE MS graduate student) were married in April 2013 in India.



A page from **The Spirit of LSU: Tiger Memories**, written by 1972 alumni **F. Mike Feig**.

I graduated in Chemical Engineering in 1972. During one of the Spring semesters my class was struggling with a major exam in a grand floor classroom in the Chemical Engineering Building, between the sugar mill and the south end of Tiger Stadium. It was hot outside, so the classroom windows were open. As we toiled away at the grueling exam, a student walked past the open windows of the room on the sidewalk outside, and he was whistling a happy tune. Without looking up from his exam, one of my classmates said to himself, but loud enough for everyone to hear, "he must be a Business major..." It broke up everyone in the class, including the professor, and definitely took some of the tension away from the exam!

Mike Feig

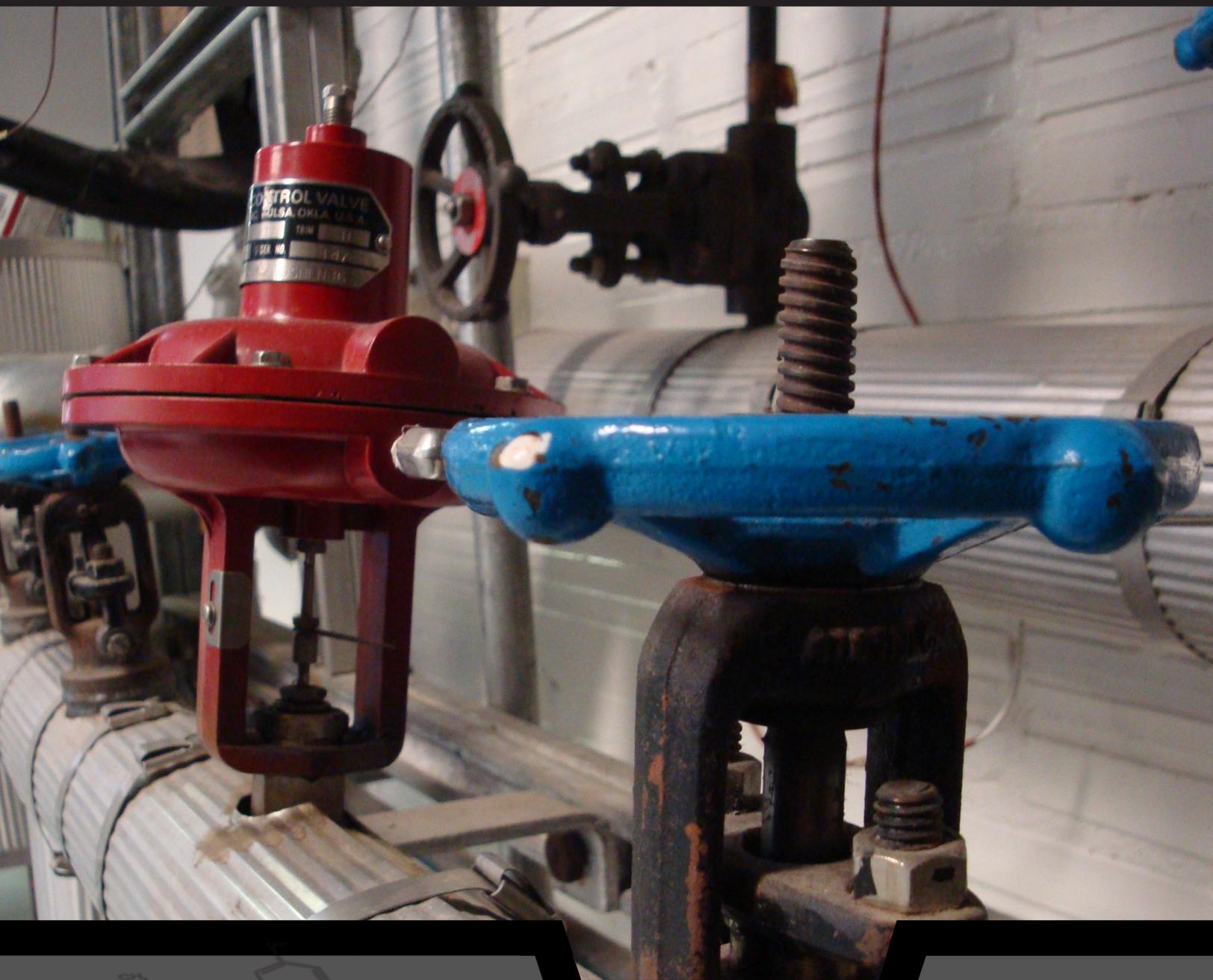
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