

Baton Rouge Newsletter

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September Meeting—Tour of LIGO

Date: Saturday, September 16, 2017

- Place: LIGO facility, Livingston, LA. (Take I-12 to Livingston Exit 22, North on LA 63 to US 190, West for ¼ mile to LA 63, North for 3.5 miles, Left on LIGO Lane.)
- **Topic:** Tour of LIGO (Laser Interferometer Gravitational-Wave Observatory).
- Agenda: 10:45 AM Registration 11:00 AM – Tour (estimated 2 hours)
- Menu: Picnic lunch on the grounds.
- Cost: \$18 Per person (\$15 for members; \$10 for students)

RESERVATIONS	Professional Engineering Certification
Please make your reservation with chapter secretary, Chelsea Bourdon, by 5:00 PM on Thursday, September 14 at <u>CBourdon@Hargrove-EPC.com</u>	The subject of this meeting is an acceptable activity for continuing Professional Development as defined by LAPELS and is approved for <u>one (1)</u> PDH unit.
Reservations required. Tour limit: 30.	The Baton Rouge AIChE chapter is NOT responsible for individual record keeping of PDH credits. Certificates must be obtained at the meeting by the individual.

Other Upcoming 2017 Events / Speakers

If you or your colleague(s) would like to give a technical presentation at an upcoming chapter meeting for 2 professional development hours (PDHs), please contact Chapter Chair, Clark Snyder, at <u>WClarkSnyder@hotmail.com</u> to schedule a meeting date and time.

September Tour of LIGO



The Laser Interferometer Gravitational-Wave Observatory (LIGO) is designed to open the field of gravitationalwave astrophysics through the direct detection of gravitational waves predicted by Einstein's General Theory of Relativity. LIGO's multi-kilometer-scale gravitational wave detectors use laser interferometry to measure the minute ripples in space-time caused by passing gravitational waves from cataclysmic cosmic sources such as the mergers of pairs of neutron stars or black holes, or by supernovae. LIGO consists of two widely separated interferometers within the United States—one in Hanford, Washington and the other in Livingston, Louisiana operated in unison to detect gravitational waves.

LIGO is a national facility for gravitational-wave research, providing opportunities for the broader scientific community to participate in detector development, observation, and data analysis. The capabilities of the LIGO detectors were greatly improved with the completion of the Advanced LIGO project in late 2014. The Advanced LIGO detectors will increase the sensitivity and observational range of LIGO by a factor of 10 over its predecessor, bringing 1000 times more galaxies into LIGO's observational range.

The design and construction of LIGO was carried out by LIGO Laboratory's team of scientists, engineers, and staff at the California Institute of Technology (Caltech) and the Massachusetts Institute of Technology (MIT), and collaborators from the over 80 scientific institutions world-wide that are members of the <u>LIGO Scientific</u> <u>Collaboration</u>.

The responsibilities of LIGO Laboratory include operating the LIGO detectors, research and developent aimed at further improving the capabilities of the LIGO detectors, research in the fundamental physics of gravitation, astronomy, and astrophysics, and public education and outreach. LIGO is funded by the U.S. National Science Foundation and operated by the California Institute of Technology (<u>Caltech</u>) and the Massachusetts Institute of Technology (<u>MIT</u>).

If you're going to think anyway, you might as well think big.

--Donald Trump.

Recap of the Coates Banquet



The Coates Award Ceremony this year, celebrated the accomplishments of one of the members of the Baton Rouge Chapter of the American Chemistry Society- Samuel Ayodele Sangokoya. Sam was born in Nigeria but moved all around the world to get his undergraduate, masters, and doctorate degrees in Chemistry. He finished up his academic career by completing his post doctorate at the University of Georgia, and was a Research Professor at Clemson University. His academic work covered organo-metallic syntheses, NMR and X-ray structural characterizations of materials based on phosphorus, nitrogen, chalcogenides, aluminum, gallium, and indium.

He joined Ethyl Corporation in June, 1989 at the Baton Rouge Research Center. He remained with Albemarle (after it was spun off from Ethyl) until his retirement as a R&D Advisor in 2014. During his career, Sam developed a new chemical processes and credited Albemarle with 72 patents and patent applications. Sam received several Technical Awards for excellence in research and patent development. His technical expertise is focused on organoaluminum chemistry, metallocenes, Ziegler-Natta catalysts, and the corresponding catalyst activators (aluminoxane).

Methylaluminoxane (MAO, aka Magic Aluminum Oxide) is used in large scale industrial polymerization reactions to activate early transition metal-based polymerization catalysts (Ziegler-Natta and metallocenes). Sam played an important role in the understanding of MAO including the characterization, properties, improved preparation, and solution stability. His efforts certainly contributed to Albemarle's recognition as a leading catalyst and co-catalyst manufacturer. He also contributed to the development of high purity trimethylaluminum (TMA), which is critical for OMCVD and LED applications.

Both the AIChE and ACS chapters gave out other awards in addition to the prestigious Coates Award. One of those is recognition of 50 years of membership in AIChE; Gary Aydell and Jorge Ferrer received these. Two other AIChE awards focused on academic success by recognizing two individuals that excelled in chemical engineering while working on undergraduate and doctorate degrees. Grant Landwehr from LSU won the AIChE Junior Scholarship Award while the AIChE Outstanding Dissertation Award went to Dr. Michael Thomas for his dissertation titled: "Process Monitoring and Data Mining with Chemical Process Historical Databases."

by **Donna Bryant** (Photos by Professor George Stanley, ACS)

Report on the Tank University and Ethics Seminar

The May 19 seminar was very successful with a total full-house attendance of 75. It provided a net income to the Section of \$2,909. As in the past this income will be dedicated to provide grants to area high schools for their chemistry programs. We are indebted to all those members who worked so hard to make the seminar the success that it was.

From the Chapter Chair's Pen

Fall is fast approaching and we will soon get back into the swing of things in the section. I am thankful for so many in our section that are actively involved and take a genuine interest in each other. I have been fortunate to learn that most of my friends in Houston have been spared the catastrophic flooding and hardships. There are many that have not been as fortunate. Thousands of people are now facing one of the hardest ordeals of their life even including providing for the most basic of needs and rebuilding. We can well remember what that has meant for many in our area just one year ago. And... it isn't over yet as Florida is bracing for the next crisis. Let us all remember those in need in Houston and in Florida. Our thoughts and prayers are with them during this time and let us look for ways to help them during this time.

Clark Snyder, 2017 Chair





2017 Section Contacts

Officers

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Why Should You Join the Local AIChE Chapter?

- 1. It is a welcoming presence to new chemical engineers in the area.
- 2. It provides a neutral ground mentorship toward career directions and other life topics.
- 3. It facilities a better understanding of local, state, and federal policies related to our professions.
- It offers a smooth transition for graduating chemical engineers from LSU, ULL, and other nearby universities who start working in the area.

