

Baton Rouge Newsletter

Year 29, Number 2

www.aiche-br.org

October 1, 2018

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The AIChE Baton Rouge Newsletter is published monthly, from September to June, by the AIChE Baton Rouge Section, 110 Chemical Engineering, LSU, Baton Rouge, LA 70803. It is distributed free of charge to members of the Baton Rouge Section of the American Institute of Chemical Engineers.

Membership Fee: \$15.00/yr.

October Meeting

Date: Thursday, October 25, 2018

Place: Highland Road Community Park Meeting Rooms, N. Amiss Rd. (Map Page 4)

Topic: Steamloc Steam Traps + High School Grant Awards

Speaker: Marc Froeyen, Steamloc

Agenda: 5:30 – Social

6:00 - Dinner, Speaker

Menu: Catered. Probably BBQ and vegetarian option. Tea and soft drink.

Cost: \$20 per person (\$15 for members, \$10 for students).

Notice the **on-line** reservation procedure. When you register on the web page you can pay in advance by Pay Pal or credit card or choose to pay by cash or check at the door.

RESERVATIONS

Make your reservation and pay on-line by 5:00 PM on Wednesday, October 24 at https://www.aiche-br.org or pay by cash or check at the door.

Professional Engineering Certification

The subject of this meeting is an acceptable activity for continuing Professional Development as defined by LAPELS and is **approved for one (1) PDH unit.**

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 2018 Events / Speakers

Fri Nov 9 Solids Handling and Cooling Tower Seminar + Ethics, Crowne Plaza, 8 PDHs
Thu Nov 15 Election and Beer Brewing Competition Presentation by Bad News Beers, see Page 7.

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, Donna Bryant, at Donna.Bryant@Syngenta.com to schedule a meeting date and time.

October Meeting Topic--Steamloc International

In 1984 our engineering improved a less-known technique to separate liquid phases from gas phases in general. The main principle is based on venturi technology. With the focus on steam installations, this technology permits highly economic condensate removal from all kind of steam applications. The absence of any moving parts generates logical benefits for maintenance, energy and production.

Energy efficiency can be achieved within a wide range of condensate loads. Even at high pressures. At the same time, applications with varying loads or pressures are handled in a same economical way, even though it seems just the opposite.

At first sight, Steamloc® can be classified as a kind of steam trap based on what it actually does. But our clients call it a better solution, despite its simplicity. The way it discharges your condensate is completely different from obsolete mechanical systems. And highly efficient, worth to be named a BAT (Best Available Technology) as a permanent solution on the long term

Steamloc® is based on a modified multi-configured venturi jet and designed to enhance the condensate flow and at the same time inhibit passage of live steam. There are no moving parts to fail and when properly sized and installed, it performs better than mechanical traps. The installed capacity depends on differential pressures and loads. Each application has its unique Steamloc® which perfectly handles its running loads. Steamloc® is available for loads from< 5 kg/h upwards to massive loads of 100.000 kg/h and more at differential pressures, even more than 100 bar, but also for the tiny pressure differences balancing with vacuum where mechanical traps do not even work at all.

Steamloc® is used for all types of applications. While mechanical traps are chosen from a catalogue and usually oversized. Each application will be equipped with its own customized Steamloc®. The same datasheets are used as for steam traps.

Come to the October 25th meeting to learn more about this technology.

Recap of the September Dinner Meeting



Keith Yutzi described Teikoku's Canned Motor Pumps. These are pumps in which the rotor and the pump are "canned," that is, enclosed so that no seals are needed. Only the rotor and the bushings are in contact with the fluid. Lubrication, and if the fluid is clean cooling, are provided by the fluid. External circulation is provided if the fluid is hot, dirty or tends to flash. A meter is provided to detect magnetic imbalance in the coils that shows increase wear in the bearings. The pumps have a 20-year life expectancy and the cost is competitive with that of double-seal pumps.

Expect to succeed even before you start. All winners, no matter what their game, start with the expectation that they are going to succeed. Winners say, "I want to do this, and I can do this," not "I would like to do this, but I don't think I can." --Dennis Waitley

From the Chapter Chair's Pen

We have started off this semester with a start and will be continuing until the holidays hit us in December. Our next meeting will be October 25th and its topic will be about venturi orifice steam traps. In addition to having Marc Froeyen from Steamloc International speak to us about this topic, we will be presenting grants to the winners of the High School Grant Awards. While a focus of AIChE is offering technical courses and sessions to members, an important part of it is promoting chemical engineering in our community and giving back. Our High School Grants are one way for us to do this. In this program we have teachers across the Baton Rouge area apply for funding to purchase items to help improve their science focused classrooms. Once a teacher wins the award, they are invited along with one of their top students to our meeting (fully covered). When we present the awards, the teachers share what they are planning on using the grant money for and the students share what they are planning to do with their future. I always enjoy listening their dreams and am happy that our chapter is doing something to promote science in the Baton Rouge area.

Our chapter is continuing to promote science in the Baton Rouge area by helping operate an experiment booth at Super Science Saturday on Saturday, October 27th. It goes from 10am-3pm at the LSU PMAC and will help hundreds of kids around the area experience neat science experiments. We are looking for volunteers! If you can help for the entire time or just for an hour that will help. Erick Flores will be organizing volunteers, so you can contact him if you are interested.

We are going to be continuing to try our online sign up and payment for our meetings. You can do this by going to our online site (www.airche-br.org) and clicking the link under the meeting. You will be able to pay via credit card and RSVP online until 2 days before the meeting. Check it out and let us know your opinions about it. Registration and meeting payments will continue to be taken at the door by our section Treasurer, Jimmy Orr.

I wish our Beer Brewing team the best of luck at the Annual Meeting in Pittsburgh October 28th as they compete against other local section teams. You can read more about their activities in the article in this newsletter and come out to our November meeting at George's (Highland) to see what they were up to and try a sample of their brews.

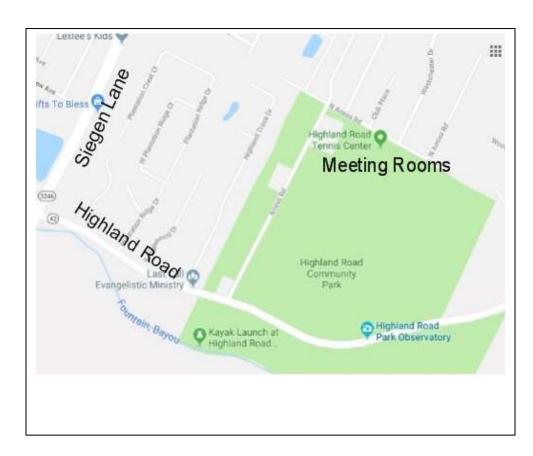
See you at one of our activities!

Donna Bryant, 2018 Chair

AIChE Baton Rouge Section Trivia Night



On October 11 members of the Baton Rouge chapter and LSU chapter got together at the Bengal Tap Room for a trivia night. It was a good time had by all in attendance with many fun and challenging questions the competition was close the whole way but in the end the group "the best bankers" won out. There was plenty of food and drinks for everybody and thanks to BTR for allowing us to host our event there. For our young professionals it was a great event to meet new people from many different industries. In case you missed out this year don't fret we are already looking forward to our next trivia night! Thanks to Donna Bryant for providing the pictures and promotional support, Stephen Reilly for helping with question development, and finally thanks again to all who participated and made it a great evening.



2018 Section Contacts

Officers

Chair: Donna Bryant, <u>Donna.Bryant@Syngenta.com</u>

Vice Chair: Vishal Vora, VVVora@Gmail.com

Secretary: Chelsea Bourdon, CBourdon@Hargrove-EPC.com

Treasurer: Jimmy Orr, <u>Jimmy.Orr@Jacobs.com</u>

Executive Committee Members

Glenn Bryson

Noel Ricord

BGBryson@BellSouth.net
LCNoel55@aol.com

Armand Melikyan

William Buck

W. Clark Snyder

AMelikyan@Hargrove-EPC.com

William.Buck@WinkEngr.com

WClarkSnyder@hotmail.com

Committees

Awards: Dal Dilfer's, <u>Joseph.Dalferes@jacobs.com</u>
Communications: Brandon Lithgoe, BLithgoe@Yahoo.com

Education: Erick Flores, EFlore5@LSU.edu

High School Grants:W. Clark Snyder, WClarkSnyder@hotmail.comMembership:Glenn Bryson, BGBryson@BellSouth.netNewsletter:Armando Corripio, Corripio@LSU.edu

Nominations: Noel Ricord, LCNoel55@aol.com

Professional Development: Randy Goodman, Randy.Goodman@LA.gov

Seminars: Armand Melikyan, <u>Armand_Melikyan@hotmail.com</u>
Sponsorship: Stephen Reilly, <u>Stephen.Reilly@emerson.com</u>

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.
- 4. It offers a smooth transition for graduating chemical engineers from LSU, ULL, and other nearby universities who start working in the area.



Candidates Requested for 2019 Section Officers

Candidates for the following section vacancies are being solicited through 31 October 2018: Vice-Chair, Secretary, Treasurer and Executive Committee Member. However, at the annual Election Meeting, nominations may also be taken from the floor. Only members of AIChE and the section in good standing are eligible to hold office.

Voting for the Candidates shall take place at the section's annual Election Meeting (November 2018) meeting and their installation will take place at the section's Annual Meeting (December 2018).

Duties -

Vice-Chair: In absence of the Chair, shall preside at all meetings of the section. The Vice-Chair serves as the Chair of the Program Committee which makes arrangements (topic, speaker, location, food and time) for eight (8) or more monthly meetings (September through May). Term of office is one (1) year, then serve as Chair for one year and then serve on the Executive Committee for two years.

Candidate Chelsea Bourdon. Chelsea Bourdon graduated from LSU in December of 2014 and is employed by Hargrove Engineers and Constructors in Baton Rouge. She has been part of the local AlChE chapter since 2016 serving as secretary for the past two years.

Secretary: In absence of the Chair and Vice-Chair, shall preside at all meetings of the section. The Secretary shall keep a record of the proceedings of the Section and issue a report to the Institute (i.e., National AIChE), outlining the activities of the Section during the year. The Secretary shall coordinate section meeting attendance with the Treasurer (e.g., receiving individual e-mail reservations). After the annual election (i.e., December meeting), the Secretary shall forward the names of the officers and members of the Executive Committee to the Institute. Term of office is one (1) year.

Candidate Clark Snyder. Clark Snyder is a graduate of the University of Arkansas and attended LSU. He has over 20 years' experience in chemical engineering and has been actively involved in the AIChE local section since 2004 serving as secretary, vice-chair and chair.

Treasurer: In absence of the Chair, Vice-Chair and Secretary, shall preside at all meetings of the section. The Treasurer shall keep a financial record of the Section. The Treasurer shall be charged with the collection and disbursement of funds (e.g., collection of meeting credits and debit payments) as authorized by the Chair or the Executive Committee. Mid-year and end of year financial reports shall be prepared for the Executive Committee (essentially automated). Term of office is two (2) years.

Executive Committee Member (elected): Provides guidance, recommendations and opinions at Executive Committee meetings. Former section officers usually best candidates to fill this position. Term of office is three (3) years.

Candidate Randy Goodman. Randy Goodman has been a member of AIChE since 1981, and has held the positions of Vice-Chair, Chairman, Executive Council, Seminar Chairman, and PDH Chairman in the AIChE Baton Rouge Chapter. Randy has a BS degree in Chemical Engineering from Louisiana Tech University. His career includes 25+ years as a Process Engineer working mostly in petrochemical and refining. Randy's work at DOTD has included work as the Right-of-Way Permits Engineer and Specifications Engineer. As the Specifications and Standards Engineer leading the DOTD Specifications Unit he developed and produced the DOTD 2016 Louisiana Standards and Specifications book. Randy currently serves as the DOTD Asset Management Engineer and has the responsibility for managing the agencies responsibilities relating to MAP-21, with a primary focus of developing and implementing the Transportation Asset Management Plan (TAMP).

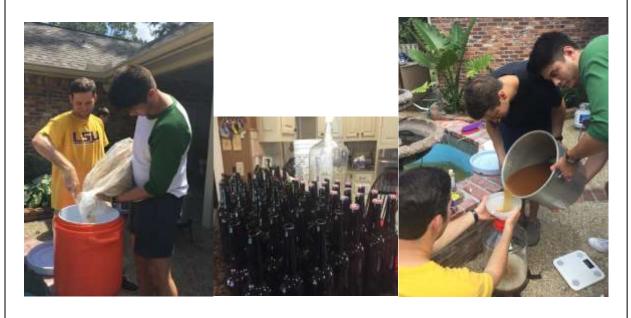
Candidacy Submittal: Should you desire to be nominated for one of the vacancies, please submit your name and, if desired, qualifications by e-mail to LCNOEL55@aol.com (Noel Ricord) not later than 31 October 2018.

Candidates will be listed in November issue of our section's newsletter.

Baton Rouge Section Brewing Team: Bad News Beers

The Bad News Beers team consists of Daniel Candler, Matt Schutte, Donna Bryant, and Doug Beach (Honorary member) that all work at Syngenta. We have been hard at working making 3 different types of beers for the competition at the Annual Meeting in Pittsburg-Imperial Stout, IPA, and Hefeweizen. We began with the Imperial Stout in August to make sure it would ferment in time for the competition, and then did the IPA and Hefeweizen in early September. We purchased the grains so were able to go straight to the mashing step where the grains were steeped in hot water for a long time to make the grains release their sugars to form what is called a "wort" or sugary- carbohydrate water. The grains then had to be separated from the wort and brought to a boil. During this boil process, hops were added. The IPA had a more involved hop dumping schedule than the other beers. After the boil process, the pre-beer solution was cooled and filtered into a fermenting jug where we then added yeast to it. At this point, we let it ferment for a couple weeks in a cooler. During the fermentation stage the yeast was consuming all the wort's sugar and producing alcohol and CO2 as waste products. We had made our beer, however needed to add carbonation to it. During the first weekend of October, we reconvened as a team to add sugar and bottle the beer. The beer is currently aging now and will be ready for consumption the weekend of October 20th. The process was pretty neat to learn and go through. We tasted it all throughout the process, but it will be great to taste it once it is fully carbonated and ready for consumption! Based on our initial tastings of the three beers, the beers will be called Sweet Crude (Imperial Stout), Citri-delic (IPA), and Big Jefe (Hefeweizen).

As part of the AIChE Beer Brewing Competition, our team will be making a poster to present to the judges. We are going to be presenting this poster at the November Baton Rouge AIChE meeting, showcasing our methods, and have some samples of our beers available for consumption. We invite you all to come to learn about the beer brewing process and test out our beers!



AIChE Baton Rouge Fall / 2018 Seminar

Solids Handling & Cooling Tower Seminar + Engineering Ethics

November 9th, 2018

MORNING SESSION: Solids Handling Equipment & Technologies

Topic Description

Design Fundamentals for Solids Handling

This presentation will begin with the theory and basics of solids handling from an engineer's perspective. Solids handling basics will be covered including important engineering design parmaters used in design including: angle of repose, particle size distribution, particle shape factors, cohesiveness of solids handled, etc. The presentaion will address basic questions such as: 1) if or when solids can be treated like a fluid for flow design 2) can or when solids can be pumped vs conveyed, etc. Next, an overview of the common solids handling technologies will be provided including pneumatic conveyance: dilute phase and dense phase, mechanical conveyance, and gravity flow coneyance systems. The presentation will conclude with the latest technologies and equipment available for solids handling: rotary air-lock valves (vented/notvented); conveyors; instrumentation, automation & controls, and turn-key solids handling equipment systems. Emphasis will be provided on the common difficulties of instrumentation for proper controls in solids handling processes including level measurement techniques (latest).

AFTERNOON SESSION: Cooling Tower Fundamentals & Design Overview / Engineering Ethics

Topic Description

Design Fundamentals for Solids Handling

This presentation will begin with the theory and basics of cooling towers including psychrometrics and the basic design parameters used in cooling tower design such as the relative humidity and wet bulb temperature. Design of cooling towers is provided with a discussion of the general limitations of cooling towers for temperature range, approach, cycles, loss, drift, and blowdown (manual and continuous). The discussion of open vs closed cooling systems is provided. Next, a discussion of the evaluation of a cooling tower's efficiency and performance is provided including the Cooling Tower Institute (CTI) Standard STD-202 which encourages cooling tower capacity of 100% or better. The presentation continues on to the different types of cooling towers, fill types, distribution, fan optimization, flow control valves, strainers and filters, and other ancillary equipment. The presentation concludes with an overview of actual installations and addresses problems incurred and problems resolved.

Engineering Ethics

A Presentation on Engineering Ethics*

*This presentation will be LAPELS On-Line Ethics Quiz

Solids Handling & Cooling Tower Seminar + Engineering Ethics

Friday, November 9, 2018 8:00AM – 5:00PM

Location: Crowne Plaza Executive Center

4728 Constitution Ave, Baton Rouge, Louisiana 70808, (225) 930-0114

Earn 8 PDH's! Enrollment is Limited! Sign-Up Early!

REGISTRATION FORM

NEW! Register online at <u>www.aiche-br.org</u> and pay by credit card using PayPal, or mail this completed form with payment to the address below.

NAMF:

MAII ING ADDDESS.				
WAILING ADDRESS.				
CITY:	ST/	ATE:	ZIP:	
EMAIL:		PHONE:		
TECHNICAL/PROFES	SSIONAL SOCIETY ME	MBERSHIP*: (must ind	icate)	
COST: (Please check appropriate box)	<u> </u>	ch/Prof Society Members* prior to 04-Nov-18 n-Tech/Prof Society Members prior to 04-Nov-1 ll after 04-Nov-18		
(Please include check if tha	GISTRATION FORM TO: at is your payment option) dit cards on event day ermitting.	P.O. Box 84787 Baton Rouge, LA 7	elikyan@hotmail.com	

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*The AIChE supports membership in Professional and Technical Societies (see list below)

<u>Refund Policy</u>: Advance registration is 100% refundable with notice at least 12 days prior to the date of the seminar. Notice received between 31-Oct-2018 and 08-Nov-2018 is 50% refundable. No refunds on day of the seminar.

<u>Cancellation</u>: AIChE reserves the right to cancel this seminar if low attendance is projected. A full refund will be sent in this event.

EVENT: Solids Handling & Cooling Tower Seminar (7 PDHs);

+ Engineering Ethics (1 PDH)

DATE: November 9th, 2018

PROPOSED AGENDA:

7:30 - 8:00 Breakfast

8:00 –11:30 Solids Handling (BME, HorizonPSI)

11:30 - 12:30 Lunch (provided by AIChE)

12:30 - 4:00 Cooling Towers (Evaptech/Fischer)

4:00 - 5:00 Engineering Ethics (N. Ricord)

Presenters:

Thomas Meade – Chief Executive Officer, Bulk Material Equipment (BME)

Email: thomas@bulkmaterialequipment.com | Phone: (214) 601-2577 | www.bulkmaterialequipment.com 1333 W. McDermott, Suite 200 | Allen, TX 75013

Mr. Thomas Meade is the President and CEO Bulk Material Equipment (BME). Thomas holds an B.S. degree from Texas A&M focused on Industrial Supply Chain. He has 20+ years of bulk material handling, processing, storage and air pollution control equipment as well as professional engineering, construction and fabrication experience in wide variety of industries. He owns and operates an industrial manufacturers rep agency that covers the states of TX, OK, LA and AR with a primary focus is on dry bulk solids. Thomas will be discussing general mechanical conveying techniques as well as the latest technologies in point and continuous level control instruments.

Todd Baker - Vice President of Engineering, HorizonPSI

Email: tbaker@horizonpsi.com | Phone: (785) 766-6962 | www.horizonpsi.com

1101 Horizon Drive, Lawrence KS 66046

Mr. Todd Baker is the Vice President of Engineering at HorizonPSI. Todd holds a B.S. Degree in Engineering from the University of Nebraska. He has 33 years of bulk material handling experience with extensive application of pneumatic conveying systems in many industry applications. His experience includes 15 years of direct sales and application experience in conveying, weighing and feeding, dust collection and system integration. Todd is responsible for all phases of design, product/process development and project management for HorizonPSI. He has extensive application experience in dilute phase and dense phase conveying systems. As a current member of the NFAP 652 Fundamentals of Combustible Dust committee he is involved in assisting customers with decisions to comply with the current combustible dust standards.

Dave Simac – Business Development Manager, Evaptech, Inc.

Email: tbaker@horizonpsi.com | Phone: (913)322-5165 | www.evaptechinc.com

8331 Nieman Road, Lenexa, KS 66214

Mr. Dave Simac is the Business Development Manager at Evaptech, Inc. Dave's primary role is to manage sales and marketing functions involving new towers, after market services, and parts/components within an assigned region. Dave has worked in the cooling tower industry since 1980 and has extensive experience with

cooling tower sales and services for the chemical, power, petrochemical and HVAC industries. Dave Simac holds a B.S. in Civil Engineering from the University of Missouri and an M.B.A. from the University of Missouri, Kansas City, MO. He is a member of the American Society of Heating, Refrigeration and Air Conditioning Engineers.

Steve Fischer – President, Fischer Equipment, Ltd. Email: stevef@fischerequipment.com | Phone: (985) 900-2444 2000 Preserve Lake Drive, Suite A | Covington, LA 70433

Mr. Steve Fischer has 30 years of experience as a sales representative for various heat transfer equipment manufacturers. Fischer Equipment has been in business since 1937. Primary equipment focus is on Cooling Towers, Boilers, Water Treatment (boiler feed systems) & Fired Heaters. In cooling towers, Steve has worked with Engineering Consultants & Owners to repair, upgrade, replace and install new cooling towers in process & comfort applications. Steve's focus has been on customers in the Chemical, Petroleum, Power & Paper industries.

Noel J. Ricord, P.E., F.A.I.Ch.E. – Retired, AIChE BR Sect Committee Member Mr. Noel Ricord has 40+ years of experience in the Gulf Coast Chemical Industry. He is currently retired, but has worked for DuPont (North Carolina), Ormet, BBECI, RPM, ENGlobal, Plant Engineering Services, Global Environmental Solutions, Inc. and CB&I. He is a 1969 BSChE graduate from Tulane University and holds a MBA degree from East Carolina University. Noel served in the USAF and the Louisiana Air National Guard and was a commander of the 236th Combat Communications Squadron.

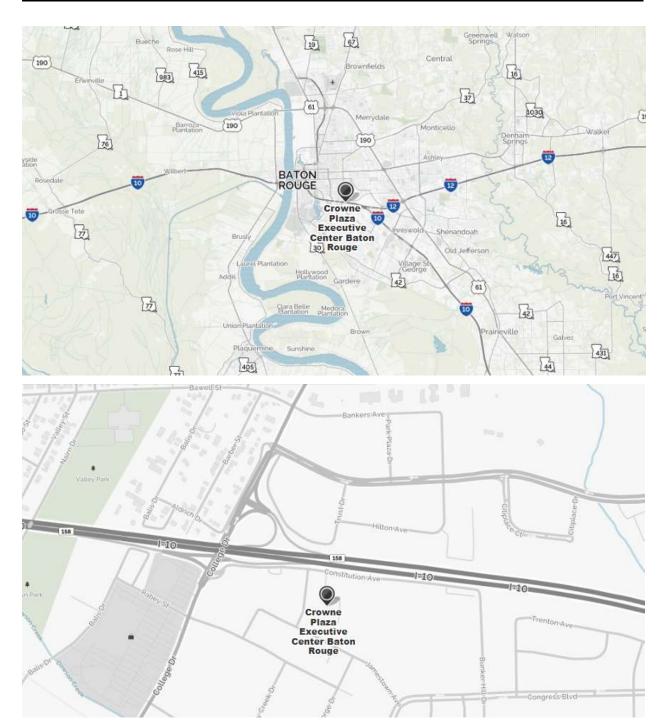
The morning session will cover fundamentals and latest technologies on solids handling including instrumentation and packaged systems. The afternoon session will cover the latest on cooling towers including the Cooling Tower Institute (CTI) Standard STD-202 which encourages cooling tower capacity of 100% or better. The seminar concludes with a presentation on Engineering Ethics (1 PDH).

Note: Some topics may change without prior notice.

Notice: Full day registration only. Registration fees will not be reduced for half day attendance. Attendance signatures will be required at the beginning of each presentation. PDH (Professional Development Hour) certificates will be issued based upon attendance list signatures, with Hours reflecting actual attendance. Fees will not be reduced or partially refunded for partial attendance.

***Morning and Afternoon Sessions each to include two or three 10 min. breaks (not shown) ***

(Maps to the Crowne Plaza 4728 Constitution Ave, Baton Rouge, Louisiana 70808)



Local Professional Societies

- Louisiana Engineering Society (LES)
- Louisiana Society of Professional Surveyors (LSPS)

National Technical Societies

- America Academy of Environmental Engineers (AAEE)
- American Institute of Architects (AIA)
- American Institute of Chemical Engineers (AICHE)
- American Institute of Electrical Engineers (AIEE)
- American Consulting Engineers Council (ACEC)
- American Concrete Institute (ACI)
- American Institute of Steel Construction (AISC)
- American Management Association
- American Iron and Steel Institute
- American Society of Mechanical Engineers (ASME)
- American Plywood Association (APA)
- American Society of Civil Engineers (ASCE)
- American Society of Engineering Education (ASEE)
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
- American Society of Safety Engineers (ASSE)
- American Wood Council (AWC)
- Earthquake Engineering Research Institute (EERI)
- Institute of Transportation Engineers
- Institute of Electrical and Electronics Engineers (IEEE)
- Instrumentation Systems and Automation Society (ISA)
- National Council of Examiners for Engineering and Surveying
- National Design Specification (NDS)
- National Society of Architectural Engineers
- National Society of Professional Engineers (NSPE)
- Society of Petroleum Engineers (SPE)
- Society of Petroleum Evaluation Engineers (SPEE)
- Society of Professional Well Log Analysts (SPWLA)
- Society of Women Engineers (SWE)
- Air & Waste Management Association (A&WMA)