



Baton Rouge Newsletter

Year 28, Number 3

www.iche-br.org

November 10, 2017

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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.

November Dinner Meeting

Date: Thursday, November 16, 2017

Place: Ralph & Kacoo's Seafood Restaurant, Bluebonnet at I-10.

Topic: *Chemical Engineers in Process Safety*

Speaker: **Rachel Wiggins**, Manager of Safety and Security, Louisiana Offshore Oil Port

Agenda:
5:30 – Registration and Social
6:00 -- Dinner
6:15 – High School Grants, Election of 2018 Officers
6:30 -- Speaker

Menu: Sensation Salad, choice of Grilled Shrimp Dinner, Angus Ribeye, Chicken Gambretti, or Trio Royale (catfish-shrimp-crawfish), New Orleans Style Bread Pudding.

Cost: \$38 per person (Members \$33, Students \$23)

RESERVATIONS

Please make your reservation with chapter secretary, Chelsea Bourdon, **by 5:00 PM on Tuesday, November 14** at CBourdon@Hargrove-EPC.com

Reservations required

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 2017 Events / Speakers

Nov 10 Seminar, 8:00-4:30. SCADA/DCS/PLCs/Separation Technology/Ethics, Oak Lodge Center, 8 PDHs.

Dec 6 6 PM. Tour of the Cane Land Distillery, Downtown Baton Rouge, \$10/person.

TBA 4th Annual AIChE Young Professionals Trivia Night (see Page 2).

TBA Financial Planning Happy Hour (see Page 2)

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 WClarkSnyder@hotmail.com to schedule a meeting date and time.

Rachel Wiggins, October Speaker and Topic



Rachel has a BS ChE from University of Missouri and a Masters in ChE from Tulane. She has over 20 years of experience, in several industries including specialty chemical, refining, oil & gas, and pipeline. Throughout her career, Rachel has been involved in process safety, from sizing relief valves, to facilitating HAZOPs (Hazard and Operability Analyses) and PHAs (Process Hazard Analyses), to conducting LOPA (Levels of Protection Analyses) and SIL (Safety Integrity Level) verification. Rachel is a licensed professional engineer in Louisiana, and is a Certified Functional Safety Expert.

The presentation will touch on several process safety topics, including the safety lifecycle, risk assessment, process hazard analysis, layer of protection analysis, and process safety standards.

Fourth Annual AIChE Young Professionals Trivia Night

Testing of your trivia knowledge in the realms of chemistry, chemical engineering and more. Enjoy a pleasant night in the company of other chemical engineers. Location and date to be announced.

Financial Planning Happy Hour

The Financial Planning Happy Hour is a social event for young chemical engineers who are just starting their careers. A member of a financial advising firm, Compass Capital Management, will discuss the benefits of setting various nest eggs like savings accounts, HSAs, (ROTH-)IRAs, and will answer questions by those attending. It is planned for early 2018.

Lying makes a problem part of the future; truth makes a problem part of the past.

--Rick Pitino

From the Chapter Chair's Pen

Fall is fast approaching and we are winding down 2017. There are still some great opportunities to get involved in your local section., such as the Fall Seminar, monthly meetings and plant tours, nominations for local section offices and even Young Professional (YP) events. I encourage you, if you haven't gotten out and gotten involved, there's no time like the present!

This year we will get to help six area high school teachers with their classroom needs and some lucky students in each of their classes will get to come and spend an evening with the section. We have given in this way for 22 years now and have given more than \$55,000 including this year. That amounts to a whole lot of test tubes and beakers.

I am always excited about this time of year because our local section gets to give back in a special way these area high schools. How many of us can look back and say we first became interested or were spurred on to become chemical engineers because of some special teacher in our younger days... perhaps, a Chemistry teacher? My Chemistry teacher had coke bottle glasses, an Ozzy poster on his classroom ceiling and would celebrate Mole day (Oct 23rd) by wearing his Avogadro shirt each year (6.022×10^{23}). Anyone remember Avogadro's number? Maybe it would be good to reach out and say thanks to that special teacher you remember...or that special professor that steered you right.

I look forward to seeing all of you come out for the November meeting. And, may I say thanks to all those Chemistry teachers and professors that guided me along the way. 😊

Clark Snyder, 2017 Chair



Recap of Almatris Refinery Tour



We went to the Almatris refinery located in Burnside on October 19th for our monthly meeting. Since it was in between Baton Rouge and New Orleans, we invited the newly revitalized NOLA AIChE Chapter to join us. Several of the New Orleans members made the drive to join us.

Once arriving there, John Rockwell and Rudi Azimullah walked us through the history of Almatris, the different alumina products, and in general the aluminum oxide refining process. The overall process used to produce aluminum oxide from bauxite is the Bayer Process. After watching the safety video and eating dinner, John showed us a visual demonstration of the different aluminum products throughout the refining process (which some are pictured above). Caustic is added into the process after the bauxite is crushed initially as a solvent and carrier for the bauxite. Once people were finished eating, John and Rudi split the groups up in two and led a walking tour around the facility to show how the incoming Brazilian bauxite is milled down and refined into different aluminium oxide product. Once we saw this process first hand, John gave a short technical overview about the process and spoke about the difference in aluminium refinery designs- it basically all comes down to what the bauxite source. Also in this presentation, we learned about the red mud ponds that the solid waste ends up flowing into and their methods for maintaining these ponds during large rain storms.

Almatris is one of only two operating aluminium refineries within the United States. There are another two located in Texas, but they are at this time not operational. It was a treat to visualize how one operates and aluminium oxide is made.

Submitted by *Donna Bryant, Vice Chair*

We are proud of our young Vice Chair, Donna Bryant



Donna Bryant received one of the 35 under 35 awards at the National AIChE Meeting held in Minneapolis during the last week of October. This award highlights 35 individuals in the AIChE organization that are under 35 years old and have made significant contributions to both AIChE and the chemical engineering profession. There were 7 different categories that individuals could be recognized in: Leadership, Chemicals, Education, Energy, Innovation, Safety, and Bioengineering. Donna Bryant received her award in the leadership category.

Donna currently works as the Environmental Operations Unit Superintendent for Syngenta in St. Gabriel. She has been working for Syngenta for over 6 years in a wide variety of roles. Donna has been involved in AIChE for the last couple of years in both the national and local level. In the national level, she was the Young Professional Committee (YPC) 2016 Annual Conference Programming Chair, the co-programming chair for the Management Division, and will be the YPC Vice chair beginning in 2018. In the Baton Rouge Chapter, she is currently the Vice Chair for the 2017 year and will become the Chair at the beginning of 2018.

If you would like to see more of the winners, please look at the August CEP magazine or check out the AIChE website.

Become a part of our group of talented, experienced and highly motivated individuals who combine engineering and technical expertise with the ability to be dynamic, innovative team members and leaders.

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2017 Section Contacts

Officers

Chair: W. Clark Snyder, WClarkSnyder@hotmail.com
Vice Chair: Donna Bryant, Donna.Bryant@Syngenta.com
Secretary: Chelsea Bourdon, CBourdon@Hargrove-EPC.com
Treasurer: Jimmy Orr, Jimmy.Orr@Jacobs.com

Executive Committee Members

Glenn Bryson GBBryson@BellSouth.net
Noel Ricord LCNoel55@aol.com
Armand Melikyan AMelikyan@Hargrove-EPC.com
William Buck William.Buck@WinkEngr.com
Stephen Reilly Stephen.Reilly@Prosys.com

Committees

Awards: Dal Dalferes, Joseph.Dalferes@jacobs.com
Communications: Brandon Lithgoe, BLithgoe@Yahoo.com
Education: Erick Flores, EFlore5@LSU.edu
High School Grants: W. Clark Snyder, WClarkSnyder@hotmail.com
Membership: Glenn Bryson, GBBryson@BellSouth.net
Newsletter: Armando Corripio, Corripio@LSU.edu
Nominations: Open
Professional Development: Randy Goodman, Randy.Goodman@LA.gov
Seminars: Open
Sponsorship: Stephen Reilly, Stephen.Reilly@Prosys.com

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 facilitates 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.



AIChE Baton Rouge Fall / 2017 Seminar

SCADA/DCS/PLCs & Separation Technology Seminar + Engineering Ethics

This presentation will compare and contrast the DCS vs PLC/SCADA platforms as they relate to operational business objectives and employees' work life balance.

SCADA=Supervisory Control And Data Acquisition

SCADA is a category of software application program for process control, the gathering of data in real time from remote locations in order to control equipment and conditions.

-Latest SCADA Technologies: Allen-Bradley; Honeywell; Matrikon; WinCC.

DCS=Distributed Control System

-General Architecture Diagram; Description of the Elements; Programming & Tuning Control Loops: Main Programming Formats: Function Block, Structured Text, Ladder, Sequential.

-Latest DCS Technologies

PLCs=Programmable Logic Controllers

General architecture Diagram; Description of the elements; Programming & Tuning Control Loops: Main Programming Formats: Function Block, Structured Text, Ladder, Sequential.

-Latest PLC Technologies

Interfacing

Discussion of control system architectures, computers, and interfaces, networked data communications and graphical user interfaces for high-level process supervisory management.

The Future of Process Automation:

DCS vs PLCs

The network infrastructure of the DCS and the network architecture for plant information are becoming increasingly intertwined.

Today with open technologies, DCS systems are competitively priced with PLCs.

Gas/Liquid/Liquid Separations Technology

- Define and Discuss Physical Separation Fundamentals
- Detail Design Philosophy of Separation (Do's & Don'ts)
- Gas/Liquid, Liquid/Liquid, and Gas/Liquid/Liquid Separation Applications and Services: Inlet Separators, KO Drums, 3-Phase Separators, Compressor Suction Scrubbers, Glycol dehydration Towers, etc.
- Separator Analysis Steps & tools (Design Philosophy, CFD Analysis, Simulators)
- No-Weld Designs, Retrofit, and Revamp Solutions (Case Study)

Latest Physical Separation Technologies and Products:

- Gas/Liquid Separation
 - o Wire Mesh and Vane Mist Eliminators,
 - o Demisting Cyclones (Maxswirl™ Cyclone)
- Liquid/Liquid Separation (Coalescing)
 - o Wire Mesh Coalescers
 - o Corrugated Plate Coalescers
 - o Parallel Plate Coalescer

Latest Chemical Separation Technologies and Products:

- Mass Transfer Technology Fundamentals (Stages, Theoretical Plates, HETP, Flood %, Foaming or Froth, etc.)
- Conventional and High-Performance Trays (Float & Fix Valves, Sieve trays, High Performance SEMV™ Trays)
- Structured Packing and Random Towers (similarities and differences)
- Feed Inlet Devices; Liquid Distributors; Hold Downs and Packing Supports, etc.

SCADA/DCS/PLCs & Separation Technology Seminar

+ Engineering Ethics

Friday, Nov 10, 2017
8:00AM – 4:30PM

Location: Oak Lodge Reception & Conference Center
2834 S. Sherwood Forest Blvd. Suite E-1 Baton Rouge, Louisiana 70816, (225) 291-6257

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

REGISTRATION FORM

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

NAME: _____

MAILING ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP:** _____

COMPANY: _____

EMAIL: _____ **PHONE:** _____

TECHNICAL/PROFESSIONAL SOCIETY MEMBERSHIP*: (must indicate) _____

COST: \$85/person for Tech/Prof Society Members* prior to 05-Nov-17 (Please check)

\$95/person for non-Tech/Prof Society Members prior to 05-Nov-17

\$110/person for all after 05-Nov-17

MAIL COMPLETED REGISTRATION FORM TO:

(Please include check if that is your payment option)

Check or cash only, no credit cards on event day

Walk-ins welcome space permitting.

Jimmy Orr (Treasurer)

1729 Roseneath Dr.

Baton Rouge, LA 70806

Email: jimmy.orr@Jacobs.com

Phone: (225) 540-5154

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

Refund Policy: Advance registration is 100% refundable with notice at least 12 days prior to the date of the seminar. Notice received between 01-Nov-2017 and 09-Nov-2017 is 50% refundable. No refunds on day of the seminar.

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

**EVENT: SCADA/DCS/PLCs & Separation Technology Seminar (7 PDHs);
+ Engineering Ethics (1 PDH)**

DATE: Nov 10th, 2017

PROPOSED AGENDA:

7:30 A - 8:00 A Breakfast

8:00 A - 11:30 P

11:30 P -12:00 P Lunch (provided by AIChE)

12:00 P - 4:30 P

Presenters:

August Tassin CAP - Reliability and Process Controls Consultant

John H. Carter Company, Inc.; 14141 Airline Hwy. Building 3, Suite N| Baton Rouge La 70817| U.S.A; Office (225) 755-1706 | Mobile (225) 916-9569; August.Tassin@johnhcarter.com | www.johnhcarter.com

August Tassin – Reliability and Control Systems Consultant at John H. Carter Co. With over 20 years of service in chemicals and oil and gas industries, August has held multiple automation maintenance, design, implementation, and system migration roles. Recently moving from end user to a consulting role, August provides the practical operations and business context to Automation and Reliability decisions.

Babak Rafienia – Applications Process Engineer

AMACS - Process Tower Internals; 14211 Industry St, Houston, TX 77053 USA; Direct: 713-332-0388 | Fax: 713-433-6201; BRafienia@amacs.com | www.amacs.com

Babak Rafienia – Applications Process Engineer and responsible for separation and fractionation design/technology at AMACS-Process Tower Internals for over past 3 years. He has received his B.Sc. and M.Sc. in chemical engineering focusing on gas-liquid and liquid-liquid separation optimization and is acknowledged as "Individual with Exceptional Ability" in separation technology by United States DHS. Prior to joining AMACS, Babak spent 4 years in oil and gas industry holding positions as Process Engineer, Manufacturing Field Engineer, and Researcher. His focus is to provide solutions in new internal designs, retrofit solutions, and designing of internals for revamp projects for different sectors of the oil & gas industry.

Richard Savoie, P.E. – LAPELS Deputy Executive Director

Richard Savoie – Deputy Executive Director for the Louisiana Professional Engineers and Land Surveyor's Board (LAPELS). He has served in the position since April 2015. He also served one term as a Board Member from 2007 to 2013.

The presentation will cover fundamentals and latest on SCADA/DCS/PLC Control Systems including an overview of the various architectures and interfacing (Foundation FieldBus; MODBUS; TCP/IP). Smart (HART) communication and loop tuning. The presentation will also cover fundamentals on Separation technologies and latest design alternatives for demisters, coalescing elements, tower internals, etc. 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) *****

(Map to Oak Lodge (2834 S.Sherwood Forest Blvd. Baton Rouge, LA 70816)



“Oak Lodge” is a little bit hard to find

Please Reference the next Map to Find “Oak Lodge” in the Local Area

Local Area Map



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 (AWMA)