



# Baton Rouge Newsletter

Year 30, Number 1

[www.iche-br.org](http://www.iche-br.org)

September 10, 2019

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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.

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## *September Dinner Meeting*

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- Date:** Thursday, September 12, 2019
- Place:** George's South, Highland Road at Staring Lane
- Topic:** *Pall Introduction and Filtration Fundamentals*
- Speaker:** **Brandon Peterson**, Pall Corporation
- Agenda:** **5:30** – Registration and social  
**6:00** – Dinner and speaker
- Menu:** American fare: burgers, po-boys, seafood, and casual food..
- Cost:** Pay for your meal at the counter.

### RESERVATIONS

Make your reservation  
**by 5:00 PM on Wednesday, September 11<sup>th</sup>**  
at [EFlores@Hargrove-epc.com](mailto:EFlores@Hargrove-epc.com)  
No reservation required. Bring a friend.

### 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.

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## *Other Upcoming 2019 Events / Speakers*

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Nov 15<sup>th</sup> Process Technologies, Equipment Sizing and Specification, P&ID Creation and Engineering Ethics Seminar, Oak Lodge Conference Center, 8 PDHs.

*If you or a colleague(s) would like to give a technical presentation at an upcoming chapter meeting for 2 professional development hours (PDHs), please contact Chapter Vice-Chair, **Chelsea Bourdon**, at [CBourdon@Hargrove-epc.com](mailto:CBourdon@Hargrove-epc.com) to schedule a meeting date and time.*

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## *From the Vice-Chair's Pen*

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It's hard to believe it's already start of football season again, but I hope everyone enjoyed their holiday weekend and a tiger win! I know I'm looking forward to cooler weather as well as the events and speakers we have planned for this fall. Due to some crazy weather last spring, we were forced to cancel our April meeting on Filtration Fundamentals. Many of you expressed interest, so we're kicking things off with a casual dinner at George's southside and everything you want to know about filters.

This time of year is always pretty busy for me, and it's become even more so as I'm leaving for an Italian vacation in a few weeks. Needless to say, it hasn't been easy keeping my focus on everything I need to get done beforehand, so I just wanted to thank the executive committee for everything they do and all the help they've given me.

I look forward to seeing everyone next Thursday and the events to come!

*Chelsea Bourdon*, Vice-Chair



***Diligence is the mother of good fortune.***

***--Miguel de Cervantes (1547-1616)***

## *Recap of Coates Award Banquet*

The 2019 Coates Award Banquet was held May 8, 2019 at Ashley Manor. The annual award recognizes outstanding professional contributions in either Chemistry or Chemical Engineering. The American Chemical Society (ACS) and the American Institute of Chemical Engineers (AIChE) jointly sponsor the Award. Larry Simeral LSU Adjunct Professor of Organic Chemistry is the 2019 Coates Award winner. Prof. Simeral received his PhD degree at Colorado State University. Larry currently is an Analytical Group Leader at LSU and a Nuclear Magnetic Resonance (NMR) Specialist. He is a 50-year member of National ACS and has held various Officer positions for the Baton Rouge Section. Professor Simeral was the Banquet keynote speaker. The Topic was "Adventures in Science". Prof. Simeral's problem solving talent was showcased.

A number of Chemistry Student & Chemistry Teacher awards were presented by ACS.

Chelsea Bourdon presented certificates to the following 50-year AIChE members: Bruce King, Thomas Hertwig and David Libbers. Abigail Ferrell, a junior at LSU, was recognized as the 2019 George Lappin scholarship winner. Dr. Yuxin Fang was recognized for the 2019 Best Dissertation Award, "Electrochemical Reduction of CO<sub>2</sub> at Functionalized Au Electrodes". Neither Abigail nor Dr. Fang attended the Banquet. But both will receive a certificate and \$250 cash award.



## 2019 Section Contacts

### Officers

<b>Chair:</b>	Vishal Vora, <a href="mailto:VVVora@Gmail.com">VVVora@Gmail.com</a>
<b>Vice Chair:</b>	Chelsea Bourdon, <a href="mailto:CBourdon@Hargrove-EPC.com">CBourdon@Hargrove-EPC.com</a>
<b>Secretary:</b>	Erick Flores, <a href="mailto:EFlores@hargrove-epc.com">EFlores@hargrove-epc.com</a>
<b>Treasurer:</b>	Jimmy Orr, <a href="mailto:Jimmy.Orr@Jacobs.com">Jimmy.Orr@Jacobs.com</a>

### Executive Committee Members

Randy Goodman	<a href="mailto:Randy.Goodman@LA.gov">Randy.Goodman@LA.gov</a>
Noel Ricord	<a href="mailto:LCNoel55@aol.com">LCNoel55@aol.com</a>
Glenn Bryson	<a href="mailto:BGBryson@BellSouth.net">BGBryson@BellSouth.net</a>
Donna Bryant	<a href="mailto:Donna.Bryant@Syngenta.com">Donna.Bryant@Syngenta.com</a>
W. Clark Snyder	<a href="mailto:WClarkSnyder@hotmail.com">WClarkSnyder@hotmail.com</a>

### Committees

<b>Awards:</b>	Dal Dalferes, <a href="mailto:Joseph.Dalferes@jacobs.com">Joseph.Dalferes@jacobs.com</a>
<b>Communications:</b>	Brandon Lithgoe, <a href="mailto:BLithgoe@Yahoo.com">BLithgoe@Yahoo.com</a>
<b>Education:</b>	Erick Flores, <a href="mailto:EFlores@hargrove-epc.com">EFlores@hargrove-epc.com</a>
<b>High School Grants:</b>	W. Clark Snyder, <a href="mailto:WClarkSnyder@hotmail.com">WClarkSnyder@hotmail.com</a>
<b>Membership:</b>	Glenn Bryson, <a href="mailto:BGBryson@BellSouth.net">BGBryson@BellSouth.net</a>
<b>Newsletter:</b>	Armando Corripio, <a href="mailto:Corripio@LSU.edu">Corripio@LSU.edu</a>
<b>Nominations:</b>	Noel Ricord, <a href="mailto:LCNoel55@aol.com">LCNoel55@aol.com</a>
<b>Professional Development:</b>	Randy Goodman
<b>Seminars:</b>	Armand Melikyan, <a href="mailto:Armand_Melikyan@hotmail.com">Armand_Melikyan@hotmail.com</a>
<b>Sponsorship:</b>	Stephen Reilly, <a href="mailto:Stephen.Reilly@emerson.com">Stephen.Reilly@emerson.com</a>
<b>Young Professionals:</b>	Erick Flores, <a href="mailto:EFlores@hargrove-epc.com">EFlores@hargrove-epc.com</a>

### **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.

150 years

 **BASF**

We create chemistry



# AIChE Baton Rouge Fall 2019 Seminar

## Process Technologies, Equipment Sizing and Specification, P&ID Creation + Engineering Ethics

15 November 2019

### **MORNING SESSIONS: ProcessTechnologies**

#### **Petroleum Refining**

**Presenter: Roland Thompson**

Petroleum refineries are configured to optimally address the processing of available crudes to generate the most profitable and environmentally acceptable fuels for the market. This presentation provides an overview of refinery processes necessary to achieve these goals. Topics will include crude distillation, fluidized catalytic cracking, hydroprocessing, delayed coking, alkylation, and sulfur handling.

#### **Nitrogen Based Fertilizer Manufacturing Process**

**Presenter: Ryan Stinson**

Nitrogen based fertilizer production contributes approximately half of the total world production of fertilizers. The process of reforming natural gas allows the synthesis of ammonia which in turn can be used as an end product or a feedstock for other products such as ammonium nitrate (AN), urea ammonium nitrate (UAN), or urea. This presentation provides an overview of the nitrogen based fertilizer process starting with ammonia and going to nitric acid-AN, UAN, and urea processes to obtain upgraded fertilizer products.

#### **Polyvinyl Chloride**

**Presenter: Roland Thompson**

Forty percent of chlorine produced in the United States is used to manufacture polyvinyl chloride or PVC, a widely used plastic. The intermediate, vinyl chloride monomer or VCM, is a known carcinogen. This presentation provides an overview of the PVC manufacturing process including reaction, monomer recovery, and drying. Safe and environmentally acceptable handling of VCM will also be discussed.

## **AFTERNOON SESSIONS: Equipment Sizing and Specification    Engineering Ethics**

### **Shell & Tube Heat Exchangers**

**Presenter: Damon Motto**

Shell and tube heat exchangers are ubiquitous across the chemical processing industries. This presentation will focus on the preliminary design and specification of shell and tube heat exchanger units using commercially available third party software (such as HTRI Xchanger Suite). Heat exchanger geometry fundamentals and terminology will be explained. A description of the recommended workflow for the process engineering discipline over the phases of a project will be described. A crude preheat exchanger will be used as an example to demonstrate the workflow.

### **Drums**

**Presenter: Roland Thompson**

Drums are more than a wide spot in the line to accumulate liquids. Improper sizing and design can disrupt process operations. This presentation will focus on drums in accumulation and separation service addressing good design guidelines to ensure proper drum operation.

### **Equipment Heat Loss**

**Presenter: Roland Thompson**

When is equipment insulation important? This presentation will apply heat transfer principles to understanding equipment heat loss or gain and when this should be considered for energy conservation and process stability purposes.

### **Art Of The P&ID**

**Presenter: Roland Thompson**

The piping and instrument diagram is the key control document to communicate how equipment, instrumentation, and piping will interconnect and interact to achieve process design objectives. While many consider the P&ID a conceptual and schematic drawing, the P&ID developer must use every opportunity to present information in a way to improve user understanding of intent. This presentation will explain how good layout and attention to details can benefit everyone.

**Process Technologies, Equipment Sizing and Specification, P&ID Creation  
+ Engineering Ethics**

**Friday, November 15, 2019  
8:00AM – 5:00PM**

**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](http://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 02-Nov-19  
(Please check appropriate box)  \$95/person for non-Tech/Prof Society Members prior to 02-Nov-19  
 \$110/person for all after 02-Nov-19

**MAIL COMPLETED REGISTRATION FORM TO:** Armand Melikyan (Seminar Coordinator)  
(Please include check if that is your payment option) P.O. Box 84787  
Check or cash only, no credit cards on event day Baton Rouge, LA 70884  
Walk-ins welcome space permitting. **Email:** [Armand\\_melikyan@hotmail.com](mailto:Armand_melikyan@hotmail.com)  
**Phone:** (225) 773-0468

\*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 2-Nov-2019 and 14-Nov-2019 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: Process Technologies, Equipment Sizing and Specification, P&ID  
Creation  
+ Engineering Ethics**

**DATE: November 15th, 2019**

**AGENDA:**

**7:30 A - 8:00 A Breakfast**

**8:00 A –11:30 A Process Technologies**

**11:30 A – 12:30 P Lunch (provided by AIChE)**

**12:30 P – 4:00 P Equipment Sizing and Specification**

**4:00 P – 5:00 P Engineering Ethics (TBA)**

**\*\*\*\*\* TO BE REVISED \*\*\*\*\***

**\*\***

**Presenters:**

**Roland B. Thompson, P.E**

Roland Thompson has forty years of process design experience in the petroleum refining, petrochemical, polymer, and specialty chemical industries, both as a plant process engineer and as a consultant. He is a registered professional engineer in Louisiana and a member of AIChE. He began his career with Georgia Pacific as a plant process engineer in basic chemicals, specifically vinyl chloride and poly vinyl chloride manufacturing. He also worked for Mobay Corporation in the specialty chemical business, developing expertise in batch and continuous unit operations for the production of pesticides and herbicides while acquiring experience in the formulation and packaging of powder and liquid agricultural chemical products.

For the last thirty years, Mr. Thompson has worked as a process consultant and process engineering lead for several major engineering firms including Spectrum Engineering, Jacobs, and Ford, Bacon & Davis. He is committed to analyzing and documenting work processes to improve accuracy and productivity in engineering practices and has developed many spreadsheet programs with accompanying written guidelines for process equipment sizing and hydraulic calculations.

**Ryan D. Stinson, P.E.**



Ryan Stinson has sixteen years' experience and worked as a research engineer, plant process engineer, process design consultant, and process manager. He is a registered professional engineer in Louisiana. As a process engineer, he has worked primarily with petrochemical, petroleum refining, and specialty chemical industries. He began his career with Engineer Research and Development Center as a research engineer where he was primarily involved with blast study research for the Department of Defense. He later worked as a plant process engineer for CF Industries supporting daily operations, maintenance, and project work in ammonia, urea, nitric acid, and UAN plants.

For the last seven years, Mr. Stinson has worked as a process consultant, process engineering lead, and process engineering manager for several engineering firms including H&K, Sigma, and Ford, Bacon & Davis. He is committed to helping train and mentor younger engineers to help maintain a good knowledge base across this industry.

**Damon Motto, P.E.**

Damon Motto has twelve years of experience working as a process engineering consultant in the petroleum refining, petrochemical, and power generation industries. He started his career with URS Corp. and has also worked for Jacobs and Ford, Bacon, and Davis. He has expertise in process modeling and computed aided engineering tools. He has extensive experience in the design and revamping of heat transfer, fractionation, separation, and fluid transfer equipment.

He is a registered professional engineer in the state of Louisiana and a member of AIChE. He is committed to developing novel methods to leverage process engineering software to make models more rigorous and valuable for his clients.

TBA – Ethics Presenter

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**The seminar concludes with a presentation on Engineering Ethics (1 PDH).**

**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))**



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

# Local Area



## Local Professional Societies

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

## National Technical Societies

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- 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)