



# New Orleans Section

Setting the Standard for Automation

March 2015  
The Current Pneusletter



## Next Section Meeting

Date	Tuesday 3 March
Place	Smilie's Restaurant 5725 Jefferson Hwy. at Edwards Ave. in Harahan
Time	Social hour 6:00–6:30 p.m. Program and dining at 6:30 p.m.
Price	Regular: \$25 Student: \$10
Click to RSVP	<a href="mailto:isanolaneworleans@gmail.com">isanolaneworleans@gmail.com</a>
Pav in advance	Regular: Click <a href="#">here</a> to pay in advance on <i>PayPal</i> Student: please pay at the meeting

These links are "hot."  
Try them out to find  
out what's going on!

Check out p.4 for information on the section's upcoming seminar on  
29 April

## The Ever Changing World of Alternative Energy Systems: Where We Have Been and Where are We Going?

ISA New Orleans Section is pleased to offer members and guests at its March section meeting a presentation by Mark Zappi, Ph.D., Dean of Engineering at the University of Louisiana at Lafayette. Registered professional engineers can earn one PDH by attending the presentation.

The energy industry is changing dramatically as new petroleum resources emerge and prices remain highly dynamic. Over the past 20 years, a tremendous amount of effort and funding has been invested in alternative energy processes. Dr. Zappi's presentation will provide a summary of recent directions with alternative energy processes and detail how today's energy markets are impacting technology development investments.

Dr. Mark Zappi currently serves as the Dean of Engineering at the University of Louisiana at Lafayette (UL). He also holds the Chevron Professorship in Chemical Engineering and is the Director of the UL Energy Institute. Prior to joining UL, Dr. Zappi was a named professor within the Chemical Engineering Department at Mississippi State University



where he served as the Founder and first Director of the U.S. Department of Energy's Mississippi University Research Consortium for the Utilization of Biomass. Prior to his tenure at Mississippi State University, he served as the Leader of the Bioremediation and Chemical Oxidation Research Team at the U.S. Army Corps of Engineers' Engineering Research and Development Center in Vicksburg, Miss.

Dr. Zappi holds a Bachelor Science degree in Civil Engineering from UL and a Master of Science Degree and Ph.D. in Chemical Engineering from Mississippi State University.

His areas of expertise are the production of energy (both fossil fuel-based and alternative), chemical products derived from novel chemical processes, and treatment of contaminated media including petroleum contamination. Dr. Zappi has over 200 technical publications and three patents. He has generated over \$40M of R&D funding over this career. Dr. Zappi is currently involved in the commercialization of three developing energy technologies in partnership with private industry. He also often serves as a technical consultant for optimization of energy systems in support of numerous industrial and governmental entities.■

## SECTION OFFICERS 2014–15

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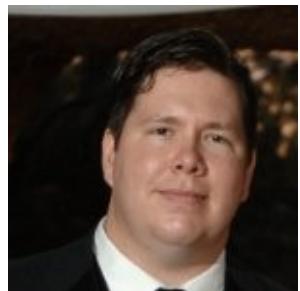
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## President's Message

**Steven P. May**  
**President**  
**ISA New Orleans Section**  
**Ph.: (504) 456-7446**  
**spm@cpullc.com**



Fellow Members,

We had a great turnout for the ethics meeting in February. Dr. Norma Jean Mattei did a great job mixing the real world with ethics.

Our next meeting topic will be “The State of Alternative Energy” with speaker Dr. Mark Zappi. There have been a lot of advances in this field, so I am sure it will be very informative.

The section meeting for April will actually be a field trip—a tour of the Abita Brewery—, which should be a lot of fun while being informative at the same time!

Also, do not forget about the ISA NOLA Safety Seminar on Wednesday 29 April. The instructor for this seminar will be Paul Gruhn, P.E., and it will be held at Jacobs Engineering’s office in Metairie. For more information, please see page 4 in this newsletter.

ISA New Orleans Section has re-started the Corporate Sponsorship Program this year. We now have six corporate sponsors that we recognize in the newsletter, on the website, and in all section meetings. Help New Orleans Section help the community and ask your company to sponsor as well.

The ISA New Orleans Section Board can always use help from the members of the Section. If you feel the need to help the Society and New Orleans Section, please feel free to contact me or one of the Board members and join us at a monthly Board meeting. ISA is your organization and it is as great as the people who support it. Also, if you have any feedback as to how we can serve better, please feel free to let us know in whatever way is comfortable.

We continue to work hard to make ISA New Orleans Section the best section it can be! I hope to see you at a meeting or event soon! Thanks for your participation!

Steve May  
President  
ISA New Orleans Section, Inc.



**New Orleans Section, Inc.**

## Articles & Announcements

### Articles and Announcements

Submit an article or announcement to *The Current Pneusletter* to Larry Iverson via [lhiverson3@att.net](mailto:lhiverson3@att.net).

### Deadline

Materials must be submitted by the 10<sup>th</sup> day of the month preceding the issue in which it should appear.

## Sponsors

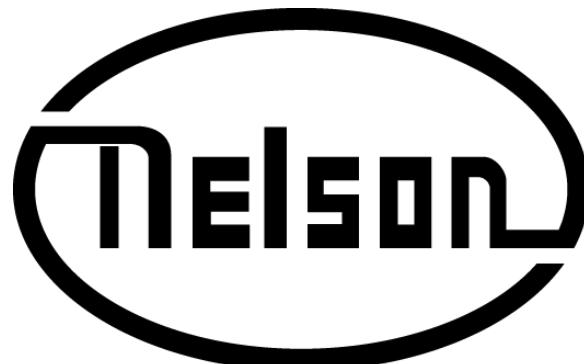
### Sponsors

Please contact your Marketing Chair, Larry Saunders, for more details and availability regarding future sponsorship with the ISA New Orleans Section beginning in the fall.

# Corporate Sponsors Page



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*Powering Business Worldwide*

# Seminar

## General Safety Instrumented Systems

### Presenter: Paul Gruhn, P.E.

**Date: Wed. 29 April 2015 | Time: to be announced**  
**Price: to be announced**  
**Jacobs Engineering**  
**3330 W. Esplanade Avenue South, Metairie, La.**

ISA New Orleans Section, Inc., presents this seminar in its ongoing mission to provide training opportunities for member and non-member practitioners

### Introduction

- What is a safety instrumented system?
- Knowledge gained from recent accidents (hindsight vs. foresight)
- Applicable standards, guidelines, recommended practices, and legislation

**Earn  
8  
PDHs**

### Philosophy of design for safety

- The safety life cycle
- Safety control vs. process control and the “separation” issue
- Independent protection layers
- Assessing process risk (frequency & severity)
- Determining Safety Integrity Levels (qualitative and quantitative techniques, including exercises)

### System implementation issues

- Failure rates and modes
- Safe failure fraction and minimum hardware fault tolerance requirements
- The real impact of redundancy (single, dual, triple)
- Safety requirements specification
- Relay systems (including modeling exercise)
- Software based systems (PLC, TMR, 1oo2D, including modeling exercises)
- Impact of field devices on system performance (including modeling exercises)
- Installation, maintenance, testing & management of change

### Takeaway book:

**"Process Safebook 1—  
Functional Safety in  
the Process Industry"**



### Speaker bio: Paul Gruhn, P.E.

- Global Process Safety Consultant at Rockwell Automation
- ISA Fellow
- Member of the ISA 84 standard committee (on safety instrumented systems)
- Member of the ISA 101 standard committee (on human machine interfaces)
- Developer and instructor of ISA courses on safety systems
- Author of two ISA textbooks (“Safety Instrumented Systems: Design, Analysis & Justification” and “Sell More Through Effective Technical Presentations”), two chapters in other books, and over two dozen published articles
- Developer of the first commercial safety system modeling software
- Bachelor of Science Degree in Mechanical Engineering from Illinois Institute of Technology
- Licensed Professional Engineer (PE) in Texas and member of CSE (Control System Engineer) exam team
- ISA 84 Expert

## Fuses and circuit breakers—differences and the similarities

by William W. Brock, Automation Specialist  
The Reynolds Company

Both pieces of equipment are designed as protective devices. They protect equipment and people by reacting to current overloads and interrupting the circuits they are on. All are wired in series on the “hot” or supply side of the circuit between the source and the load. The similarities pretty much end there with interrupting the continuity.

A fuse is a “one-shot” device. While there are some fuses with replaceable elements that can be reinstalled, the bottom line is that when a fuse is overloaded, an internal element melts; the fuse must be replaced and reinstalled before the circuit is protected and ready to go. Circuit breakers work much like a switch in that a current overload “opens” the breaker, which can be reset by moving the handle back to the ON position. A misconception for many years has been that *all* manufacturers of circuit breakers guarantee their devices only for the first operation.

It was said in the past that fuses are primarily aimed at protecting the devices and wire in a circuit, while a breaker is a device to protect the people working around the circuit. That, however, was never purely true and makes for good legend. Both are relied upon in the field to protect hardware and the people who use it.

Care should be taken to replace like for like on fuses both in amperage and type. There are many different types of fuses and breakers. Motors are usually supplied with a slow blow or time delay protection. This allows for the inrush current on starting and, yet, provides the level of protection needed for the running conditions of a motor. Conversely, solid-state electronics have, for years, been devices designed to blow quickly at the first sign of increased current. However, some circuit breakers now do have long time delay. Most integrated circuit devices, FETs, and RF-sensitive devices will self-destruct under very small overloads and must be protected carefully.

A circuit breaker works in one of two ways, with an electromagnet (or solenoid) or a bi-metal strip. In either case, the basic design is the same: when

turned on, the breaker allows electrical current to pass from a bottom to an upper terminal across the solenoid or strip. When the current reaches unsafe levels, the magnetic force of the solenoid becomes so strong that a metal lever within the switch mechanism is thrown, and the current is broken. Alternately, the metal strip bends, throwing the switch and breaking the connection. To reset the flow of electricity after the problem is resolved, the switch can simply be turned back on, reconnecting the circuit. Sometimes you have to finish the process of turning it off for the metal strip to reset.

There are many options that can be added to these, and with good reason. One of these options for fuses and breakers are lights that show they are still good. Other fuses and breakers are available with lights that show they are bad. It is very good to know which ones you are dealing with before proceeding with troubleshooting. Micro fuses, cartridge type, and screw in fuses are just a few of the fuse types. Single and multiphase breakers, plus units that can be converted from one to the other, can be purchased. Breakers with dual circuits on a single frame can be supplied. The list is almost endless.

One of the most important things to keep in mind is that a blown fuse or open breaker is an indication of trouble. If a problem occurs, a person needs to find out what it is before it gets worse. Do not keep resetting a breaker without investigating. Also, do not replace a fuse with another one just because it fits and cause further problems. Sooner or later it will cost money, lost time, possibly lost property and, worse yet, injury or death. A scenario would be if a motor heats up and a repeated breaker or fuse replacement occurs; it will eventually go completely bad and need to be replaced on an emergency basis at 3 a.m. Sunday morning for triple time, or worse yet catch fire. Thus, it is best to find out what the problem is before it becomes an emergency and to correct it in a timely, economically advantageous and safe manner, whether or not it is fused or protected by a circuit breaker.■

### New Orleans Section, Inc.



## ISA New Orleans Section 2014–15 Program and Meeting Schedule

Date	Topic	Speaker
Tues. 3 Mar.	The Ever Changing World of Alternative Energy Systems: Where We Have Been and Where are We Going?	Mark Zappi, Ph.D., Dean of Engineering at the University of Louisiana at Lafayette
Fri. 10 Apr.	Plant Tour—Abita Brewing Company Abita Springs, La.	
Wed. 29 Apr.	Seminar—General Safety Instrumented Systems Jacobs Engineering, 3330 W. Esplanade Ave. South Metairie, La.	Paul Gruhn, P.E., Global Process Safety Consultant at Rockwell Automation, ISA Fellow
Tues. 5 May	In planning	

### Society Announcements

#### ISA International Instrumentation Division Symposium

For more than 60 years, the IIS has provided instrumentation professionals with an annual forum for learning and sharing knowledge and fellowship with friends and colleagues in the field.

The 2015 IIS, taking place in May builds on this outstanding tradition through collaboration between the founding organization, the International Society of Auto-

mation (ISA), and the Society for Machinery Failure Prevention Technology (MFPT Society). This partnership paves the way for an even broader perspective and greater value for those seeking to explore what's new and innovative in instrumentation techniques, solutions, and applications.

Click [here](#) to visit online and register. ■

#### February section meeting

#### Norma Jean Mattei, Ph.D., P.E., presented “Engineering Ethics”

Photo montage courtesy of Barbara Brock



## Meeting Minutes, Executive Board ISA New Orleans Section, Inc.

3 February 2015

### Present

Steve May  
Bill Brock  
Larry Iverson  
Dean Bickerton  
Larry Saunders

### Not Present

Roger Reedy  
Brandon Carey  
Nat Muthaiah  
Brad Vicknair  
Toby Miller

Bob Deeb  
Leo Holzenthal  
Sean Curtis  
Beth Walker  
Jose Suarez

Ram Rama-  
chandran  
Mike William-  
son  
Mike Benbow

**Guest:** David Vice

### Call to Order

ISA New Orleans Section President, Steve May, called the meeting to order at 5:09 p.m.

### Quorum

The Secretary declared a quorum. Nine members are required for a quorum.

### Safety Topic

The safety topic was cold and flu season and measles. This can be prevented by washing hands with soap and water, using alcohol based products, avoid touching eyes and nose, and avoid being around sick people. Practice good health habits by covering nose and mouth when sneezing, and stay home for a minimum of 24 hours when you have fever.

### Review & Approve Agenda

The board meeting agenda was distributed. No revisions were requested.

### Review Communications from Society

The President reported he has established regular communications via Rachael with Society headquarters.

James Haw advised that the District Leadership Meeting will be held on 25 April in Galveston; there will be a reception the night before. It was decided that Steve and José would attend. If José cannot attend, then Brad would be asked to step in. (The budget only has \$500 allocated for this meeting.) Consideration on budget needs to be made in adjustment to budget based on employers' willingness to contribute.

### Review Communications from Others

None.

### Announcements

None.

### Report of Officers and Committees

#### President

The President reported that an email vote was conducted and that respondents approved having next year's Honors and Awards Banquet at the Southern Yacht Club on 15 Jan. 2016; two board members voted nay. The board requested Dean Bickerton to contact and secure the date through the section's SYC sponsor.

The President announced he would be attending the District Leadership Meeting.

He indicated he would appoint a committee for the nominations of officers for next year's term.

### Next Meeting

## Executive Committee

**Tuesday 3 March 2015, 5:00–6:00 p.m.  
Smilie's Restaurant**

#### President-Elect

President-Elect was present; no report presented.

#### Vice-President

Vice-President was not present; no report presented.

#### Past President

Past-President was present; no report presented.

#### Student Section Chair

Student Section Chair was not present.

Bill Brock announced that UNO had recommended Manish Bhatt for award of the Don Iverson Scholarship. Bhatt is a junior with a GPA of 4.0. Bill indicated he would contact the Society's Treasurer, copying the section's treasurer, requesting a check.

The instructor for the Senior I & II courses will be forwarding the project titles and abstracts within the next few weeks.

An invitation to attend the EE Advisory Council will be accepted by Dean and Bill.

Student section leadership at UNO has been invited to section board meetings.

Dean expressed a concern over another round of budget cuts by the state government.

#### Secretary

The Secretary was present and reported the last meeting minutes were completed. Recommendation for MOP amendments and revisions will be submitted in March.

#### Treasurer

The Treasurer advised that the Treasurer's report was not complete pending the turnover of the books and funds from the previous meeting. He asked that the President and Secretary meet him at the bank to get the record of officers and signature cards up-dated on the Friday noon of the same week.

A question was raised on two different PayPal accounts and the transfer of funds.

The President requested that Treasurer's report be sent out during the week.

#### Education Chair

Education Chair not present; no report presented.

#### Arrangements Chair

Arrangements Chair had no report.

#### Program Co-Chair

The Program Co-Chair reported that a program for the March meeting has been secured.

Bill Brock committed to contacting Paul Gruhn on the exact topic and syllabus for the April seminar for publication in the next issue of the newsletter.

**MINUTES from page 7**

The May meeting speaker needs to be arranged. The Program Co-Chair requested assistance.

**Honors and Awards Chair**

Honors & Awards Chair not present; no report.

**Historian**

The Historian had no report.

**Marketing Chair**

The Marketing Chair reported that he was not able to make contacts yet from the membership list requesting additional corporate sponsors.

**Newsletter Editor**

The Newsletter editor advised that the deadline for receipt of content for the March newsletter is 18 Feb. and that the newsletter would be distributed on 22 Feb.

**Membership Chair**

The Membership Chair reported that he is still seeking information from the Society on the status of the roster. He advised that he would use the same invitations and email broadcast format for the regular meetings as he developed for the Honors & Awards Banquet. Also, he will use information from the newsletter to develop the email message instead of using an attachment. Timing for notifications was reiterated to occur at two weeks, one week, a few days before, and the day before the event as a reminder. The meeting invite from Gmail will be used as well, emphasizing the value of repetition.

**Exhibits Chair**

The Exhibits Chair was not present; no report.

**Webmaster**

The Webmaster reported that he had outstanding action items: (1) to update the website, (2) to put a PDF widget on the website for the newsletter, and (3) to add corporate sponsors. He advised he would attempt to accomplish these during the week of Mardi Gras.

**Society Delegate**

The Society Delegate was not present; no report.

**Old Business**

The Event Planner assistance discussion was deferred to the next board meeting.

The Executive Committee needs to look at using another source for email notifications such as MailChimp or another service to isolate the problem of Spam.

The Executive Committee needs to settle on a figure (e.g., \$50k) in the Don Iverson Scholarship Fund to attain before it considers changing the amount of the annual scholarship award and the amount the section would contribute each year.

The Executive Committee needs to look at other ways to fund the Don Iverson Scholarship Fund, such as a shrimp or crawfish cook-off with vendor support similar to the Chili Cook-Off in Houston.

Reminder: the newsletter editor invites submission of content for the newsletter.

**Action Items**

Items in red typeface are past due/time-critical/needs-immediate-attention and items in black need timely attention. Strikethrough indicates action item is complete.

- ~~1. Bill Brock to communicate back to GNOSEF on availability for Ram and associates to speak at schools.~~
- ~~2. Bill Brock to contact EPCs for possible locations for future ISA meeting at noon or dinner.~~
- ~~3. Dean Bickerton to recommend some dollar amount goals for the Children's Museum.~~
- ~~4. Steve May, Nat Muthaiah, and Bill Brock to set a date for transfer of officers duties at bank.~~
- ~~5. Mike Williamson to submit written report of society of delegates meeting.~~
- ~~6. Dean Bickerton to add corporate sponsorship logos on website.~~
- ~~7. Mike Williamson to provide information back from Leaders Conference on Dropbox and development of SharePoint by the Society.~~
- ~~8. Dean to set up website with newsletter object.~~
- ~~9. Mike Williamson to cash check from last year's delegates meeting and to submit the expense report for this year.~~
10. Steve to submit the quarterly report by 15 March.
- ~~11. Dean Bickerton to provide copy of webmaster PDF file for José Suarez.~~
12. Steve May and José Suarez or Brad Vicknair to attend the District Leadership Conference 24–25 April.
- ~~13. Steve May to put together officer nominating committee.~~
- ~~14. Bill Brock to contact the Society treasurer for Don Iverson Scholarship award.~~
- ~~15. Bill Brock to forward the project titles and abstracts from the instructor for the Senior I & II courses within the next few weeks.~~
- ~~16. Dean Bickerton and Bill Brock to attend the EEAC at UNO.~~
- ~~17. Nat Muthaiah to send the Treasurer's Report out during week of 1–7 February.~~
- ~~18. Bill Brock to gather the info on the ISA Safety Seminar on 29 April at Jacobs Engineering.~~
- ~~19. Bill Brock to communicate with Society headquarters on status of roster.~~
- ~~20. Bill Brock to follow the UNO Engineering Society on the ISA NOLA LinkedIn.~~
- ~~21. Bill Brock to follow the corporate sponsors on social media.~~
22. Bill Brock to review the nominating committee procedures in the MOP and make recommendations including balloting.
23. Bill Brock to bring a copy of MOP to future board meetings.

**Time & Date of Next Meeting**

The next board meeting will be at 5 p.m. on 3 March at Smile's Restaurant, 5725 Jefferson Hwy., Harahan, La.

**Adjourn Meeting**

Larry Saunders motioned to adjourn the board meeting with Nat Muthaiah seconding the motion. The meeting adjourned at 5:48 p.m. with all approving. ■