



Wilmington Section ISA  
Box 9254  
Newark, DE 19714-9254

Wilmington Section ISA

ISA—The Instrumentation, Systems, and Automation Society



Check out our web page at <http://www.isa.org/community/wilmi>

## Wilmington ISA

### Annual Picnic

**5:30 pm - Sunset**  
**Tuesday, June 28, 2005**  
**"Our Lady of Grace Picnic Grounds"**  
**487 Chestnut Hill Road**  
**Newark, DE**

**RSVP to: Mike Morkun**

## ISA SENSOR

Published By  
WILMINGTON SECTION ISA  
PO Box 9254  
Newark, DE 19714

### 2004-2005 Officers

President: Ken Lawrence  
ACE (302) 738-8800  
President-Elect: Stephen Prettyman  
Rohm&Haas (302)366-0500 ext2808  
Treasurer: Tammy Mukoda  
DuPont (302) 774-2570  
Web Editor: Cullen Langford  
Cullen G Langford Inc. (610) 255-4164  
Program Chair: Mike Morkun  
DuPont (302) 774-4174  
[michael.b.morkun@usa.dupont.com](mailto:michael.b.morkun@usa.dupont.com)  
Membership Chair: Matt Murphy  
DuPont (302) 695-6315  
[matthew.f.murphy@usa.dupont.com](mailto:matthew.f.murphy@usa.dupont.com)

# The Sensor

June 2005

## June 2005 Event

**ISA - Wilmington  
Annual Picnic  
Tuesday, June 28, 2005  
At  
Our Lady of Grace Picnic  
Grounds**

Yes, it's that time of year again when we fire up the grills and fill the air with the smell of chicken, hamburgers and hotdogs.

Come join the families of the Wilmington ISA section for our Annual ISA Picnic at 5:30 -Sunset at Our Lady of Grace Picnic Grounds.

Food, Beverages and Fun provided for all. Come prepared for a softball game and other activities like horseshoe pitching.

The Ralph L. Moore Scholarship winner will be honored at the picnic.

### Highlights:

**Softball**

**Horseshoe Pitching**

**Lots of good food**

**Winner Ralph L. Moore  
Scholarship honored**

**ISA Member Awards**

Please RSVP so we know how much food to bring.

### To sign up contact:

**Michael Morkun at  
michael.b.morkun@usa.dupont.com**

## FUTUREEVENTS

**June 28th - Annual Picnic  
Ralph L. Moore Scholarship  
Award**

**July - Enjoy the Summer!**

**August - Blue Rocks Baseball  
Game**

### Directions to Our Lady of Grace Picnic Grounds:

Take I-95 to Rte. 273 west (exit 3). Continue to Rte 4 West. Look for Our Lady of Grace about a mile down Rte. 4 on the left.

### President's Message by Ken Lawrence

It's hard to believe that my year is over as Wilmington ISA Section President. The time went by quickly, but I feel we accomplished a lot this year. We had our usual social events starting the year with the August Blue Rocks Baseball game followed by the September Golf Outing, April Shrimp Boil and our end of year picnic that will be held on June 28<sup>th</sup> at Our Lady of Grace Picnic Grounds.

We had a successful Golf Outing run by Jay Kelly, which raised \$1000.00 for our Section. Nick Sands organized and ran the Exhibit and Technical Seminars Event held in November that attracted over 100 attendees to the exhibitors and allowed us to run an ISA Training Seminar on Safety Instrumented Systems.

Joe Gunn and his team took over the Shrimp Boil cooking with a very tasty shrimp boil meal after the untimely lose of Dan Roarty in an auto accident last year. We paid special tribute to Dan at the Shrimp Boil with a toast and got to meet his wife Kelly and children.

But it wasn't just all just fun and play, we had a number of technical meetings covering topics like; Cyber Security for Process Control Systems, Functional Safety, a joint meeting with IEEE on Self-Organizing Wireless Networks, and Instrumentation for Temperature Control. I want to thank Mike Morkun and Matt Murphy for the time they put in organizing and planning our meetings as this year's program chairs.

Of course, without the continued updating of our webpage and emailing of newsletters and meeting announcements by Cullen Langford and the Sensor mailings by Dirk Sweigart we wouldn't have had the successful turnouts for these meetings and events.

We lost some good friends over the year and made some new ones as we added new members to the WISA roster after attending a meeting or event. Matt Murphy filled in as our Membership Chair and will continue in that role with the new leadership. His contributions have already made a difference in bringing new members into the section and making them feel welcomed.

We started the Dan Roarty Memorial Scholarship for the University of Delaware for the Engineering College. Bill Balascio started the ball rolling as our Student Section Liaison through his introduction of our ISA Section to Deirdre Smith, Director of Development and Michael Vaughan, Assistant Dean of Student Affairs. His initial meetings and the hard work and follow up by P.C. Gopalratnam and George Bentinck paid off with the college being able to award two engineering students \$1000.00 each by the 2005 awards date.

Janelle Konchar was awarded one scholarship from the UOD College of Engineering. She is interning this summer at Black & Decker. Jennifer Lawrence was awarded the UOD Engineering Technology scholarship and will be interning at GZA Geo Environmental this summer. Congratulations to both students for their hard work and dedication to getting their engineering degrees.

The dedication of the Executive Committee to plan our events, meetings and review our financial reports made the President's job pretty easy. As treasurer, Tammy Mukoda kept our accounting accurate and understandable. As Honors & Awards Chair, Robert Crowder led the way for getting Victor Maggioli recognized as an ISA Fellow and will have section awards ready for our annual picnic.

Our past president's attendance on the committee of Kong Nguyen and Merlynn Wegter along with the contributions of all those mentioned previously made serving this year as president very enjoyable.

I look forward to working along side your new WISA Section President Stephen Prettyman who filled the role of President-elect so effectively. He will have some new talent added to the committee as Debbie Lien and Jennifer Slivka join us as Program Chairs. He still needs a President-elect to help him during his term so don't be shy, go up and introduce yourself to him during the picnic and let him know you're ready to help.

As I close out my last President's message, I would like to thank you the members for making our Wilmington Section a success. Your executive committee looks forward to serving and is always looking for input on how to improve the Section.

I would like to introduce your new Executive Committee that takes over in July. Please welcome the following committee officers as they serve the Wilmington ISA Section for 05-06.

Stephen Prettyman – President

Cullen Langford – Vice President, Assistant WebMaster, Publications Chair & Past President

Tammy Mukoda – Treasurer

Debbie Lien – Program Chair

Jennifer Slivka – Program Chair

Kong Nguyen – Education Chair & Past President

George Bentinck – Scholarship Chair & Past President

P.C. Gopalratnam – Scholarship Chair & Past President

Matthew Murphy – Membership Chair

Nick Sands - Newsletter Editor / Standard & Practices & Past President

Michael Morkun – WebMaster

Robert Crowder – Honors & Awards & Past President

Ken Lawrence – Marketing Chair & Past President

Bill Balascio – Student Section Liaison

Jay Kelly – Golf Outing Chair

Joe Gunn – Shrimp Boil

Merlynn Wegter – Past President

We are still in need of a President-elect, please contact Stephen Prettyman at [sprettym@rohmmaas.com](mailto:sprettym@rohmmaas.com) for more information or if you would like to apply for the position.

### **Ralph L. Moore Scholarship Announcement**

(George & Gopal) Our scholarship committee reviewed several applications and selected John V. Bingham of Townsend, DE to receive the Ralph L. Moore scholarship for this year.

John will receive \$1000 towards his college education at the Virginia Polytechnic Institute. We received several well-qualified applications this year and were impressed with the quality of students pursuing higher education in the technical field from our region. We thank the Wilmington section ISA for extending this opportunity to review such high caliber of talent in our area.

**Measuring Safety - BBBB  
(Bonus)  
Safety Instrumented Systems  
Verification: Practical  
Probabilistic Calculations by  
Harry Cheddie and William  
Goble**

**Reviewed by Nick Sands**

Following close on last fall's approval of the new safety instrumented systems standard ANSI/ISA-84.00.01-2004 (IEC 61511 Mod) Functional safety: Safety Instrumented Systems for the process industry sector, the new book by William Goble and Harry Cheddie is the right book at the right time.

Safety Instrumented Systems Verification: Practical Probabilistic Calculations is a well written and useful reference for anyone working with safety systems.

Both Goble and Cheddie have written safety other safety related books for ISA. Dr Goble, currently a principle partner at Exida, has over 30 years of experience and holds degrees from Penn State, Villanova, Eindhoven University of Technology. He is an ISA Fellow, a PE, and a Certified Functional Safety Expert (CFSE). Cheddie, also currently a principle partner at Exida, has many years of experience. He is certified by ASQ as a quality software engineer and a reliability engineer, a PE, and a CFSE.

This book starts with a very clear overview of the safety lifecycle, which gives a picture of how the different tasks related to safety systems fit together according to IEC61508 and S84/IEC61511.

Next is an explanation of what a safety instrumented system (SIS) is and how it is different from a basic process control system (BPCS), a good thing to understand.

The following chapters build up a basic understanding of the reliability engineering terms and calculations used in SIS verification. The failure modes, safe and dangerous, undetected and detected, also impact the verification calculations. Another consideration for the calculations is the demand mode; continuous, high demand, or low demand. Depending on the demand mode, testing can make a significant difference in the calculations, but the authors show some very interesting limits to testing credit.

After understanding the basic calculation methods to determine the probability of failure on demand (PFD), there remains the question of what numbers to use and the SIL claim limits for devices and architectures. The authors give guidance on where to get the magic numbers for the calculations and how to develop numbers for sensors, logic solvers, and valves. The discussions set the stage for the industry examples that demonstrate the iterative process of design and calculation.

The final chapter covers the contentious issue of separation, not performing safety functions in a control system, but performing control functions in a safety system. There are also eight appendices that provide background and extensions on topics including statistics, probability, and architectures. The appendices are as well written as the chapters.

Goble and Cheddie have done an excellent job with this book. In short, well written chapters, they explain the language and math of safety systems.

The step by step breakdown of the complicated verification calculations makes not only a great guide, but an excellent resource that will be useful for years to come. The appendices also provide an excellent reference. Unless you have a PhD in reliability like Dr. Goble, this is a more than a must buy, its a bonus book. You can find it at ISA for \$89, member price.

---

**Visit or Website!**

If you get a chance visit our WISA website. Cullen Langford does a wonderful job keeping it updated with the latest information. You can get:

**[NEWS AND VIEWS](#)**

**[The Sensor latest issue  
May 2005](#)**

**[Event Flyer](#)**

**[Cyber Security \(ppt\)- March  
2005](#)**

**[District 2 Newsletter Feb 2005](#)**

**[Philadelphia Section  
\[http://www.isa.org/~phila/  
phillyisa/index.htm\]\(http://www.isa.org/~phila/phillyisa/index.htm\)](#)**

**[Book Reports by Nick Sands](#)**

**[Sensor Archives](#)**

Visit the website at [www.isa.org/community/wilmi](http://www.isa.org/community/wilmi) on a regular basis to keep up with past and present events, newsletters, book reviews and current presentations.