



Wilmington Section ISA  
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Wilmington Section ISA

ISA—The Instrumentation, Systems, and Automation Society



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

### Wilmington ISA

**Instrumentation & Control Credentials  
Highlighting ISA's new CAP Program**

**Presented By  
Nick Sands**

**DuPont Chemical Solutions  
Process Control Technology Manager**

**6:00 PM, Tuesday, February 22, 2005  
Applied Control Engineering (ACE)**

Directions at [www.ace-net.com](http://www.ace-net.com)

**RSVP to: Mike Morkun or Matt Murphy**

### ISA SENSOR

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# The Sensor

February 2005

## February 22nd Meeting 6:00 PM at ACE Instrumentation & Controls Credentials

"Highlighting ISA's new Certified Automation Professional (CAP)"

**Presented by:**  
**Nick Sands**  
**DuPont Chemical Solutions**  
**Process Control Technology**  
**Manager**

In today's competitive and regulated environment, credentials such as licenses, certifications, or certificates can distinguish a job candidate or document qualifications. There are thousands of "certifications" available, but only a few of value to those in the field of instrumentation and control, which vary from specializations in safety or security to general practitioner certification. Relevant programs are discussed and the general programs such as Control System Engineer license, Certified Automation Professional, and Certified Control System Technician are compared in detail.

### **Some background on CAP:**

ISA has developed a certification program for automation professionals. Certified Automation Professionals (CAPs) are responsible for the direction, design, and deployment of systems and equipment for manufacturing and control systems.

### FUTURE EVENTS

March 22nd - Cyber Security by Tom Good, DuPont

April 26th - Annual Shrimp Boil at ACE

May 24th - Section Meeting

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

ISA certification as a CAP will provide a non-biased, third-party, objective assessment and confirmation of your skills as an automation professional.

CAP will give you and others working in automation and control a professional identity and

- recognize your specialized education, training, and knowledge in automation
- demonstrate your qualification, competence, and potential to current and future employers
- establish career paths and job advancement opportunities
- motivate you to continue growing in the field of automation

CAP Performance Domains  
Six major performance domains account for the examination's content.

Domain I: Feasibility Study  
Domain II: Definition  
Domain III: System Design  
Domain IV: Development  
Domain V: Deployment  
Domain VI: Operation and Maintenance

### **Bio: Nick Sands**

Nick has a BS in Chemical Engineering from Virginia Tech and over 14 years of experience in process control at Dupont. He is a certified automation professional (CAP).

### **President's Message By Ken Lawrence**

We have the Annual Shrimp Boil coming up on April 26<sup>th</sup> at ACE and are looking for Sponsors. If your company is a distributor or manufacturer of products or services that our members purchase, we would ask you consider being one of our sponsors this year. We have two levels of sponsorship.

### **Friends of the Shrimp**

\$125.00 - this sponsorship provides recognition in two issues of the SENSOR as well as at the Boil itself. It also entitles the sponsor to set up a table top at the Shrimp Boil to display your company's products and services.

### **Boil Buddy**

\$50 - this level of sponsorship provides recognition in two issues of the SENSOR as well as at the Shrimp Boil festival.

Please consider being a sponsor for this year's biggest Wilmington ISA social event. Contact Ken Lawrence at [lawrencek@ace-net.com](mailto:lawrencek@ace-net.com) for more information.

## **Scholarships Update**

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

Each year the Wilmington section ISA extends a \$1,000 scholarship to a high school senior who is planning to attend a 4-year college, University or a technical training school. An ISA member of our section must sponsor the candidate and applicants pursuing a technical or science degree will be given higher preference. The scholarship committee will select the successful candidate. The application deadline is May 15 and the check written to the college of the candidate's choosing will be presented at the ISA Annual Picnic in June. The details of the selection criteria and the application may be found on the Wilmington Section ISA website [www.isa.org/community/wilmi](http://www.isa.org/community/wilmi) after March 1, 2005. - George C. Bentinck & P.C. Gopalratnam

### **Daniel Roarty Memorial Scholarship**

To honor a late member, Daniel Roarty, Wilmington section ISA is collaborating with the University of Delaware to offer a scholarship to students completing their Junior/senior year at the University of Delaware. The \$2,000 award will be split equally between the college of engineering and the college of engineering technology.

The key criteria for this scholarship are: demonstrated leadership, interest in national level professional societies and willingness to take on voluntary participation in engineering related interactions beyond the university curriculum. We are also aligned with the University's minimum GPA requirement of 3.0 for this recognition.

George and Gopal shared with the University our section's interest in some or all of the following objectives to gain the most value from this collaboration: (a) Sustain section activities into the future so as to attract continued membership from the local area; (b) University student and faculty participation in our section meetings; (c) Faculty member presentation of seminars at our alternate year Exhibit and Symposium; (d) Assistance from faculty in review of technical papers for International society level publication awards; and (e) University hosting of annual student fair where section vendor representatives can participate. Additional assistance that the section can offer includes: (a) Provision of a cost-free booth at our local Exhibit and Symposium; (b) Sponsorship of selected students to a national ISA annual meeting; and (c) Purchase of technologically related books and video tapes for the appropriate departmental library

The candidate will be selected by the University's college of Engineering. Details of the award will be shared in future issues of SENSOR newsletter. - George C. Bentinck & P.C. Gopalratnam

## **Ralph L. Moore \$1000 ISA Scholarship Applications Being Accepted Presented by the Wilmington Section of the International Society of Measurement & Control**

### **Application Requirements:**

A Wilmington Section ISA member must sponsor the Applicant

Applicant must be a high school senior

Applicant must have plans to attend a 4-year college/university or technical training school.

Applicants pursuing a technical or science degree will receive preferential treatment.

### **Supporting Information Required:**

Short written essay including:

\*Name of sponsor

\*Achievements (both scholastic & personal)

\*Extra curricular activities & community service

\*Leadership roles

### **Recommendations:**

\*Teachers (2)

\*Personal (1)

### **Award & Presentation:**

The Wilmington Section Scholarship Committee will review this information. Deadline for receipt of information by the committee is May 15th. The recipient will receive a check for \$1,000 written to the university or college at the ISA Family Picnic planned in June 2005. All applicants will be notified of the results. In case of tie the award will be evenly divided.

### **Submit information to:**

P. C. Gopalratnam  
INVISTA S.a.r.l.

Three Little Falls Centre  
2801 Centerville Road  
Wilmington, DE 19808

e-mail:

[p.c.gopalratnam@invista.com](mailto:p.c.gopalratnam@invista.com)

The ABCs of Network Security -  
BBB (Borrow)

**Industrial Network Security by  
David Teumim**

**Reviewed by Nick Sands**

One of the hottest topics in the control industry is security for process control systems and networks. Finally ISA has a book on the subject, Industrial Network Security by David Teumim.

Teumim is a certified information system security professional (CISSP) and a workgroup leader for SP99, the committee working on manufacturing and control system security. The book is very basic, an introduction to an introduction to the subject. But with such a new area, this elementary book is a good beginning to the body of knowledge.

The first chapters are an introduction and background, answering many questions. What is an industrial network? Why should it be secure? Can it be secure and open? Who should work on security? How is the cost justified? Teumim contrasts IT security issues, managed corporately by a CIO and a cybersecurity manager, with security for manufacturing control systems, managed by a plant personnel like the automation and control manager. The shift of control systems from proprietary to commercial-off-the-shelf hardware and software and network connectivity have created new vulnerabilities in industrial networks. But cybersecurity alone is not enough. A complete security program also includes personnel security, and physical security.

Cybersecurity consists of protecting the availability, integrity, and confidentiality of the systems and data. This requires understanding the threats to the systems and the vulnerabilities of the systems.

Threats like the Slammer worm and buffer overflows are explained. Some of the highlights of this book are the examples of real attacks on control systems and the consequences.

Countermeasures can be designed to protect against the threats. Usually a system for identification, authentication, and authorization is one of the most important layers of defense.

The remainder of the book covers the steps, at a very general level, to execute an industrial network security program. The first step is planning and design for security, such as separation of networks. An understanding of the technology, like encryption and firewalls is important. To make an effective security system requires writing clear policies for the application of technology, trained and aware people, and periodic audits and other methods to provide assurance of the effectiveness of the security program. Some example approaches to industrial network security programs from Dupont and Proctor & Gamble form the last chapter.

Every company in the control community will have people that can benefit from reading this book, people that need a basic understanding of information security for manufacturing and control systems. Teumim just introduces the subject though, with little detailed information. Future books or revisions of this book will have more lasting value as references. So even though this book is a must read, it is not a must buy at \$54 (ISA member price). It is a great book to borrow (BBB).

Disclaimer: The rating is only one readers view of the value of information in one book vs others, based on this one readers experience.

**Leadership Need for WISA**

One key position we are trying to fill for our Wilmington Section is the Education Chair.

The Primary Responsibilities & Duties are as follows:

1. Help develop the subject matter for the monthly technical meetings, special conferences, training courses, etc.
2. Alert members to pertinent instrumentation information.
3. Encourage members to prepare papers for ISA conferences and other technical organization events.
4. Maintain liaison with Student Sections and other organizations devoted to technical education and encourage joint programs.

Another position that we are seeking help in is our local ISA Wilmington Section Website. If you like working on the web and are familiar with website development and support we would like to talk with you.

Please contact Ken Lawrence if you are interested in these roles.

**District 2 Meeting:**

The time for our District Leadership Conference is fast approaching. It is scheduled for April 1-2, 2005 in Myrtle Beach, SC.

As we did last year, we will meet Friday evening (April 1) for a delegates meeting and section reports. Then a full day of meetings and related activities on Saturday (April 2), concluding with our Honors & Awards banquet on Saturday evening.

Donald P. Mailliard  
ISA District 2 Vice-President  
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