



Wilmington Section ISA
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Wilmington Section ISA

ISA, the international society for measurement and control, advances the technology and the competence and careers of practitioners for the benefit of industry and humanity.

Check out our web page at <http://www.isa.org/~wilmdel/>

Wilmington ISA Section Meeting "The Rebirth of Statistical Tools"

**Tuesday, September 26, 2000 6:00 pm
Delaware Technical & Community College
Stanton, DE**

**Directions: I-95 to rte. 7 N (exit 4B), right at first light.
Park in front and enter at the flagpoles.**

Please RSVP by Friday, Sept 22 to
John-W.W.Wood@usa.dupont.com
or leave a message at 856-540-3949

ISA SENSOR

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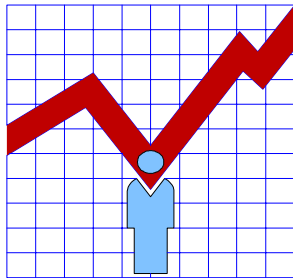
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The Sensor

September 2000



Next Meeting - SPC: Witnessing the Rebirth of Statistical Tools

When asked about Statistical Process Control (aka SPC), do images of quality control charts such as the time-honored Shewhart or CUSUM charts drift to mind? Come to this month's section meeting to find out how the application of statistics reaches far beyond the traditional charting methods. Today, SPC finds applications in some of the hottest arenas in industry. Our guest speaker, Tracy Clarke-Pringle, will describe the history and tools of traditional SPC, and then extend the ideas to show how the latest 'hot topics' such as Product-by-Process, Six Sigma, and Controller Performance Monitoring are all variants of classic statistical ideas.

Tracy Clarke-Pringle

Tracy is a graduate of McMaster University, in Hamilton, Canada, where she recently completed her PhD under the supervision of John MacGregor. Her thesis, which can be best described as 'Topics In...', addressed quality control issues in polymerization reactors, and process control of

CALENDAR OF EVENTS

September 26, 2000
Section Meeting
DelTech

October 11, 2000
Executive Committee
Meeting

November 16, 2000
Exhibit & Technical
Seminars
Holiday Inn Select Hotel

systems with low underlying dimensions. During this time, she gained a unique perspective on the interaction between Statistical Process Control (with a focus on Multivariate methods) and Automatic Process Control. Tracy joined the Process Dynamics and Control group, in DuPont Engineering, in February of this year. Her work to date has been on developing dynamic models for polymerization systems, monitoring and diagnosing controller performance, and developing an operator training simulator/FEL support for a new semi-batch polymerization facility.

Tabletop Presentations

The following vendors will be on hand to show the relevance of their products to the world of SPC. Come show them your support!

Northwest Analytical Quality Analyst (NWAQA) is a desktop software tool that provides fast

and simple control charts (SQC / SPC) by connecting to data from ODBC compliant databases, spreadsheets, or manual entry. Come see an example of a working application performing SQC on real quality data.

In addition, Aspen Technology will demonstrate their **InfoPlus.21** Process Information Management System with a focus on Statistical Process Control and other advanced applications.



Blue Rocks Night Another Success

August 15th was the annual ISA Nite @ the Blue Rocks. It was a beautiful evening for a picnic and a ball game. The food was excellent and plentiful; hot dogs, burgers, grilled chicken and corn on the cob. The game did not go our way as the Potomac Cannons won a pitchers duel, beating the Blue Rocks 2-0. Both runs were in the fourth inning. The ISA Nite @ the Blue Rocks is a great family event. This year all kids received wristwatches just for coming to the game. Join us next year.

- Nick Sands



National Show a Success

The numbers from the New Orleans meeting just concluded are as follows:

Technical conferences — 1,525 attendees. Of these, 910 (58%) elected to take a half-day course that was included in the registration at no extra charge.

Short course registrants — 1,506, a record number. Of these, 1,050 were in the 1/2-day courses (including 910 with conference registration) and 456 in 1, 2, or 3-day courses. Clearly the 1/2-day courses, offered for the first time this year, are popular.

Total meeting attendees: 15,555. Of these, 587 registered for the co-located IMS EXPO (112 paid are included in the conference registrations above). The meeting was expected to draw 24,000 attendees. Removing about 4,000 exhibitors because of the smaller exhibit and number of companies, 20,000 total would have hit the forecast mark. So was it a successful meeting? From the conference and short course educational side, a clear "yes." From the exhibit side, the feedback from the exhibitors also indicates a clear "yes." Although the total number of attendees was below expectations, the quality of the attendees was quite high. This was heard from individual companies and at the exhibitors' meeting on Thursday morning. Some companies even reported a record number of

leads being generated. One conclusion is that either the timing/location, or the state of the industry (or both) are such that the "tire-kickers" and casual-lookers stayed home, and that those 9,200+ attendees who came did so because they had real needs to be met and were real or likely buyers.

Noteworthy Observations from ISA 2000 (one section member's view)

- Hyprotech and others selling operator training simulators.

Greg McMillan (Pharmacia), Fisher-Rosemont, and Hyprotech are pushing operator training simulators, touting benefits like DCS checkout, smoother startups, control studies... F-R DeltaV hookup to Hysys is a slick system. They also talked about running Hysys in parallel with the process for what-if scenarios and soft sensor applications.

- Web enabled control applications and technical sessions were extremely hot.

Web based or enabled applications were everywhere ...from web based control / quality systems to web based EMS systems. You could not get in the sessions on web applications. Lots of papers on quality information systems on the web.

- Fisher-Rosemont and Foxboro Open DCS provide very useful advanced tools for control engineers.

Fisher-Rosemont has really taken the next step in DCS

application development. Two products of note. They have a very powerful blockware MPC environment and an advanced regulatory configuration / development environment that they say reduces application development time from two weeks to two hours. All work is done on the PC-DCS screen; the tools are heavily user configurable and defaulted (user can set up object inherited defaults); user and developer interfaces are standardized; maintenance and support functions are built in. All this creates an equally attractive environment for the control and DCS engineer both.

- Lots of "asset management" tools for instrument problem detection and diagnosis via field-bus or HART interface.

Sites using field-bus are starting to see some real benefits in startup and maintenance. Time devoted to field checkout for startups are cut in half and maintenance inventories for E&I are being drastically reduced. There are some powerful software packages being written for open DCS systems (again Fisher-Rosemont) that run very detailed metrics on control loop elements (transmitters and valves) Metrics like valve cycle count, initial valve signatures ...all help to quickly diagnose problems.

- Several small companies offer tools that might help accelerate web based developments

Two promising contacts are Lighthammer and SL Corporation.

- Phillip D. Schnelle

Measurement and Control Engineering Center (MCEC)

Meeting

Date: Monday and Tuesday, October 30-31, 2000

Location: Hotel Dupont, Wilmington

MCEC, an NSF-grant center which includes the University of Tennessee, Oklahoma State University, Oak Ridge National Labs, and other associated academic groups, is holding this special meeting in Wilmington for the benefit of several of its member companies. However, non-members may also attend after signing a confidentiality agreement. Member companies in this area include DuPont, Hercules, Atofina, Honeywell (formerly AlliedSignal), Bayer, and Ciba Specialty Chemicals.

This Center includes both process analytical instrumentation and process control and optimization research. The first area will be emphasized on Monday and the second on Tuesday, followed by a poster session covering all topics. Progress reports will be presented in the mornings, followed by discussions in the afternoons. Lunch will be included for those who notify the Center of their intention to attend.

Topics to be presented on Monday:

Inline Polymer spectropolarimetry/UV-NIR spectroscopy – Marion Hansen, UT

UV instrumentation for in-situ characterization of batch

reactions/ self modelling curve resolution – Paul Gemperline, ECU

Sol-gel base and ion sensors – Ben Xue, UT

Online rheology sensors – John Collier, UT

Process / polymer mass spectrometry – Kelsey Cook, UT

An evaluation of low-cost miniature optical spectrometers – John Coates, UT

Process NMR – co-operative link with the CPACT center in the UK – Paul Gemperline

Control to economic optimum – Karen High, OSU

Topics to be presented on Tuesday:

Batch monitoring and control – Charlie Moore, UT

Applied process automation laboratory – Duane Bruns/John Arnold

Control & analysis of non-linear dynamics – Duane Bruns/Stuart Daw, UT

Experimental batch control – P. Gemperline/Russ Rhinehart/Karen High

Visual and auditory data-assisted process monitoring – Gary Yen, OSU

Automatic initiation of model adjustment – Rob Whitely/Russ Rhinehart, OSU

Integration of first-principles models with empirical models – Ron Whitely, OSU

If you would like to attend or need more details, please contact Patti Nugent by phone at 865-974-2375 or by e-mail at pnugent@utk.edu. You can also visit their website at <http://mcec.engr.utk.edu>.

Ralph L. Moore Scholarship Awarded

This year's winner was Mr. Andrew Schmalz of Landenberg, PA. Andrew's sponsor was Joe Shunta. Andrew received his \$1000 check at the June ISA picnic.

This year we received a record seven applications. Once again, all of the applicants were outstanding students and the decision was extremely difficult. Thanks to Cullen Langford, Nick Nath, and Ralph Moore for acting as judges.

- Dan Roarty

Welcome New Members!

The following members joined our section within the past six months. Please take a moment to introduce yourselves to them.

Mr. Francis Zielinski
Mr. Karl A. Stevens, E I duPont
Mr. Carsten Juchheim, Jumo Process Control
Mr. Asher Tingle, Red Valve Co

Psst... know a friend who would benefit from ISA membership? From Sept. 1 through Dec. 31, our section will receive an extra \$5.00 rebate for each member signed up. A special application form is required, and can be obtained by leaving your fax number with Bob Crowder at 302-738-7782. So pass it on!

Wilmington ISA Section

Year 2000 Industrial Measurement and Control Exhibit and Technical Seminars



Thursday, November 16, 2000

10:00 AM - 6:00 PM

Holiday Inn Select Hotel

(Formerly Wilmington Hilton)

Off I-95 and Naamans Road in Claymont, Delaware

**See the latest in instrumentation and control technology
right here in your own backyard!**

Access to new and innovative instrumentation products and technology
One-on-one interaction with vendors to discuss the most appropriate
products and equipment to meet your facility's needs

Free Admission

Easy to get to Location, and free On-site Parking
TECHNICAL SEMINARS (Earn Continuing Education Units toward Technician
Certification Renewal—contact us for details)

The 1998 Wilmington Section ISA Exhibit and Technical Seminars were a great success for the exhibitors and Section alike. There were 61 exhibitors and 308 user attendees from 124 companies.

For more information contact Ms. Janet Cunningham

Phone: 301-898-3772 / Fax: 301-898-5596