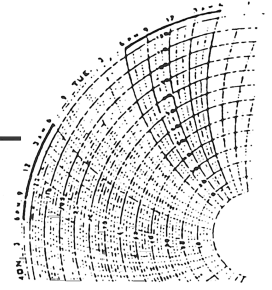




ISA—The Instrumentation, Systems,
and Automation Society

ORANGE COUNTY SECTION
www.isa.org/~oranc/



CHART

February 2004

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Digital data acquisition systems

Modern data acquisition systems are computer based to provide the greatest flexibility and cost effectiveness. This means that the systems use sampled data representation of the analog data. This digital data introduces errors which must be minimized to accurately represent the sampled signals.

The February program will feature a presentation by **Robert Harrison**, retired Boeing/Rockwell Technical Fellow and ISA Life Fellow, who has spent 37 years designing, developing and implementing computer based process control systems and associated real time operating systems. Mr. Harrison also currently teaches *Instrumentation, Data Acquisition, and Control Systems Engineering* classes at Cal State Fullerton. He is also webmaster for the Orange County Section.

System applications include cement, steel, chemical, petrochemical, electrical power generation and dispatch, and robotic systems. His last 16 years at Boeing/Rockwell were concentrated on guidance, navigation and control systems for space vehicles. Since retirement, Bob is applying this technology to applications ranging from environmental water analysis to drag racing engine and vehicle monitoring & analysis.

This program is based on the classes that Mr. Harrison teaches at Cal State Fullerton, and the following items will be covered with notes distributed:

- * System Accuracy
- * Analog Sensor Interfacing
- * Analog Signal Conditioning & Filtering
- * Single Ended vs. Differential Signals
- * Instrumentation Amplifiers
- * Signal Noise & Ground Loops
- * Common Mode Rejection
- * Programmable Gain Amplifiers
- * Signal Multiplexing
- * Analog to Digital Conversion
- * Signal Quantization
- * Sampling Frequency
- * Digital Filtering
- * Alarm Processing
- * Data Analysis

Speaker: Robert W. Harrison, P.E., President of Conex Systems
Date: Wednesday, February 11th
Schedule: 5:00 pm - Social Hour, 5:45 pm - Program
Location: Park Place, Room CN-150, 3353 Michelson Dr, Irvine

Spotlight: maintenance and operations

Keeping a plant up and running is a full-time job. ISA's Maintenance and Operations community provides insight into the best practices for maintaining and running manufacturing lines and processes with minimal downtime and losses to production. Also, since a plant doesn't work without infrastructure, learn the best ways to keep the physical plant and infrastructure of your facility at peak efficiency.

Troubleshooting: A Technician's Guide. A detailed look at the skills and knowledge required for troubleshooting. More at www.isa.org...

ISA Automation and Control Technical Paper Collection. Access the latest maintenance practices and applications from the world's leading practitioners through ISA's extensive technical paper collection. More at www.isa.org...



*"He who lights his candle from mine
receives light without darkening me."
— Thomas Jefferson*

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President's message



In order to keep the momentum going and to continue to provide good programs and services for our ISA members and non-members in Orange County section, we had a kick off meeting at

Rosemount in Irvine on January 10. During that meeting, we reviewed the things we did in Year 2003, and came up several great ideas to improve the things we would like to do in Year 2004 including the program survey sheet.

We want to listen to your voice how we can help you better and provide the programs and the services you need. At the end of each monthly program, we will pass the program survey sheet to every attendee. We will summarize your suggestions and provide you better programs and better services. At the meanwhile, please feel free to e-mail your suggestions to me, JohnG@icpdas-usa.com or any board members.

On 1/14 in Kinko's in Irvine, we had a web seminar called Marketing Warfare. The speaker was **Paul Gruhn** who has many years experience in Marketing. He is the author of ISA text *Sell More Through Effective Technical Presentations*. This presentation covered the following a) Sell More; b) Become a market leader; c) Learn how to create an effective marketing program based on proven and accepted military theory. If you are interested in the PowerPoint presentation, please let us know.

On February 11, we will have a monthly program in Irvine again. The topic will be "Digital Data Acquisition" and the speaker is **Bob Harrison**, a retired engineer from Boeing with a lot of experience in this field. Bob teaches at Cal State Fullerton and is also an ISA instructor. We welcome everyone to this program. Please check our web site for more details.

Also, don't forget to check our web site regarding our local ISA Automation West 2004 in Long Beach. Mark your calendar. This is going to be a great show. You don't want to miss it.

Please feel free to contact me directly with any suggestions and comments you may have. I can be reached at Johng@icpdas-usa.com or (310) 517-9888. Again, we want to hear from you!

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The monthly **ISA Section Newsletters** and annual **Regional Membership Directory and Buyers' Guide** are mailed to all ISA section members in Southern California and Southern Nevada and to ISA student affiliates at Cal Poly Pomona, Cal State Fullerton and Long Beach State. Newsletters include the South San Joaquin Valley Alarm, Los Angeles Annunciator, Orange County Chart, San Diego Signal and Las Vegas Experience. **Changes of address** can only be processed by ISA by at (919) 549-8411 or www.isa.org. For **editorial submissions and feedback**, please contact the newsletter editor. **Advertising rates, circulation information and style guide** is posted at www.TechPubs.net. **Billing** and publishing correspondence may be addressed to TechPubs Communications, PO Box 1605, Costa Mesa, California 92628. Submissions are copyright by the authors with all rights reserved.
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**TREASURER'S REPORT FY 2003-2004
Budget Report 1/06/03**

INCOME	Actual	Budget	Differential
Arrangement Inc		\$ 3,000	
Christmas Event	2,900.00	3,000	
Dues Refund	2,150.98	4,400	4,102.72
Education Inc	460.00	1,200	
Exhibit Inc			
Interest Income	285.89	750	
Other Income			
Honorarium			
Student Competition			
Income(donations)		1,000	
TOTAL INCOME	\$5,796.87	\$13,350	\$7,553.13
EXPENSES			
Arrangements	2,433.92	5,000	
Christmas		3,000	
Education		1,600	
Exhibits			
Honors & Awards		100	
Insurance		250	
Membership			
Misc*	1,938.43		
Newsletter			
Planning Mtg 2004		750	
Pres Spring Mtg		500	
Pres Elect Training	1,396.67	1,500	
President's Budget		500	
Programs		500	
Marketing/Publicity		500	
Society Delegate	1,173.07	1,500	
Student Competition		1,000	
Student Section		500	
Treasurer	67.65	100	
ISA Long Bch Presidents Suite		250	
Dist 11 Leadership Workshop		1,000	
TOTAL EXPENSES	\$7,093.37	\$18,550	\$10,456.63
TOTAL	\$ (1,296.50)	\$ (5,200)	\$2,903.50

Balances (as of 12/31/03)
Checking: \$ 8,736.19
Savings: Account closed. Funds Transferred to Checking.
CD: \$42,403.34