Orange County Section Meeting

Safety instrumented systems and the automation engineer

On Wednesday, February 13, 2008, the Orange County Section will host an interactive panel discussion on safety instrumented systems (SIS). A local panel of experts led by Paul Bodeau of Why Not Engineering, one of the countries leading consultant on safety systems, will demystify safety instrumented systems. The panel will be comprised of Alejandro Fung of Triconex, Charlie Black of Walters Wholesale Electric (Siemens), Larry Lammers of Caltrol (Emerson’s Local business partner) and Jim Stewart of Fluor Corporation. The panel will discuss SIS standards and work practices.

- The basics of SIS will be discussed by the panel and then they will delve into AEC 61508 and ISA 84.01 / IEC 61511 standards, and then cover safety integrity levels (SIL) levels, PFD, SFF, LOPA and proof test intervals.
- Grandfathering / Replacement in kind, or “When are the current SIS rules triggered for existing Safety Instrumentation?"
- What is the difference between using Safety Technology to meet OSHA PSM objectives or using it to reduce non-safety risks such as Financial, Public Relations, or Environmental targets.

With a great mix of engineers and vendors for safety system, this will be an exciting evening. There is lot of information to be shared on this very timely topic so be prompt, bring your questions and be ready to take away ton of information.

The basics of SIS will be discussed by the panel and then they will delve into IEC 61508 and ISA 84.01 / IEC 61511 standards, and then cover safety integrity levels (SIL) levels, PFD, SFF, LOPA and proof test intervals. IEC 61508 is entitled “Functional safety of electrical/electronic/programmable electronic safety-related systems (E/E/PES)” is intended to be a basic functional safety standard applicable to all kinds of industry. ISA 84.01/IEC 61511 is a standards document entitled “Functional safety - Safety instrumented systems for the process industry sector”. The process industry sector includes many types of manufacturing processes, such as refineries, petrochemical, chemical, pharmaceutical, pulp and paper, and power.

Paul Bodeau is President and founder of Why Not Engineering. He has a BSEE from Cal Poly Pomona and has more than 30 years experience in developing hardware and software for various industries. Paul provides independent safety consulting for military and aviation programs. He is also Standards and Practices Chair for ISA Los Angeles Section. Paul can be reached at (661) 259-3805 or pbodeau@whynotengineering.com.

Charlie Black is Automation Technology Manager with Walters Wholesale Electric Company. He has over sixteen years of experience in the process automation industry.

INSTRUMENTATION 2008 expo & training Feb 28

There will be plenty of hands-on training classes, state of the art exhibits, food, cash prizes, full size DARPA Grand Challenge desert race robotic SUV’s -- and one person will leave with an advanced, custom-built RC-control electronic control rover. Those who pre-register at www.instrumentation2008.com will also receive an early -signup gift not available to those who sign-up at the door.

As of January 31, there were 75 state-of-the-art exhibits. In addition, you will be able to talk with hundreds of technical personnel from California, across the US and overseas. As of January 25, Chevron, BP Chemical, ConocoPhillips, S Calif Edison, Los Angeles Dept of Water & Power, See Instrumentation, continued on page 5
Meeting Details
Date: Wednesday, February 13, 2008
Time: 5:00 Networking; 6:00 Program
RSVP: Hiten Dalal at (714) 500-1018 or HitenD@ntrcal.com
Location: Fluor, 47 Discovery, Irvine CA 92618

Nominations Chair --
Raj Adani
Emerson Process Management, (714) 803-3399
raj.adani@emersonprocess.com

Program Chair — Hiten Dalal
Newtech Resources, (714) 500-1000
hitend@ntrcal.com

Publicity Chair —
Sebastian Zielonka
Fluor Enterprises, (949) 349-8773
sebastian.zielonka@fluor.com

Student Section Liaison —
Bob Harrison
Conex Systems, (714) 968-1369
robert_w_harrison@member.isa.org

Webmaster — Bob Harrison
Conex Systems, (714) 968-1369
robert_w_harrison@member.isa.org

Division Vice President -
Ray Spangler
Central Automation, (661) 633-2850
ray.spangler@centralautomation.com

ISA Staff Contact -
Dalton Wilson, ISA
(919) 990-9280, dwilson@isa.org

Treasurer’s Report
Orange County Section
Budget FY2007/8 (June ’07 - June ’08)
September, 2007

INCOME                           Actual       Budget
Arrangements -                   750.00        2000.00
Dues/Membership Rebate -         2,443.32       4,000.00
Education -                      500.00        1,500.00
Interest Income -                456.49        2000.00
X-Mas Party 2005 -               8,159.55       5,250.00
Student Section -                1,500.00       1,000.00
Society Income -                 500.00
Misc. -                          1,500.00
TOTAL INCOME -                   $13,809.36     $17,250.00

EXPENSES                          Actual       Budget
President’s Budget -              210.58        200.00
Arrangements -                   1,120.21       3,200.00
Membership/Mtg -                  500.00
Programs -                       400.00
Education -                      340.00        500.00
Insurance -                      590.00        350.00
Honors Awards -                   200.00
Student Competition -             500.00
Student Section -                250.00
Misc. (Quicken Soft) -            250.00
Pres. Elect -                     1,200.00
Pres. Meeting -                   659.72        1,500.00
Society Delegate -                1,564.09
Pres. Elect -                     1,200.00
X-Mas Party -                     6,017.62       5,250.00
Dist Leadership Conf (DLC) -     2,000.00
Planning Meeting -               527.45        100.00
CLCPE -                          673.00        300.00
Treasurer -                       42.00        100.00
Bank Charge -                     19.10
Misc. -                          812.00
TOTAL EXPENSES -                 $12,575.77    $18,300.00

NET -                            ($1,233.59)    ($1,050.00)
Message from the DVP

ISA is growing

Hello all,

Well Joe Bingham is now done with his duties as District 11 VP. Joe, when you communicated your message each month, it was always heartfelt and pertinent to keeping all of us together and rowing in the same direction! We thank you for your all your efforts and we are glad you are still so active in ISA with your local and International committee work. Many of you have seen me around over the years and for those who I have yet to have the pleasure to meet, I am looking forward to the time we can spend together over the next 24 months.

I am amazed at how ISA has grown and adapted the last few years. What a great message we are sending to our communities. Some of the things I have personally witnessed over the last couple of years are:

Kim Miller-Dunn (International President of ISA) - A “West-Coaster” is now in the key position for ISA. Kim has been championing so many good things like supporting Automation Education in grade school, high school and major colleges. Of course she has had help from so many good things like supporting Automation Education in grade school, high school and major colleges. Of course she has had help from many of you members. Great work is being done!

Kim Miller-Dunn
International President of ISA

Message from the DVP, continued on page 8

Outstanding member nominations due Feb 10

The ISA Honors and Awards Gala, held each October, provides an opportunity for outstanding individuals and companies to stand up, be recognized, and be appreciated for the work that they’ve done. But these individuals and companies need to be nominated first.

The ISA awards program recognizes outstanding technical accomplishments, Society service, contributions to education, student mentoring, standards development, and corporate support. The ISA Honors & Awards Committee is now accepting nominations for 2008 recognition.

Don’t wait! Nominate a deserving colleague today, visit www.isa.org/honors. Nominations are due 10 February 2008.

For more information about the ISA Honors and Awards Program and Honors and Awards Gala, call (919) 549-8411.

Training to highlight Instrumentation 2008

You asked for it - you got it! This year Instrumentation 2008 has tripled the number of technical training sessions and is going on doubling the number of exhibitors. For the latest information and a list of the training sessions, see www.instrumentation2008.com.

Pre-register today for a free gift at . . .

www.Instrumentation2008.com

See us at Instrumentation 2008!
Los Angeles Section

Data communication panel discussion

“Wireless, Modbus, Ethernet, Fiber Optic”

Byron Postma of Carollo Engineers will lead a panel discussion on data communication covering wireless, Modbus and fiber optics on Tuesday, March 18. The panel will consist of the leading experts in the data communications field: including Danny Wade, Wireless Specialist of Rosemont; Mike Crossman, Operations Manager of PLCs Plus International; and Dennis Horwitz, Vice President of Micronor. For more information, please see the newsletter next month or check the ISA Los Angeles Section website at www.isala.org. Topics to be covered include...

Modbus - Still With Us After All These Years. Even though Modbus(r) has been with us for over twenty-five years it remains a viable option for data transmission in SCADA and control applications. More and more products and devices are supporting Modbus as a means for communications. Developed by Modicon(r) in 1979 for use with its PLCs it has become the “de facto” standard for communications in the automation and controls industry.

Removing the Confusion about Wireless Standards. Are you confused with the Wireless Standards? Should you adapt HART 7.0 or wait for ISA SP 100 standard? Many customers are considering wireless technology as a means to cost effectively reduce risk and improve the operational performance of their plant assets. Implementing wireless solutions is increasingly being used to achieve these improvements. One technology, Wireless Self Organizing Networks (IEEE 802.15.4) is emerging as the preferred method for monitoring assets due to its advantages in providing HART information wirelessly while mitigating line of sight considerations.

Fiber Optic’s EMI-Immune Solutions for Harsh or Hazardous Motion Control. There are five major reasons for upgrading or designing with fiber optics versus copper: (1) provides immunity (not just resistance) to EMI/RFI, lightning and static electricity; (2) can operate over wider temperature extremes; (3) inert & intrinsically safe for use in hazardous environments; (4) offers high bandwidth & low loss over long distances; and (5) reduced size & weight compared to copper systems. For the industrial world, fiber optic solutions range from passive sensors to fiber optic media converters to enterprise-wide High Speed GbE/10GbE fiber optic networks. We’ll briefly explore the options available today as well as the products and lessons-learned to help you implement a successful fiber optic solution.

About the panel

Byron Postma has 33 years of experience in the design of instrumentation and control systems for water and wastewater facilities, nuclear and hydroelectric power plants and pumping stations. He has designed radio-based SCADA systems for clients from New York to China, and a utility-wide distributed control system and fiber optic network for San Diego. He is currently employed by Carollo Engineers in Fountain Valley, California. Byron may be reached at (714) 593-5221 or BPostma@carollo.com. Website: www.carollo.com.
Michael E. Crossman is Operations Manager for PLC’s Plus International, Inc. Michael has been in the automation industry for over twenty years and has literally grown up in the industry, following in the footsteps of his father. With vast experience ranging from field instrumentation, communications, SCADA development and PLC programming, Michael Crossman can be reached at PLC’s Plus International, Inc., at (661) 322-4470 or MECrossman@bkppi.com. Website: www.bkppi.com

Danny Wade is Wireless Product Specialist with Rosemount. Danny has been in the process automation industry for 23 years. Danny has been with Rosemount for 6 years and has been working as a Wireless Specialist since Emerson rolled out their Smart Wireless Networks in October of 2006. Danny has many years of experience in Flow, Level, Pressure, and Temperature measurement applications in various industries. Danny Wade, can be reached at (661) 246-8863 or danny.wade@emerson.com. Website: www.emerson.com.

Dennis Horwitz has over 25 years experience in R&D, sales and marketing of fiber optic test equipment and components. He was co-founder of two successful start-ups in fiber optic test and measurement: Photodyne Inc and Rifocs Corp. He is actively involved in fiber optic standards committees (ARINC, IEC, IEEE, ISA, SAE and TIA). Mr. Horwitz is the developer of courses on fiber optics including fiber optics for beginners and designing fiber optics for harsh environmental applications. He is currently co-founder and VP of Micronor Inc. Dennis Horwitz can be reach at (805) 499-0114 or dennis.horwitz@micronor.com. Website: www.micronor.com.

Meeting Details
The meeting will be held Tuesday, March 18, with networking at 5pm and program at 5:30. For information on the meeting location and to RSVP, contact Marina Setiawan at marina.setiawan@fluor.com or (949) 349-5865.
Cost to attend is $40 for non-members and free to ISA members, students and those who join at the door.

Choose the smart and flexible option for the controls requirements in your steam system.

SP300 Positioners

- All communications protocols. Capable of connecting to all existing network systems as well as those in the future.
- All operating environments. The SP300 is suitable for any operating location and condition.
- Compatible with all pneumatic actuator types. Can be fitted to a new and existing control valve which means you can standardize on the SP300 for all your controls valves.

To learn more about options we can provide for the controls requirements in your steam system contact Spirax Sarco today at 1-800-883-4411.

See us at Instrumentation 2008!
State of the art expo, hands-on training Feb 28

Continued from page 5


State-of-the-Art Instrumentation Exhibits

The following organizations and companies will be exhibiting state of the art products and services at Instrumentation 2008 on Thursday, February 28th.


Instrumentation Training Schedule

2:15 - 3:00 - Room 1A
Flow Measurement: Selecting & Specifying the Proper Instrument
Joe Hohn, Dynalelectric

3:00 - 7:30 - Outdoor Arena
Robotic SUVs and Desert Race Vehicles; CalTech’s “Alice”; Golem Group’s “Golem 3”; Cal State Long Beach RC Rover; and more

3:00 - 7:30 - Room 1B
PLC Programming: Basic to Advanced (Individualized all day)
Reid Hogue, Rockwell Automation

3:30 - 4:00 - Room 2A
Analyzer Sample Conditioning Technologies:
Today & Tomorrow
Robert Sherman of CIRCOR, who will also be signing his book, Process Analyzer Sample-Conditioning Technology, the ultimate reference on the subject.

See Training, continued on page 9
Camera chip mfg, web-control at Instrumentation 2008

by Salomón Oldak, Ph.D, Cal Poly Student Section Advisor

During Instrumentation 2008 Cal Poly Pomona students and faculty will demonstrate two of the projects students developed during the last year. Hands-on project design is one of the requirements all engineering students must satisfy before graduation.

The **Extended Communication Couch Project** was completed jointly by students in the departments of Architecture and Electrical and Computer Engineering and was exhibited in New Orleans during the Des Course exhibition last January.

The couch illumination can be controlled remotely over the internet and is locally controlled using a microcontroller. It emphasizes to students the importance of interdisciplinary design and integration. It requires two SUV’s to transport it, with a minimum footprint of 10ft by 5ft and a height of 6ft. A regular outlet is required for operation. The couch is modular so it can be made larger as space allows.

In the **Camera on a Chip project** students design a CMOS camera chip from scratch all the way to fabrication. Thanks to industry donations Cal Poly Pomona is one of the few universities in the country offering to undergraduate students the opportunity of fabricating an actual chip. Students highly benefit from this experience as they learn the use of various design and simulation tools for VLSI design plus they are able to verify their design in a practical manner towards the completion of the project.

**Dr. Brita Olson**, who designs a camera chip and sends it for fabrication each year, will be demonstrating the process at Instrumentation 2008 on Thursday, February 28. See [www.instrumentation2008.com](http://www.instrumentation2008.com) for more information.

Cal Poly Pomona has a thriving ISA student club with many graduates working in the instrumentation field. Please stop by the project exhibits. Your questions and comments will be very welcome.

---

**Salomón Oldak, Ph.D., is Professor and Chair, Electrical and Computer Engineering Department, Cal Poly Pomona at soldak@csupomona.edu. For more information about Cal Poly, please contact Dr. Oldak at soldak@csupomona.edu**

ISA Bakersfield College Student Section

Attracting students, building careers... and our future

By Sean Caras, Associate Professor/Student Section Advisor, Bakersfield College

This second article in the series covers the challenges of recruiting students into our program who are not already employed in a technical career. This is the demographic we need to increase if we are to remedy the critical shortage of trained technical professionals in our area.

In October, around 1100 high school students were invited to our campus to participate in the annual Career and Technical Education Open House. The largest group chose the Engineering and Industrial Technology career path, in which our program is included. Although all of the 233 students learned about our program, most of the students were interested in two of the most popular programs: automotive and welding. Generally, most people in our blue collar county know that welders make good money, and everyone knows what an auto mechanic does. But many of the students didn’t have a previous understanding of the nature of an Electronics and Automation career. Many students were surprised that we do not train electricians. Most understand what electricians do.

We host an open house for high school Counselors every year as well. Many of them have worked in education all of their adult lives. Their career path was simple - get a university and a post-graduate degree and enter education. That is the path they know the best, but most are becoming aware of the other options for their students. Even with a Counselor who is well-versed in school-to-career options, they are simply overwhelmed. Most high school Counselors are responsible for between 350 and 600 students.

It is a common belief among parents that the ultimate measure of educational success is a university degree. Although I have one myself, I prefer to measure educational success by the ultimate outcome - how a person’s education and training translates into a productive and rewarding career. During my fourteen years as a high school teacher, I was painfully aware that high school focuses most students on only four years out of the 40+ years of their productive work cycle. Either

**ISA Bakersfield College Student Section, continued on page 11**
Local section meetings

For more details about any of the section meetings, please contact the section president, website or read each section’s complete newsletter online at www.techpubs.net/isanews.

<table>
<thead>
<tr>
<th>Orange County</th>
<th>Wed, Feb. 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>President - Craig Lanternier, (949) 349-4371</td>
<td></td>
</tr>
<tr>
<td>Safety Instrumented Systems Panel Discussion, Paul Bodeau of Why Not Engineering, a leading consultant on safety systems, will moderate a panel of experts to demystify the topic. <a href="http://www.isa.org/~orancc">www.isa.org/~orancc</a>.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Los Angeles</th>
<th>Wed, Feb. 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>President - Kristina Balobeck, <a href="mailto:publicrelations@earthlink.net">publicrelations@earthlink.net</a></td>
<td></td>
</tr>
<tr>
<td>Time Management Workshop tailored to the needs of project managers and I&amp;C sales reps. 5:00 Dinner; 5:30pm Program. Location: Marina del Rey. RSVP Marina Setiawan at (949) 349-5865. Website: <a href="http://www.isala.org">www.isala.org</a>.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>So. San Joaquin Valley</th>
<th>See Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>President - Seth Olson, (661) 322-4470, <a href="mailto:SCOlson@bkppi.com">SCOlson@bkppi.com</a></td>
<td></td>
</tr>
</tbody>
</table>

Contact the Section President listed above. Website: www.isa.org/~ssjv.

Second CCST class starts

The CCST exam will be given March-April 2008 and again in July-August 2008 covering seven major performance areas: domains, calibration, loop checking, troubleshooting, start-up, maintenance/repair, project organization and administration.

ISA Los Angeles Section is offering a second CCST training class.
To sign up, contact Allyn Jones, (626) 969-6399. If you responded in the past, you will need to sign up again for this new class.

Education chair needed

The Los Angeles Section is looking for a dynamic individual to act as Education Chair. This person will provide leadership for a dynamic educational program; develop specific programs with talents and facilities of local organizations and individuals; and identify and support instrumentation educators and their programs. If you are interested in joining this active board, please contact the ISA Los Angeles Section President through the website, www.isala.org. Membership in ISA Los Angeles Section is required.

Message from DVP, continued from page 3

The section membership in District 11 and internationally is growing and the members are participating in the local meetings and many are on committees that determine standards on how an HMI should look to what questions should be on the certification exams.

In each section there are members who get help from the companies they work for. These members have resources that have become tools for successful section meetings, exhibitions, scholarships, expert panels of industry experts and more.

The District 11 Leadership conference, which this year is March 28th - 30th in San Diego has been nothing short of exceptional for the past several years. If you have not attended the leadership conference in a while, please plan on and go to this years. Districts 8, 9, 10, and 11 are again pooling their resources so we can all benefit from exceptional training in matters pertinent to our local sections and to our broader organization. There is no better event to attend for gaining an understanding of what all the sections in the Western United states and Canada are doing that is successful and what resources are available to us from headquarters. You will meet friends you will keep for life at this conference!

Thank you all for the opportunity to serve as District 11 Vice-President. I will make it to your local section meetings in the coming months, see you soon.

Ray Spangler
District 11 DVP
661-243-7379

See us at Instrumentation 2008!

DAHL-VAUGHN, Inc.
Engineering Representatives
17939 Chatsworth Street, Suite 509
Granada Hills, CA 91344
Ph (818) 368-8467 Fax (818) 368-8433

Electro-Chemical Devices, Inc.
- pH Sensors
- Conductivity Sensors
- Resistivity Sensors
- Dissolved Oxygen Sensors
- High Purity Water Sensors
- Smart Controllers
- Insertion with or without in-line valve
- Local Service
- Local Application Assistance

Call for application assistance or a quote. info@dahl-vauhn.com

See us at Instrumentation 2008!
Regional events

Regional events

Dates are subject to change. Always contact the sponsoring party before making your final plans to attend. To include an event, please contact the editor.

February 10, 2008
Outstanding ISA Member Awards Nomination Deadline
Debbie Eby, debby@isa.org

February 13, 2008
Panel Discussion: Safety Instrumented Systems,
Irvine, www.isa.org/~oranec

February 16-21, 2008
SPIE Medical Imaging
San Diego, www.spie.org

February 17-23, 2008
National Engineers Week
www.eweek.org

February 19-21, 2008
PowerGen, Las Vegas
www.powergen.com

February 25-26, 2008
Managing CO2 Emissions
SPE, Sonoma, www.spe.org

February 28, 2008
Instrumentation 2008 Expo
Los Angeles, www.isala.org

March 9-13, 2008
SPIE Smart Structures/NDE
San Diego, www.spie.org

March 10-14, 2008


Training Schedule, continued from page 6

3:45 - 4:15 - Room 1A
Configuring Control Loops in Foundation Fieldbus Devices
Russ Muller, Rosemount Measurement Div, Emerson Process Mgmt

4:15 - 4:45 - Room 2A
Pressure Relief Valves: Codes, Terminology, Applications
Mike Rainguet, Tyco Valves & Controls

4:45 - 5:15 - Room 1A
Understanding SIS and SIL, Victor Wegelin, PMA Concepts

5:00 - 5:20 - Room 2A
Advances in Portable Multi-Parameter Analytical Instrumentation
Michael Silvia, Hanna Instruments

5:35 - 5:55 - Room 2A
Effective pH Control Through Intelligent Automation
Kenneth Queeney, Mettler-Toledo Ingold

5:45 - 6:15 - Room 1A
CEMS Audits & Current Regulatory Issues
Joanne Randall, Cemtek Environmental

6:10 - 6:40 - Room 2A
Digitizing an Analog World
P. Lyle Mariam, P.E., Las Vegas Valley Water District

6:45 - 7:30 - Room 1A
Hot Topics in the Refinery
Sandra Krauthamer, Chevron & Mitch Dornsife, BP ( moderators); Kevin Ward, Drexelbrook; Andrew Heisler, Georg Fischer Signet

7:25 - 7:45 - Room 2A - Instrumentation Jeopardy with Cash Prizes

Pre-Register at www.instrumentation2008.com
I&C training advisory committee formed

ISA Los Angeles has formed an industry training advisory committee to address the shortage of instrumentation and controls personnel in the Los Angeles basin. The primary goal of the project is to identify the different types of personnel who would benefit from training, identify what types of training would benefit both the employee and employer, and either locate existing training programs or establish new programs through the ISA, the Los Angeles Section, with independent instructors and/or in conjunction with local colleges and universities.

A great deal of basic information and feedback about current training programs was provided by ISA members from Chevron, Tesoro and Southern California Gas Company at this meeting. This discussion was designed to be the kick-off to bringing I&C training directly to those who need it, at or near the job site. Follow-up meetings will be held over the next few weeks with the hope to have an ongoing training schedule in place by early spring.

Anyone interested in taking part in this program – either as an instructor or if you would like to see world class hands-on instrumentation training by professional instructors at a reasonable cost, or if your in-house training staff needs help in meeting the need — please contact John Prince at 714 968-5501 or jprince@calcems.com.

The first meeting was held Wednesday, December 19 at the training facility at Wilmington Instrument Company, Inc., an ISO9001:2000 (ISO 17025:1999) registered calibration facility and full service distributor, providing test, measurement, and process instrumentation solutions for the plant maintenance professional. For information about the company, please contact Doug Larson at (800) 544-2843, or via their website at www.wilmingtoninstrument.com.

The meeting was followed by a tour of Wilmington Instrument Company state-of-the-art calibration lab and dinner at Shamrock Seafood courtesy of the ISALA Long Range Planning Committee. Professional Development Hours Certificates were awarded to those who RSVP’d in advance.

For more information about bringing training to your facility, please contact the committee chair, John Prince, at (714) 968-5501.
ISA Bakersfield College Student Section, continued from page 7

they were focused on surviving their four years in high school and obtaining a diploma, or were preparing for the four years immediately following: their college education. While “Career and Technical Education” courses are available for students, many cannot participate for various reasons.

Therefore, students aren’t exposed to technical careers at the levels of the past. It requires millions of dollars to build and equip the labs and “shops” we’re all familiar with. Several of the new high schools have even tried to hire teachers for these types of programs, but they are nearly impossible to find. The “No Child Left Behind” legislation, as well as the California High School Exit Exam have made it necessary for many students to reduce or forego elective classes. In addition, the “sharper” students are encouraged to take a university-prep curriculum and become Engineers. We really do need Engineers - that’s not the problem. It’s that those students usually bypass our community college system, where they could learn about similar careers in case they decided that Engineering is not for them.

Although the number of high schools in our area of the county has far more than doubled since 1990, the enrollment in our college’s technical courses has not seen similar increases. With our limited staff, we could never make the personal contact with each of the schools like we want. We do, however, attend all career fairs in which high school students are present.

The technical schools have paid recruiters that are present everywhere we are, and can manage to cover where we do not have the resources to be. Besides paying more than 12 times the tuition of Bakersfield College, these students generally do not return to our county when they have completed their education.

Besides students right out of high school, our most promising demographic are people from 22 to 30 years of age. I sure remember when I was that young. They tend to have more of a life focus than our younger students, and are able to move into a new career a little more freely than those of us in earlier generations. Our challenge is in reaching that demographic. How do we market to those folks?

What can you do?

You can talk to your HR people about their efforts to target potential employees. Are they satisfied with the quality of technical candidates they are seeing? Would they benefit from a strong Industry Advocacy Group that could promote and awareness of technical careers within our community? Would they be willing to share job descriptions and pay ranges with us so that we are better able to speak with authority on what a technical professional can earn, and what the various positions entail? Do you mentor others at your workplace that may benefit from our courses? Do you know a high school administrator? Ask how we can best get the message out to the students at that high school. Do all your friends who have children know about the opportunities in a technical profession? With the huge population growth in the Southern San Joaquin Valley, there are many newcomers that are unaware of what Bakersfield College has to offer. Can you help us “get the word out?”

We are all directly involved in this career path. Our current and future Electronics, Instrumentation, and Automation students will be the ones who help shoulder some of the load during your workday, will help your company grow and thrive, will be your customers someday, and/or will replace you when you retire. Thanks for helping us take a global view and meet our challenge to develop the technical workforce.

Sean Caras is the advisor of the ISA Bakersfield College Student Section and can be reached at scaras@bakersfieldcollege.edu.
Compelling Magnetic Attraction

- High linearity flow measurement
- No moving parts means long service life
- Digital, analog, frequency outputs
- Minimal installation and maintenance costs
- Compact design
- Unbeatable pricing
- Ideal paddlewheel upgrade
- Two year warranty

You will be drawn to the new Signet Magmeter – the electromagnetic solution to fluid measurement with the best price-to-performance ratio in the industry. Whether you choose the 2-wire 4 to 20mA output, or the digital, or the frequency output version, the 2551 is “Signet simple” – the unit fits into any standard Signet paddlewheel fitting! So visit our web site for all the details and find out why the new Signet 2551 Magmeter is attracting all the attention!

www.gfsignet.com

Georg Fischer Signet LLC
For Global Sales & Service, visit our website

Job Shop

As we continue to experience growth along with our marketplace, SVF is seeking TWO additional team members to bring us to the next level of service to our customers. We are located in Santa Fe Springs, CA, and our website is www.SVF.net.

Please see the two job descriptions - below and on opposite page.

Technical Product / Engineering Manager

Has overall responsibility for all technical aspects of the organization. Responsible for the design and development of new products as well as modifications and improvement to existing products. Provides technical support to customers and other departments. Performs testing and documentation required for development and certification of products.

- Represent SVF’s technical interests in the design, evaluation, testing, creation, and specification of new and existing valve, actuator, and accessory products. Analyze and assure products meet all specification and customers requirements.
- Create and manage technical documents and library such as technical data, calculation, literature, manufacturing and sales submittal drawings, IOMs, QA/QC documents, etc.
- Prepare design layouts, assembly and production drawings designs for manufacturing, customers, projects, and quotations.
- Assist the selection and evaluation of outsourcing functions related to the products and modification. Travel to suppliers and subcontractors locations to review engineering status and sourcing requirement and initiatives.
- Communicate with various sales, marketing, production support, assembly, and QC personnel as required for quality improvement and to resolve technical problems. Coordinate the resolution of all field service issues involving product problems
- Communicate with customers both directly and indirectly to resolve customers problems.
- Direct interact with assembly operation. Assist to the shop for assembly procedures, layout, training, quality control, inspection, and improve efficiency.
- Represent the company to interact with technical, industrial, and certification professional organizations to value and validate the products.

SVF Flow Controls, Inc., of Santa Fe Springs, California, seeks talented individuals to submit their resume for consideration to Careers@SVF.net or mail to SVF Flow Controls Inc., 13560 Larwin Circle, Santa Fe Springs, CA 90670, Attn: Careers. Our website is www.SVF.net.
Customer Service Representative

- Assists customers and intra-department personnel with general technical product support. This includes product information in the catalogs, reading through and assessing customer specifications to complex customer RFQs.
- Assists customers with authorizing RMA (return material requests).
- Manages pricing and discounts in Macola and maintains customer blanket pricing renewals.
- Has a good understanding of Macola and the reports necessary to reviewing pricing, shipments, bookings, etc. relative to customer satisfaction.
- Reviews confirming purchase orders against orders entered.
- Follows up on status of orders pending in a timely manner.
- Verifies price and availability of product and prepares quotations; prepares and processes price requests.
- Prepares, reviews and accurately processes change and customer orders; maintains customer order files in a neat and timely manner.
- Responds to general customer and distributor inquiries via fax, telephone and e-mail relative to order status, pricing, deliveries & product information.
- Handles the complete process of quotation through order entry.

SVF Flow Controls, Inc. of Santa Fe Springs, California, seeks talented individuals to submit their resume for consideration to Careers@SVF.net or mail to SVF Flow Controls Inc., 13560 Larwin Circle, Santa Fe Springs, CA 90670, Attn: Careers. Our website is www.SVF.net.

See us at Instrumentation 2008!

Georg Fischer Signet LLC, is a recognized leader in fluid sensor technology. Serving customers worldwide, we manufacturer analytical sensors and instrumentation for the water treatment market. Located in North America (El Monte, CA), we are a dedicated team seeking a Product Manager with a competitive edge.

Reporting to the Marketing Manger in this role you will be responsible for effectively defining customer & market requirements for new product development. In addition, you will collaborate with various departments, be proficient at communicating specific technical product and application needs to a team of engineers, and contribute significantly to our growth plans.

To be successful in this role, you should have previous experience in product management in the industrial process instrumentation field, particularly with analytical measurement devices for continuous monitoring. Experience in drinking water market and international standards are a definite advantage. Minimum 5 years related experience with BSc, PE preferred; or equivalent combination of education and experience.

To become a part of our winning team, please send your resume along with cover letter and salary history to Georg Fischer Signet LLC, 3401 Aero Jet Ave, El Monte, CA 91731, Attention: HR, or fax to 626-288-2067, or email to Signet.hr@georgfischer.com. Only those who’s background meet the requirements above will be considered.

+GF+

Product Manager

In Coastline's new Process Technology Program, you can:

- Earn your A.A. degree or certificate via online classes!
- Gain skills to work for major companies like Chevron, Shell or Tesoro and others.
- Interact with instructors who work in the industry.
- Learn to work with the latest computer control systems, work outdoors taking samples, monitor equipment, and solve problems in a collaborative environment!
- Prepare yourself for jobs that offer a competitive starting salary!

Classes are only $20 a unit*

For more information call (714) 241-6209, ext. 17301
For a complete class schedule, visit www.coastline.edu

*2010.com. All rights reserved.
POSITION WANTED. **Outside sales engineer.** Top sales producer with 40 years experience in instrumentation & controls, control valves, relief valves, field instrumentation, heavy industrial and aerospace sales in Southern California. Candidate is a degreed mechanical engineer and technical professional sales engineer. Can be reached at 714 636-7872 or 714 418-8468.

Outside Sales. Precision Instrumentation is interviewing candidates for an outside sales position. Precision is a stockingo distributor of pressure, flow, filtration, and temperature controls selling to industrial customers. The successful applicant will be working primarily in the Inland Empire and South Orange County. We offer a competitive compensation package including salary, bonus, medical insurance, and retirement plan. Candidates should have mechanical aptitude and sales experience. Interested candidates should email their resume to sales@precinstr.com.

GROWTH CAREER OPPORTUNITY: Established growing Systems Integrator seeks professional hands-on Control Systems Project Engineers in their Orange County, CA and Kansas City, MO offices. Accomplishments expected with Allen-Bradley and Modicon PLC; Wonderware and Intellution HMI software; developing graphics screens and tag databases; IBM DB2; and Microsoft SQL Server, ACCESS, EXCEL, and WORD for data acquisition-monitoring-reporting systems. Please forward resumes for confidential consideration to Don@DonZeeAssociates.com.

 Territory Manager II-Southern California. Salary/Commission/Car/ Benefits/Home Office/Opportunity to grow and join a winning team. We are looking for min. 5 years field sales, degree preferred, knowledge of refineries and power plants a plus, knowledge of valves and instrumentation strongly preferred. Good attitude, work ethic, relationship building, and independence are valued for this position. Nine-state region, approx. 50% travel. Email resume to tim@vsrecruiting.com.

OUTSIDE SALES – TECHNICAL PRODUCTS (LOS ANGELES COUNTY). We are a Manufacturers Rep firm seeking an energetic, motivated and self starter sales person to join our growing company. Our candidate must have Outside Sales Experience on technical products and capable of learning new technical products and applications. Candidate must maintain our established customer base while building on new customers to grow our business. Must be self-starter, financially driven and desires to be successful.

INSIDE SALES ASSISTANT (Full Time). We are seeking a talented candidate with the following skills: Must have a strong technical aptitude, proficiency in Microsoft Word, Excel and Outlook, the ability to follow through with projects. Must be detail-oriented ability to multi-task in a fast-paced environment with high volume. Handle incoming calls and faxes from our customers and manufacturers, support our outside sales team with investigating projects and generate quotes through reading and understanding specifications.

Please send your resume to: admin@mrcctechnologies.com.

ANALOG DESIGN ENGINEER. San Fernando Valley. Design and develop analog interface circuitry, electronics and magnetics for custom power supplies. Follow development process and procedures. Experience with power supply design, analog electronics, RF considerations, and PCB layout. Contact Chris Hulfish. Aps-jobsearch@juno.com.


Automation Analyst. Central Automation is a progressive and expanding Control Systems Integration company focused on the oil & gas, water/wastewater, electric utilities and food manufacturing industries. We are currently looking for qualified individuals to fill an Automation Analyst position for Central and Southern California area. Requirements: Experience with HMI graphics development, PLC programming, electrical control circuit design and instrumentation. Salary. DOE. EOE. Fax resume to (661) 633-2853 or contact by phone at (661) 633-2850 or by email at recruiter@centralautomation.com.

Instrumentation & Analyzer Technicians. Perform field repairs, calibration, preventative maintenance with a minimum of supervision on all types of electrical, instrumentation, and plant analytical equipment. Field installation of signal wiring, instrumentation and control system equipment. Experience with PLC programming, graphical interface software desirable but not required. Ability to work from electrical schematics, mechanical drawings. Will cover Southern California. No overnight travel. Full-time, part-time or contract openings. Please contact John Prince at APG Analyzer Systems, at (714) 968-5501 or apply via www.calcems.com.

Manufacturers Representative. Growing Manufacturer is looking for Mfg. Representatives to sell Process Control Equipment. We specialize in food, pulp and paper, and wastewater. Product line is established in the USA and around the world. Send contact info to phasejump@aol.com.

HVAC/DDC Controls Engineer. HVAC Controls Company in San Dimas has immediate need for an engineer with abilities to complete panel drawings, loop diagrams, perform programming related tasks, and assist in commissioning. HVAC, DDC, and ACAD experience a plus. Contact Grant Jones (909) 394-0850.

Electro-Mechanical Engineer/Technician. Automation company needs Engineer/Technician experienced with computer and PLC controlled equipment comprised of multi-axis motor control, pneumatic actuators, machine control, and feedback elements including analog & digital inputs, encoders, photo-electrics, vision systems. Must understand PC/PLC software, HW/SW interfaces and be able to identify and isolate electrical, software, or mechanical problems. Will assist with design & assembly of new systems as well as installation, field service & support. Salary commensurate with experience. Email resume to lbernstein@nortekautomation.com.
Outside Sales Position. Valin is interviewing for an immediate outside sales position covering a territory that includes Los Angeles and Orange Counties. The position has specific focus on the petrochemical and engineering contractor markets. Candidates should have experience selling valve and instrumentation products. Please contact the following for more information: Greg Neneman at gneneman@valin.com or John Hill at jhill@valin.com. You may also find out more about Valin Corporation at valinonline.com.

Newly Formed Manufacturers Representative Firm aggressively seeking Process Control product lines to represent in Southern California. Owner has over 15 years of experience in Industrial Sales. We are also offering onsite Project Management and Consulting Services at competitive rates. Let us GROW your business. Send inquiries to Job Shop 0801, c/o Tech Pubs Communications, PO Box 1605, Costa Mesa, CA 92628.

Inside Sales and Technical Support Position. Ponton Industries currently has a new position for an inside sales support person. Very competitive salary, tax deferred retirement package, health, dental and life insurance benefits. Candidates need to be good on the phone, computer literate, and preferably have experience in the instrumentation industry. Excellent opportunity for the right candidate! For more information please email us at info@pontonind.com or call 714-998-9073.

AUTOMATION TECHNICIANS AND ELECTRICAL ENGINEERS for our Santa Maria, CA office. For over 30 years, Cannon Associates has provided engineering, surveying, and planning services to clients throughout California.

AUTOMATION TECHNICIAN: Requires 3 years experience working with automation equipment and programmable controllers. Must have firm understanding of Programmable Logic Controllers and familiarity with process instrumentation (RTU’s, HMI, SCADA, flowmeters and transducers) including installation, calibration, and maintenance.

SENIOR ELECTRICAL ENGINEER: Requires 7 years experience with a concentration in power distribution and/or control systems. Must have BSEE degree from accredited college and CA P.E. registration or ability to obtain within 6 months of hire.

ENTRY–LEVEL ELECTRICAL ENGINEER: Requires 0–3 years experience and BSEE degree from accredited college. Must be proficient with AutoCAD and be able to obtain EIT Certification within 6 months of hire.

Visit www.CannonAssociates.us for complete descriptions. We offer full benefits and competitive salaries. Submit resume and cover letter to HR@CannonAssociates.us or fax 805-781-0915.

Robotic vehicle to be auctioned

The advanced, custom-built robotic device pictured on the cover will be the awarded to the winner of a silent auction at Instrumentation 2008. Completely new, it was built this semester as a Cal State Long Beach robotics class project. All components are new, including 4 FM channel remote controller, a tank bot with dual-servo drive, turret for the camera and wireless transmitter camera. This is a in perfect working condition and was only used for a demo in class. It comes with all the extra batteries and accessories. Must be present to win.

IMPORTANT: Only registered attendees will be eligible to enter the auction. To register, go to www.instrumentation2008.com > Register. To bid in the silent auction, see the Cal State Long Beach exhibit in the DARPA desert race vehicle demonstration viewing area.

ADVERTISERS INDEX

Caltrol, Inc .................................................... 4
Capital Westward Systems & Controls ........ 10
Coastline Community College ..................... 13
Dahl-Vaughn, Inc. ........................................... 8
Don Wolf & Associates, Inc. ......................... 5
Electrical Systems Limited ............................ 9
Emerson Process Management .................... 10
Georg Fischer Signet LLC ....................... 12
Golden State Controls ............................... 4
JPR Systems .............................................. 3
Moore Industries ................................ Insert
Patten Systems, Inc. ......................... Insert
Precision Instrumentation .......................... 6
SpectraSensors ................................ Insert
Spirax Sarco ........................................ 5
PR Electronics ....................................... Insert
Valin Corporation ................................ Insert
WestMark Sales, Inc. ........................... Back Cover
Wilmington Instrument Co. ..................... Insert
Gas Instruments

AIR DIMENSIONS, INC.
Dia-Vac® pressure/vacuum gaseous diaphragm sampling pumps

APPLIED ANALYTICS, INC.
Continuous process spectrophotometer (UV, IR, NIR and Visible) analyzers

CL ANALYTIC, INC.
Gas Chromatograph and Dry Colorimetric Analyzers

DELTA F
Gas Analyzers for Trace and Percent Oxygen/Moisture

DRAEGER SAFETY
Ambient Air and Process Gas Monitors for Combustibles/Oxygen/Toxics

KAHN INSTRUMENTS, INC.
Moisture Analyzers

KAYDEN INSTRUMENTS, INC.
Thermal flow, level, temperature and interface switches/Radar level/Ultrasonic level

ORB INSTRUMENTS
On-line Property Analyzer for RVP, Cloud Point, Freeze Point, Pour Point, Organics and Oil in Water

HMUPID ANALYZERS
Gas Monitors for portable and continuous process and area monitoring of VOC, IAQ, Toxic, Combustible and Oxygen Analyzers

RC SYSTEMS
Sensor/Computer Interface including Transmitters/Digital Indicators/CEM and Analyzer Controllers/Signal Conditioners

SERVOMEX COMPANY, INC.
Gas Analyzers for CO, CO₂, SO₂, NO, and NOₓ

THERMO FISHER SCIENTIFIC CO., INC.
Gas Analyzers/Ambient Particle Analyzers and Samplers

UNIVERSAL ANALYZERS, INC.
Sample conditioning components for continuous, on-line process gas analyzers and CEMS

Liquid Instruments

APPLIED ANALYTICS, INC.
Continuous process spectrophotometer (UV, IR, NIR and Visible) analyzers

AQUAMETRIX
pH/Conductivity/ORP/Dissolved Oxygen

AQUASENSORS
pH/Conductivity/ORP/Dissolved Oxygen/Ozone

ENTECH DESIGN, INC.
Shade Level and Effluent Turbidity Analyzers and Filter Backwash Expansion Analyzers

GREYLINE INSTRUMENTS, INC.
Non-Contacting Ultrasonic Level and Flow/ Doppler and Transit Time Flow Meters

HIF SCIENTIFIC, INC.
Process On-line and laboratory: Turbidity/Residual Chlorine/Streaming Current

INSITE
Dissolved Oxygen/Suspended Solids

KAYDEN INSTRUMENTS, INC.
Thermal flow, level, temperature and interface switches/Radar level/Ultrasonic level

K-PATENTS
On-line Process Refractometer for liquid measurements of concentration, liquid density, Refractive Index and Brix

PH/ORP/CONDUCTIVITY
DISSOLVED OXYGEN
Turbidity/Suspended Solids/Residual Chlorine/Streaming Current/Ozone/On-line and Portable Water/Wastewater Samplers/Particle Counters/Flow/Level

SCIENTIFIC INSTRUMENTS, INC.
On-line Water Quality Analyzers for Ultrasound/Process/Waste Water

We sell 100% compatible replacement sensors for use with Great Lakes analyzer-systems.
- PH/ORP - Differential and conventional types
- Conductivity - Electrodeless and Contacting types