

INSTRUMENTATION AND PROCESS CONTROL 2022

Phoenix Club, Anaheim - www.CalifEngineer.com - 714-478-8816

November 3, 2022

CLASSROOM AND ROUND TABLE DISCUSSION SCHEDULE

9:00 - 3:30

Hands-on Workshop:

Remote Data Acquisition in Cybersecurity, Calculations Alarm Detection

Jasen Le

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At ICOMTECH Exhibit

In this hands-on workshop, users will be able to understand programming logic using ioLogik, ioThinX and Nat102, EDS4000. Multiple steps of detection for issues that may arise will be seen and further detailed in documentation provided.

Used in cybersecurity, calculations, alarm detection and other applications, both devices allow for Remote Data Acquisition, remote control, and alarm for automation applications.

Operators, programmers, technicians and those involved with data analysis will see these in operation. Also of interest to teams involved with Operation Technology (OT) and Information Technology (IT) with automation and Programmable Logic Controller(PLC). Both types can be used in multiple types of industries.

Details will be explained how the user makes the initial connection and sets up the Nat 102 and EDS-4000 Demo to a PC. We will create the initial Port Address Translation rules and show how they act within the test. Also the new MXview program that Moxa has developed for their newest series line will be demonstrated.

9:30

CCST Level 1 Control System Technical Training and Certification

Neil Finch, CCST3

Heritage Room

For Instrumentation and Controls Technicians and others

Why pass the test? Requirements for 2, 3. What you need to study. What application info for the exam. Need simple math for exam, basic electronics, draw from elec, chem and operation. To excel you must ask questions.

Environmental topic

Bob Katin PE
Garden Room

Bob will be speaking on Environmental Remediation and issues after years of operating a process industry facility.

Bob Katin, P.E., is a licensed engineer with over 35 years of industrial experience and is founder of Katin Engineering Consulting. Mr. Katin has managed projects up to \$40 million in scope and has been a chemical plant manager, petroleum refinery operations supervisor, chief engineer of Du Pont Environmental, and general manager of an instrument & electrical contractor firm. He is President of the California Legislative Council of Professional Engineers (www.clcpe.org), an organization of engineering societies including ASME, ANS, AIChE, IEEE, ASABE, CSPE and many others. CLCPE provides advice to the State Legislature on engineering issues. He has also been Chair of the AIChE Statewide Government Relations Committee.

Use of Math Software for Engineering Calculations

Lyle Mariam, P.E., C.S.E.

Engineers deal with mathematical calculations every day, some simple, some complex. Often the calculations are the same thing performed yesterday except with different numbers. The results are often included in reports and documentation which requires a clear and easily understood methodology.

Math software such as MathCAD and SMath Studio provides the user with the ability to create calculations that can be understood by most technical people with errors, scratch-throughs, or spelling errors typical with handwritten calculations.

This presentation will introduce the user to the basics to get started creating a library of reusable calculation worksheets to increase productivity and reduce errors.

10:30

Understanding Analog & Digital I/O Connections from Instrumentation to SCADA & DAS

Neil Finch, CCST3
Heritage Room

For Instrumentation and Controls Technicians and others

Energy Conservation and Cost Effectiveness

Bob Katin PE
Garden Room

Bob will be speaking on energy conservation; and keeping your industrial facility operating most cost effectively.

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Roundtable Discussion -- Oil & Gas Industries - Instrumentation and Controls

Exhibit Hall

All those interested in I&C and other topics relating to oil and gas are invited to take part in this open discussion. Topics may include the latest devices, standards, common and difficult applications.

Pressure Regulating Valve Sizing, Selection, and Analysis

Instructor: Lyle Mariam, P.E., C.S.E.

This course is an introductory to the basics of the sizing, selection, and analysis of pressure regulating valves (PRVs) commonly found in the water and wastewater industry.

Self-contained pressure regulating valves are an integral part of the water and wastewater industry yet the sizing and selection process has received little attention, unlike similar applications in the chemical, petrochemical, and power industry.

The goal of this course is to provide the user with the basic information and tools necessary to properly size and select a pressure regulating valve, as well as educate the user in the performance analysis of installed valves.

11:30

Hands-on Workshop: Understanding Control Loops

John Bowman, Valley Instruments
Heritage Room

Practical use and theory of control loops are discussed with questions and answers.

Industrial Safety

Bob Katin PE
Garden Room

What are some of the OSHA safety & PSM issues you should know.

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Improving onsite investigations for materials failure analysis

Joseph Quinn, Materials FACT
Materials failure analysis: improving onsite investigations
Lorelei Room next to restaurant

Roundtable Discussion: Power Generation Use of Instrumentation and Process Controls

Moderator: Neil Finch, CCST3
Exhibit Hall

For Instrumentation and Controls Technicians and others. Open discussion where those taking part bring up a variety of issues and applications for discussion.

Neil is a Professional Instrumentation Instructor who holds a Control System Technician advance level certificate. He has routinely taught instrumentation and controls at Southern California Edison, International Brotherhood of Electrical Workers, and well-known professional organizations involved with process industries. Instrument and Controls Technicians and those interested in a career in steady demand should attend one or more of these presentations:

12:30

Hands-on Workshop: Field Calibration and Advanced Use of DVMs

John Bowman, Valley Instruments
Heritage Room

Field calibration and practical use of DVM's.

Roundtable Discussion: The Value of the Professional Engineer License in Today's Economic Climate

Professional engineers will co-moderate this discussion and answer questions about the benefits of having a PE license.

Lorelei Room, next to the restaurant

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1:30

Evaluation of a recent plant design project

Bob Katin, P.E.

Garden Room

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Reprogram your calibration efforts

Roy Tomalino, Beamex, Inc.

roy.tomalino@beamex.com, (970) 480-7709

Heritage Room

This course will focus on an irreverent view of your calibration program. Over the past 20+ years most instrument shops have a quarter of the technicians but the number of calibrations to do have increased. You can't do everything so how do you decide what to calibrate? Grizzled veterans have retired and a new generation is stepping up to do the work along with new documenting tools.

Secret #1 - You don't have to calibrate everything

Figure out what you need. Cals regulated by federal mandate or safety systems lead the top of the must have list. Also important are those critical processes related to product quality and production up-time. Look at increasing the cal interval of those mid-level assets. Some process instrumentation can be designated as Run-to-Failure. Meaning, you run it and replace it when it expires. RTF assets do not need calibration intervals.

Secret #2 – Do not calibrate to manufacturer's specifications

Attend Roy's session for the details. Come prepared to make your argument if you disagree. Differing opinions are welcome as long as they promote discussion.

Secret #3 – Safety is not #1

Well...this should be interesting...

2:30

Industrial Controls Applications with Regards to Wireless, Signal Converters and Water Treatment Analyzers

Julian Klotz
REALTECH Controls
Heritage Room