

## **Regulation**

Introduction to Gas Regulation – Kevin Shaw, Itron

Introduction to Overpressure Protection – Robbie Swiggert, Itron

Introduction to Regulator and Relief Sizing – Robert Bennett, Elster American Meter Company

Flexible Element Regulators – Reese Dawes, Spartan Controls, LTD.

Industrial Pressure Control at Turbine Engine Power Plants – Jim Green, Tri-Pacific, Inc.

Noise Mitigation in Regulator Stations – Ken Goodwin, PCE Pacific, Inc.

Regulator Freeze Protection – Chad Richards, Catalytic Heater Company

Troubleshooting Regulators – Paul Anderson, Emerson Process Management

Troubleshooting Control Valves – Jim Green, Tri-Pacific, Inc.

Three Mode Control (PID) Tuning – Casey Floren, PCE Pacific, Inc.

## **Measurement**

Introduction to the Basic Gas Laws – Robert Bennett, Elster American Meter Company

Fundamentals of Gas Metering – Paul Dallapiazza, Northwestern Energy

Fundamentals of Gas Turbine Meters – Paul Honchar, Sensus

Fundamentals of Flow Computers – Jereme Stewart, Eagle Research Corporation

Ultrasonic Meter Operation – Thomas M. Kegel , Colorado Engineering Experiment Station, Inc.

Clamp-On Ultrasonic Meter Applications and Installations – Shane Dolar, Questar Gas Company

Practical Selection and Usage of Coriolis Meters for Gas Measurement – Tonya Wyatt, Emerson Process Management

Regulator & Industrial Meter Station Design – Dave Smith, Avista Utilities

Meter Run Switching – Dean C. Vesco, Northwestern Energy

Electronic Volume Corrector Basics – Madeline Corb, GE Oil & Gas

Distribution Gas Meter Proving – Gregory A. Germ, Elster American Meter Company

Differential Testing of Rotary Meters – Craig Lam, Elster American Meter Company

Working with Combined Accuracy – Paul Brunton, Southern California Gas Company

Verifying Gas Ultrasonic Meter Accuracy and Stability – Martin Schleich, Daniel Measurement and Control

Measurement Standards Update – Edgar B. Bowles, Jr., Southwest Research Institute

## **General Interest**

Gas Odorants: Safe Handling, Health, and Environment – Daniel E. Arrieta, Chevron Phillips Chemical Company

Odorant Transfer Systems and Safe Delivery – Michael E. Leathers, Chevron Phillips Chemical Company

Overview of Odorant Systems – Dominic Giametta, Welker

Introduction to Gas Quality – May Lew, Southern California Gas Company

Measuring Hydrocarbon Dew Point Accurately – Jack Herring, Michell Instruments, Inc.

Gas Chromatograph Maintenance – Burt Reed, ABB Totalflow

Use of LNG and CNG to Support Customers and other Utility Operations – Austin Hastings, Pacific Gas and Electric Company

Pulsation Mitigation and Its Effects on Metering – Robert J. McKee

Hazardous Area Classification – Alex Hicks, Southern California Gas Company

Considerations for M2M Hybrid Networking – Dan Steele, FreeWave Technologies

Pipeline Alarm Management – Brady J. Kinsella, Puget Sound Energy

Polyethylene Pipe Standards and Updates – Karen Lively, Performance Pipe