

2019 Joint Chapters' Regional Conference Technical Session

Sponsored by IES; Integrated Environmental Solutions

HVAC&R Technical Applications and Innovations

Thursday, August 8, 2019; 1:30 pm to 4:30 pm

Tradewinds Hotel; St Petersburg Beach Florida

Current DRC's; Dan Rogers Region XII; Grant Page Region VII

MC; Ross Montgomery

Register at <http://region12.ashraeregions.org/?page=crc&lang=en>

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Hear from the "experts"; HVAC&R topics including...

- Chilled Beams; Design and Construction
- Air Flow Monitoring Technologies
- BIM and "tools" for Design; such as Revit
- Psychrometrics for Engineers



Dennis Sikkema



Abe Morris

**BIM Program Manager
SSR Engineering**

"Building Information Modeling"



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Barry Dunham, Kat Liegl,

Ashley Bence

Director of Market Dev. +
Sales/Application Engineers

ONICON/AFM Corp.

*"Panel Discussion; The Challenges of
obtaining an accurate outside air
flow measurement"*

Director of Technical
Sales: Price Industries Inc.

Chilled Beams



Julie Ferguson

Account Manager
George Israel Inc.

"Psychrometrics"



Adrianna Schneider, LEED

**AP | Senior Enterprise
Engagement Manager**

ASI + IMAGINiT Technologies

"Building Information Modeling"

The Challenges of Obtaining an Accurate Outside Airflow Measurement.

We would like to do a panel discussion titled The Challenges of Obtaining an Accurate Outside Airflow Measurement. The panel will consist of:

Barry A. Dunham, P.E., LEED® AP

Barry is the Director of HVAC Market Development for ONICON Incorporated and Air Monitor Corporation. His design experience includes mechanical, electrical and energy engineering. Some past projects have involved a wide range of scope in multi-discipline engineering systems such as chillers, cooling towers, energy management systems, and thermal energy storage and data centers. Responsibilities also include compliance with LEED® related efforts.

Kat Liegl

As a member of the Sales and Applications Engineering team at ONICON, Kat Liegl specializes in answering technical questions about flow and energy measurement. She holds a BS in Mechanical Engineering and a BA in International Relations. Her background includes nautical design, design lab management and teaching. Kat is a member of the Florida West Coast Chapter of ASHRAE.

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Ashley Bence

Ashley is the Sales and Applications Engineering Supervisor at ONICON/Air Monitor and has been with ONICON for six years. She holds a BS in Chemical Engineering from the University of South Florida. Over the past three years, Ashley has held the Young Engineers of ASHRAE chair or co-chair position for the Florida West Coast Chapter.

Chilled Beams

Chilled Beams have been used successfully for decades in Europe and are relatively new to North American projects. They can offer substantial energy savings while maintaining occupant comfort. And like any HVAC technology, a successful project is dependent on proper selection and application of the Chilled Beams.

This session will review Chilled Beam concepts including:

- Project suitability
- Product types and selection
- Common piping methods
- Controls

Dennis Sikkema is the Director of Technical Sales for Price Industries Inc. of Atlanta, Georgia. He has been with Price Industries for 19 years. Previous to that he was with Tuttle & Bailey for 12 years as an Application Engineer, Product Manager, and a Regional Sales Manager. Also, he was an Application Engineer for Johnson Controls for six years. Dennis has a BSME from Western Michigan University.

Dennis is a LIFE member of ASHRAE and has been involved in the development of ASHRAE test standard 130, the AHRI 880 certification program and the AHRI 885 sound program.

Building Information Modeling (BIM) in the AEC industry.

Abe Morris (SSR Engineers) and Adrianna Schneider (IMAGINit / Advanced Solutions-REVIT)

There are numerous tools used within a BIM environment for design, layout, analysis, coordination, and collaboration, and we will review how these tools are used to support the BIM process. We will also provide an update on the development of ASHRAE SPC224 – Standard for the Application of Building Information Modeling. SPC 224 will provide minimum requirements for the application of BIM to the planning, design, construction and operation of buildings.

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There are many methods and products available today to provide advanced design and modeling information to professionals. We will explore one popular methodology in this talk.

Adrianna is a dedicated technical expert with more than 15 years of experience using Autodesk software, Adrianna specializes in developing and executing implementation strategies using Building Information Modeling tools and the Integrated Project Delivery process within the AEC community to improve and enhance their business practices.

Adrianna has a Degree in Architectural Engineering, with specialties in Structural and Environmental Design from Milwaukee School of Engineering. She worked in several engineering firms before entering the field of technology adoption implementation specialist in the early 2000's. She was involved with ASHRAE and was their student liaison with MSOE; she received an award in 2003 "in grateful recognition for devoted service for the growth and progress of ASHRAE".

Abe Morris is a seasoned professional with over 15 years' experience in the AEC industry. He has been working as the BIM Program Manager for the past 10 years at SSR (Smith, Seckman, Reid, Inc.), a medium size engineering consulting firm based out of Nashville Tennessee. SSR has 15 offices scattered about the US with the headquarters in Nashville. Prior to the BIM Program Manager role, Abe worked as an Electrical designer at SSR. Before joining SSR, Abe worked for a contractor where he became familiar with the construction process and field installations which provided valuable insight to the BIM process. Abe has come to appreciate BIM over the years as the process and software tools have become an integral part of the AEC industry and his career. As the BIM Program Manager, he is responsible for bringing new technology and processes into the firm. His talented team is responsible for many aspects of design technology including, R&D, Training, Support, Software Development, Deployments, Customization and Process Documentation.

Fundamentals of Psychrometrics for Human Comfort Applications

Julie Ferguson has over 20 years' experience in the commercial HVAC industry with expertise ranging from equipment selection to system engineering to equipment design. Currently Julie is an Account Manager for George Israel. She is an active participant in ASHRAE, having served as a voting member of SSPC 55 on Thermal Comfort and TC 8.10 on Mechanical Dehumidification. Currently she serves on ASHRAE Standards committee, Code Interaction Subcommittee and Standards Project Liaison Subcommittee SPLS. For over 10 years

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she has been involved in a wide array of professional continuing education activities, sponsoring building science symposia for engineers, architects, contractors, and others. Her presentations have been given across the country as well as in China, Argentina, Singapore and India.

Understanding Psychrometrics is fundamental to the HVAC industry. It is essential for designing air-conditioning systems that address human comfort and for helping diagnose building systems that do not meet our comfort needs. We will cover basic definitions, look at the behavior of the mixture of air and water vapor and utilize the chart that represents this mixture. Attendees will have fun and enjoy this refresher course in fundamentals that shape what we do every day. By the end of the presentation, everyone in attendance should be able to more easily find their way around a psychrometric chart.