



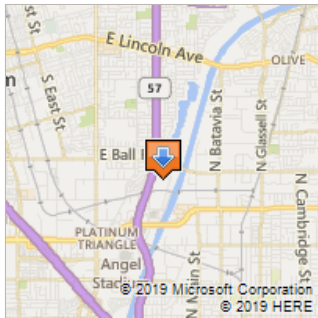
When

Tuesday, November 13, 2018 from 5:30 PM to 9:00 PM
PST

[Add to Calendar](#)

Where

Phoenix Club
1340 S. Sanderson Avenue
Anaheim, CA 92806



[Driving Directions](#)

Contact

Greg Glover

Orange Empire ASHRAE Chapter President Greg Glover

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ASHRAE Orange Empire November 2018 Meeting

Join us for our November 2018 meeting!

November 13, 2018 Research Night

Location: Phoenix Club

Technical Session: Measurements and Verification, Part II: The Variable Air Volume Box!

The technical presentation will focus on the the variable air volume zone box, and its vital role as the keystone of performance. Last season, travis presented energy performance, drawing on data collected from measurement and verifications of 19 real buildings, compared to their design energy models. Frequently, heating energy and fan energy far exceed the design expectation. In this session, Travis will show data collected from initial trending of variable air volume (VAV) boxes. The sample of boxes, designed by different engineers, installed by different controls vendors, on different projects, have similarities which provide clues as to where and how energy is used differently from our best design intents.

Dinner Presentation: Future Thinking about the Net Zero Hospital

Can hospitals really keep up? Net zero is everywhere! Not a month goes by without an announcement of new net zero achievement, or guideline, or policy. But, hospital energy use is as high as ever, five to ten times that of other commercial buildings. Net-zero hospitals seem a distant goal. Most of the energy in hospitals goes to HVAC systems. US hospital design is regulated by a set of prescribed air changes per hour for most spaces. These air change rates are largely historical, some pre-dating the turn of the last century. What possibility is there to update this design paradigm, incorporating learnings from best practices, and energy conservation. Travis will present the possible: net zero hospitals are not so far off. New design ideas and code reform hold promise to move US hospital design towards the net-zero design ideal.

Presented by Travis English, PE CEP LEED AP

Kaiser Permanente

BIO

Travis is the Chief Design Engineer and National Director of Engineering for Facilities Strategy, Planning and Design for Kaiser Permanente, the US's largest managed health care provider. He is responsible for facilities standards, design quality assurance, and oversight of the commissioning program. The quality program includes energy targets, water use planning, total cost of ownership, delivered system performance, and sustainability.

Travis has a BS in Mechanical Engineering from Cal Poly Pomona and an MBA in management from Cal State Fullerton. He is a professional mechanical engineer with over 20 years of experience in design and construction of mechanical and energy system, with an emphasis on high performance design, indoor air quality, and building control systems. In 2009, he received the ASHRAE technical award for the Environmental Nature Center, a facility which used passive heating and cooling designs with 100% natural ventilation. In 2014, he was named one of Consulting- Specifying Engineering Magazine's "40 under 40". Since 2012, he has actively advocated development and adoption of next-generation ventilation design principles and practices in the health care industry. Participating member of TC-9.6, SSPC-62.1 and SSPC-170.

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