

The Gee Chee

2016

April



ASHRAE Webcast

Register now
at <http://www.ashrae.org/webcast>

for ASHRAE's
FREE Webcast,
"Making Net Zero
Net Positive:
Solving the
Efficiency & Cost
Paradox."

2016 Charleston ASHRAE Spring Golf Tournament

When: Friday May 6th

Where: Charleston
Municipal Golf Course on
James Island

See flyer attached
for details on how
to sign up!



Next Meeting Tuesday, April 12th

Harbor Breeze at Patriots Point, Mt. Pleasant

BOG Meeting 5:00-5:30

Dinner and Tech Program 5:30-7:00

\$30/person—dinner w/ drinks

\$25/person—dinner only

[REGISTER ONLINE](#)

Updates and News:

From Resource Promotion

Thanks to all who have so graciously donated this year! So far we have raised \$6310 toward our goal of \$15,000; so we have some work to do. Our big fundraiser coming up is the Spring Golf Tournament to be held at Charleston Municipal Golf Course on Friday May 6th. See the attached flyer for tee times and signup sheet. Someone from the golf committee will be contacting you soon to confirm your team and sponsorship level. Remember, 100% of your donation goes to ASHRAE Resource Promotion, which includes Research, Scholarships, and YEA. You can go to www.ashraerp.com to donate online or find out more about how your donations are spent, or contact me directly. Again, many thanks for your support. See you at Muni on May 6th for a great afternoon of golf. —Chris Constantine, PE

From History

History of the Charleston Chapter of ASHRAE – As of April 2016

On September 10, 1894 the American Society of Heating and Ventilating Engineers (ASHVE) was established. On December 5, 1904 the American Society of Refrigeration Engineers (ASRE) was founded. In 1906 the term "Air Condition" was coined by a North Carolinian - Stuart Cramer. On January 29, 1959 ASRE and ASHAE merged to form the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE).

The Charleston Chapter of ASHRE was chartered on April 14, 1971. Our Chapter achieved its 45th Anniversary April 2016. The current Charleston Chapter grew from the division of the South Carolina Chapter in Columbia SC and inclusion of the Savannah Chapter in Savannah GA (now disestablished). Thirty – six members petitioned Society to establish the Chapter. Of those charter members, F.A. Bailey III ('71), Clyde Poplin ('72), Tom Saunders ('73), Ivan Valdes ('74), Furman Cullum ('75), Bob Townsend ('76) and Mel Bundy ('79) served as Presidents of the Chapter. Sadly six charter members have passed, F. A. Bailey III, Clyde Poplin, Louis Drake, Bob Townsend, Jack Clayton, and Charles Hipp, II. Also sadly six past presidents have passed, F. A. Bailey III, Clyde Poplin, Bob Townsend, Jack Clayton, George Rast (May 10, 2015), and Eric Crawford (Jan 17, 2015 age 36). Forty different members have served as president in our forty-five years. Five of these, F.A. Bailey, Dennis Knight, Ron Runyon, Bo Nutting, and Steve Marek served two terms. In 2003-4, a third generation member, Charles Hipp III, served as President.

(continued on Page 4)

Chapter Sponsors

Thank you for your sponsorship. If you would like to support the chapter, please contact the Research Promotion Chair.

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Silver Level Donors (\$300)

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Dennis Knight

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Bronze Level Donors (\$150)

Wall of Honor—Individual
Donations of \$100 or more

Bo Nutting, Steve Marek,
Chris Constantine, Megan
Rooney, Victor Fallon, Larry
Elkin, Chris Wigginton



CTT Corner— Review of March Presentation by Hoy Bohanon

For more information about this presentation, contact Gene Brown, CTTC.

Remember to register for the April 24 webcast, “Making Zero Net Positive”. Go to WWW.ASHRAE.ORG/WEBCAST for information. Registration opens March 21. If you watch the webcast and complete a critique you will receive 3 PDH credits. Everyone remember to submit entries for a technology award. Contact me at GENE3380@GMAIL.COM if you have any questions.

In March, Hoy Bohanon gave an outstanding presentation on ASHRAE Building Efficiency Quotient (BEQ). There are many types of ratings for cars, restaurants and numerous other things. Building efficiency ratings must be accurately established. We need to add to the building performance database. A low rise restaurant cannot be directly compared to a high-rise office building but if a BEQ is assigned we will have a meaningful method of comparison.

A number of labeling programs have been established. They include: EPA Energy Star; DOE Commercial Building Energy Score (now in pilot phase); and BOMA 360. ASHRAE is involved because of: over 100 years of experience; technical expertise; and constant update of ASHRAE Energy Standard 90.1. BEQ draws on other labeling programs. BEQ allows for comparison of “as-designed” rating with actual performance. With BEQ, a building would have to be one-in-a-million to receive an A+. There is no perfect building. To receive Energy Star, a building must be in the top 25%.

ASHRAE energy audits can be level 1, level 2 or level 3. An asset rating can be given based on the as-designed building configuration. An “in-operation” rating can be given based on energy consumption data which is influenced by occupancy and operation.

$$BEQ = (EUI_{measured} / EUI_{median}) \times 100$$

EUI is energy use intensity relative to building size and other factors. This includes electricity, gas and other energy sources. The median is derived for the specific type and use of building. A low BEQ is better. The score can go below zero for energy producing buildings. There is a BEQ workbook. When the workbook is filled out and furnished to ASHRAE a BEQ will be calculated.

Hoy gave us one of his favorite quotations: “In theory there is no difference between theory and practice but in practice there is.” Based on this, don’t put something “great” in a building if the user does not know how to run it. One big advantage of BEQ to building owners is that it comes from a trusted source. Over 400,000 buildings have used EPA Portfolio Manager. There is progress in mandatory labeling by municipalities but it is slow. It is hoped that LEED will choose BEQ as its energy rating method. ASHRAE Standard 90.1 will not require something with a 20 year payback.

ASHRAE Standard 100 is an energy standard for existing buildings. Randy Jones pointed out that you can fill out the workbook, receive a score and make changes to improve the score. Randy is currently reporting to the SC Advisory Committee.

Presidential Corner— March 2016

I would really like to send out a kudos to Megan for setting up last Month's meetings with a Lunch meeting in Charleston and a Dinner meeting in N. Myrtle Beach, two great programs in one day by our Region IV DL Hoy Bohanon, PE, good info for today's issues.

Don't forget about the WEBCAST, Online registration began March 21, 2016 at www.ashrae.org/webcast. There is no fee for registration. 3 PDH's Chris Crane.

Remember we are looking for a few Volunteers to take our Chapter thru the next couple years, please contact myself or Megan if you are ready to step into any position.

On May 6th we will be holding our Spring Golfing event and Fund Raiser at the Infamous Charleston Muni, this is the one you do not want to miss. Please contact myself or Chris Constantine if you would like to attend or maybe just make a little Hole Sponsor Donation.

Continuing my Membership duties here with a welcome to this year's new members, John G Gottlieb, PE, Lawrence (Tripp) Paul Livingston, Richard S. Combes, Charles Brunson, Cole Cameron, John Housley, Tim Monahan, Kurt William Andrzejczyk, Ronald K Gardner, Michael Thomas and Michael Frey.

No new members this week so please bring a friend to the meeting and let's sign them up.

Thanks and have a good day,
Steve Marek

President ASHRAE Charleston Chapter

<https://charlestonashraechapter.wildapricot.org/>

History of the Charleston Chapter (continued)

The Charleston Chapter has Charleston, SC (Charleston County) as its headquarters and encompasses the Low Country from the North Carolina/South Carolina line to and including Savannah, GA. The Chapter nick name is the "Gee Chee" Chapter – a local pre-Civil War Gullah term. Charleston Chapter has had the fortune to charter two sections and two student chapters. The Student Chapter at the Savannah School of Art and Design, Savannah, GA, was chartered in 1993 and has been continuously most active. The Student Chapter at College of Charleston, Charleston SC, was chartered in 2003 but is currently inactive. The Myrtle Beach SC Section of ASHRAE, chartered April 8, 1997 held a joint meeting with the Wilmington Section of N Piedmont Chapter on March 8, 2016. The Savannah Section of ASHRAE, Savannah GA, was chartered April 7, 1995.

Our Chapter has maintained a "historian archive" since 1971 which at present resides with the Historian. A gala 25th anniversary celebration of the Charleston Chapter was held April 8, 1997 on the deck of the U.S. Navy Aircraft Carrier, the U.S.S. Yorktown. The chapter celebrated its 40th anniversary, April 14, 2011, at a festive party on June 14, 2011.

One of our current members, M. Dennis Knight, P.E., was honored at ASHRAE's 2014 Winter Meeting for his contributions to the Society. Dennis's membership was elevated to the grade of "Fellow ASHRAE" that recognizes exceptional members that have attained distinction and have made substantial contributions to the HVAC&R industry. He was one of 15 in all of ASHRAE so designated in 2013-14. Dennis is also a distinguished speaker in Society. He is the first in our chapter to have achieved either!

In addition, as of March 31, 2014, twelve of our members were serving as volunteers on Society level positions as either chairs, vice-chairs, members, or corresponding members of Technical Committees, Standard Committees, or Society guiding committees. These individuals are: Emad Afifi (Savannah Section/SCAD), Robert Chase (Savannah Section), Leonard Damiano (Myrtle Beach Section), and Joe Fisher, Randy Jones, Dennis Knight, Kimberly Pierson, Ronald Runyon, David Schaaf, Seth Spangler, Richard Trent, and Michael Weeks (all of Charleston). Most of these members serve on multiple committees.

As a testament to keeping up with technology, our Chapter in Jan 2015 included "wildapricot.org" in our website <https://charlestonashraechapter.wildapricot.org>. Thus we have progressed from carbon paper, typewriter, stamped envelope environment in 1971, to an on-line website, newsletter, meeting reservation and payment operation!



April Meeting Technical Presentation

You Can't Afford Discomfort — Mr. Dan Int-Hout

While much has been said about saving energy, little is said of the downside if the savings strategy reduces occupant productivity. The average salary in any office is 100 times greater than the full cost of heating and cooling that space. Strategies that add to the first, renovation, or operating cost of a space have to be weighed against the potential for reduced productivity when calculating the time to payback.

We aren't doing a very good job, it seems. BOMA continues to report that the #1 reason for tenants not renewing the lease is "occupant dissatisfaction with the thermal environment". ASHRAE Standard 55 describes the conditions that will satisfy a majority of the occupants. It is often referenced in code, and many LEED projects have been awarded a point for compliance, at the design stage, of course.

In practice however, we find that systems don't operate at design, or even as designed. We will discuss the issues related to maintaining comfortable conditions at all loads, and discuss the benefits of ventilation and economizer operations.

April Presenter Biography:

Mr. Dan Int-Hout, Chief Engineer, Krueger, is responsible for the presentation of technical data and advanced application engineering for the Grilles, Registers and Diffusers, as well as the VAV air terminals, produced by Krueger. Mr. Int-Hout originally joined Krueger in 1981, but has had several other jobs in the industry, in engineering, marketing and product research roles, with Owens Corning Fiberglas, Carrier, Titus and Environmental Technologies.

Mr. Int-Hout has been in the air distribution research and design business since 1973, has a Masters degree in Business Management from Central Michigan University, and a Bachelors degree in Biology and Physics from Denison University. Mr. Int-Hout has written over thirty technical papers and articles on VAV system performance, acoustics, air diffusion, controls and occupant comfort. He was recently Chairman of both ASHRAE Technical and Standards Committees on Thermal Comfort, is a past Chairman of several other related ASHRAE Technical and Standards Committees, as well as ASHRAE Standards and Environmental Health Committees. He received the ASHRAE Distinguished Service Award in 1993. He is currently the Chairman of the ARI Committee on Applied Acoustics (885) and Chair of ISO 205 U.S. Panel on Thermal Comfort. He is presently a member of the ASHRAE Technical Activities Committee (TAC).

Chapter Officers

PRESIDENT—Steve Marek

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VICE PRESIDENT—Megan Rooney

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SECRETARY—Chris Wigginton

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TREASURER—Victor Fallon

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BOG— Austin Jones, Chris Constantine, Randy Jones

Chapter Meetings

September— Tuesday 9/8
Membership
October—Tuesday 10/13
November—Tuesday 11/10
December—Tuesday 12/8
January—Tuesday 1/12
February—Tuesday 2/9
March—Tuesday 3/8
April—Tuesday 4/12
May—Tuesday 5/10

YEA!
Donor Recognition
Annual Oyster Roast
Research Promotion
History Appreciation
CTTC
History, YEA, & Membership
GGAC





ASHRAE GOLF

CHARLESTON CHAPTER'S "SPRING 2016 RESOURCE PROMOTION"

CAPTAIN'S CHOICE GOLF TOURNAMENT

FRIDAY, May 6th, 2016

12:00 PM LUNCH SERVED

1:00 PM SHOTGUN START

CHARLESTON MUNICIPAL GOLF COURSE

2110 Maybank Highway, Charleston, SC 29412

(843) 795-6517

\$75.00 includes GOLF, CART, FOOD, BEVERAGES, and PRIZES!!!!

Bring your own team or we can assign you to one.

Player:

Handicap :

Player:

Handicap :

Player:

Handicap :

Player:

Handicap :

If you do not list your handicap you will be listed as a Scratch Golfer!

Contact: Chris Constantine: 843-518-0319

cconstantine@constantineengineering.com

SPONSORSHIP LEVEL DESCRIPTION

PLATINUM SPONSOR

Same as GOLD except the one Company which donates the most to the Charleston Chapter Campaign will receive recognition as a Platinum Sponsor for this year's Campaign.

GOLD LEVEL

- Company name will be prominently displayed at ALL Chapter activities, i.e. Chapter Meetings, Golf Outing (as a hole sponsor), Technical Seminars.
- (2) Spots at all Research Promotion activities including the fall and spring golf tournaments
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.
- Hole Sponsor in the Chapter Research Promotion Golf Tournaments
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 800 Contribution)
- Sponsor of Engineering Week Activities

SILVER LEVEL

- Hole Sponsor for the Chapter Research Promotion Golf Tournaments
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 500 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.
- Sponsor of Engineering Week Activities

BRONZE LEVEL

- Hole Sponsor in the Chapter Research Promotion Golf Tournaments
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 300 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.

HONOR ROLL LEVEL

- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 150 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.
- Chapter Meeting sponsors are also available recognition on front page of Chapter Newsletter and recognition at the meeting (ADD \$150)

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REGION IV

CHARLESTON CHAPTER
2015 - 2016 FISCAL YEAR

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	HONOR	\$ 150	_____

CHAPTER MEETING SPONSOR ADD \$150

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CHRIS CONSTANTINE

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