

Upcoming Event Excitement!

We have a lot of exciting
events around the corner!

Feb. 13th:

**CEJC Annual Engineers'
Week Banquet**

March 23th:

**2018 ASHRAE Spring
Golf Outing**

March 30th:

**ACE Mentor Charleston
Golf Tournament**



Next Meeting Tuesday, March 13th

Harbor Breeze at Patriots Point, Mt. Pleasant

BOG Meeting 11:30am-12:00pm

Chapter Meeting/Lunch 12:00pm-1:00pm

\$25/person

[REGISTER ONLINE](#)

Presidential Corner by Philip Runyon

Please come out to the Charleston Engineers Joint Council meeting this coming Tuesday. We are attending this event in place of our regularly scheduled ASHRAE meeting as we are a part of this joint council and want to show support. We will pick back up with our regularly scheduled meetings next month. Please remember March will be a LUNCH meeting.

Please note that we have set our spring golf outing for March 23rd at Charleston Municipal Golf Course. We will be starting fundraising efforts so please be prepared to help out and we look forward to seeing you all there!! We hope to use this event to finish our Research Promotion efforts and meet GOAL.

We were all very sad to announce the passing of one of our long-time members Clarence Ham this month. This was very sad news and Clarence will be sorely missed in our Charleston ASHRAE family. Please keep his family in your thoughts and prayers.

Philip Runyon



ASHRAE Research Investors

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

Corporate Donors (\$1,000+)

Chapman Company

Corporate Donors (\$300+)

MSS Solutions

Carotek

Rivers Plumbing & Electric

Constantine Engineering Associates, LLC

Honor Roll Donors (100+)

Marcus Googer

Megan Rooney

Dennis Knight

Philip Runyon

Jacob Yount

Tim Niles

Randy Jones

Steve Marek

Pete Conroy

Gene Brown

Victor Fallon

Mariah Schwartz

Ron Runyon

Del Laquiere



CTTC Corner

For more information about this column, contact Gene Brown (gene3380@gmail.com).

Johnathon Jackson gave a very interesting presentation at our January meeting. Variable refrigerant flow is useful in cheap, simple HVAC systems and in more complex systems. A VRF system uses smaller pipe than a chilled water system to distribute cooling to various parts of a building. VRF can be used in ducted and in non-ducted systems. VRF controls can be installed at the factory and can be accessed via laptop. With VRF the return on investment is enhanced by lower maintenance.

Thermostats can have occupancy sensors including infrared and other systems.

Energy savings of 20 to 40% may be obtained by using VRF. Weight and required space on roof are reduced by using VRF. Maintain power supply at +/- 10% of rated voltage. The VRF systems are typically air-cooled. With no cooling tower, there is no danger of Legionnaires' disease. The system can have a bank of multiple outdoor units. It is not necessary to have 50 tons of equipment running when the load is 10 tons. The electronic expansion valve has many steps of opening so only the required flow is provided. A system with open protocol may be obtained so that BACNET and other systems may be connected.

ASHRAE 15 limits the amount of refrigerant to 26 pounds for a 10'X10'X10' space. Now it is possible to have a refrigerant detector in the room and satisfy the code. A charge of refrigerant must be added, 15 to 35# to fill piping plus enough to charge the condenser. Hotel rooms are not allowed to have door grilles so any refrigerant leak could be trapped in the room. One outdoor unit typically serves 10-15 rooms. In one hotel room four users of hairspray triggered the refrigerant alarm. The equipment cost is equal for one 24-ton system and for two 12-ton systems but the installation cost is cheaper with the single system. Piping should be pressure tested at 550 PSI and vacuum tested at 550 microns (0.0106 PSIA).

Because refrigerant is heavier than air, refrigerant sensors must be installed under the beds. There is no refrigerant manufacturer in the US. The DOD can buy from friendly nations.

Touch screens and thermostats can be obtained with the capability to lock out control so that building occupants cannot cause problems. Third party kits can be obtained so that one company's AHU's may be connected to a VRF system. In one project, a water coil was removed and a DX coil was installed in the AHU.

An energy recovery system for a lab used heat pipe technology to avoid cross contamination.

Members are encouraged to take advantage of the ASHRAE certification program. Certifications include: Energy Assessment Professional (BEAP) ; Building Energy Modeling Professional (BEMP); Commissioning Process Management Professional (CPMP); Healthcare Facility Design Professional (HFDP); High-Performance Building Design Professional (HBDP) and Operations & Performance Management Professional (OPMP)



GGAC Corner:

February 18-24, 2018 has been designated as Engineers Week (EWeek). Since 1951, EWeek has been set aside to recognize the remarkable men and women of this profession and to inspire young people to enter into the engineering fields. EWeek is a formal coalition of more than 70 engineering, education and cultural societies, with more than 50 corporations and government agencies dedicated to raising public awareness of engineers' positive contributions to the quality of life. The [Eweek website](#) provides additional information about this annual commemoration as well as links to their social media outlets such as [Facebook](#), [LinkedIn](#), [Twitter](#) and [YouTube](#). [View the ASHRAE draft proclamation and cover letter](#) to send to elected officials.

Visit the EWeek website at <http://www.discovere.org/our-programs/engineers-week>

Pete Conroy

GGAC Chair

CEJC Corner:

The Banquet will be held at The Citadel, Mark Clark Hall, Buyer Auditorium (2nd floor) on Tue, 13 Feb 2018. Volunteers are welcome to join the committee.

It is imperative that member societies ensure the award nomination notifications are disseminated to their members who are expected to in-turn pass the nomination notifications to their company or agency human resources departments for local enterprise-wide announcements and submissions. In addition, members need to be enthusiastic advocates for these awards and nominations throughout their company/agency to include HR and push for the widest dissemination possible.

The initial nomination announcements for both Engineer of the Year and Technical Project Team of the Year are out and all members organizations have been asked to help create awareness about the awards, raise their profile, and garner nominations. We as a supporting committee need to make sure we get some nominations in.

Next CJEC Stingrays Hockey night will be Sat, 17 Feb 2018. Free parking is again available game night.

Greg Ashcroft

CEJC Liason



Chapter Officers

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prunyon@chapman-jhj.com

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BOG— Steve Marek, Megan Rooney, Randy Jones

2018 Events

February 13th, 2018 **Meeting/CEJC Banquet** @ The Citadel—Mark Clark Hall, Buyer Auditorium 2nd Floor— *Remaining Competitive in a Changing Landscape*

March 13th, 2018 **Lunch Meeting** 12:00pm-1:00pm@ Harbor Breeze— *Passion and Performance— The Importance of Attitude and Dedication to be Successful in Both Your Professional and Personal Life*

March 23th, 2018 **2018 ASHRAE Spring Golf Tournament** 10:00am @ Charleston Municipal Golf Course

March 30th, 2018 **ACE Mentor Charleston Golf Tournament** 1:30pm-6:30pm@ Shadow Moss Plantation

April 10th, 2018 **Meeting** @ Harbor Breeze— *TBD*

May 8th, 2018 **Meeting** @ Harbor Breeze— *TBD*

June 12th, 2018 **Summer Low Country Boil Social** @ Harbor Breeze @ TBD





ASHRAE GOLF

**CHARLESTON CHAPTER'S
"FALL RESEARCH PROMOTION"**

CAPTAIN'S CHOICE GOLF TOURNAMENT

FRIDAY, MARCH 23, 2018

**10AM SHOTGUN START
CHARLESTON MUNICIPAL GOLF COURSE
2110 MAYBANK HWY
CHARLESTON, SC 29412**

**\$100.00 includes GOLF, CART, LUNCH TO BE
SERVED AFTER GOLF, BEVERAGES, and
PRIZES (CLOSEST TO PEN, LONG DRIVE,
ETC)!!!!!!**

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

**Player:
Player:
Player:
Player:**

Contact: Philip Runyon (843)729-1883; Greg Ashcroft (843)300-2851; or

David Kauffman (843)693-1908

Email this form to: prunyon@chapmancompany.com

SPONSORSHIP LEVEL DESCRIPTION

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 spring golf tournament
- 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 Tournament
- 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 Tournament
- 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 (\$ 250 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 \$200)

ASHRAE CHAPTER SPONSORSHIP
REGION IV

CHARLESTON CHAPTER
2017-2018 FISCAL YEAR

NAME _____

COMPANY/ORGANIZATION _____

MAILING ADDRESS _____

TELEPHONE: _____ FAX: _____

EMAIL: _____

SPONSORSHIP LEVELS: GOLD \$1,000 _____
(PLEASE CHECK ONE)

SILVER \$ 500 _____

BRONZE \$ 300 _____

HONOR \$ 250 _____

CHAPTER MEETING SPONSOR ADD \$200

PLEASE EMAIL COMPLETED FORM TO:
PHILIP RUNYON:
PRUNYON@CHAPMANCOMPANY.COM

**\$25,000
HOLE-IN-ONE**

SAVE THE DATE

FRIDAY, MARCH 30

Fourth Annual
ACE IN THE HOLE

ACE Mentor Charleston
Golf Tournament

Where: Shadow Moss Plantation

20 Dunvegan Dr Charleston, SC 29414

Schedule: 11:30 AM - Registration

1:30 PM - Shotgun Start

5:30 PM - Food & Awards



ACE MENTOR PROGRAM
ARCHITECTURE • CONSTRUCTION • ENGINEERING



Sponsorship Available

For more information contact: Rob Turner rob@charlestonengineering.com

Bobby Teachey bteachey@bstonegroup.com

LaShaun Key lashaun.key@novusarchitects.com

**FUNDS RAISED GO TOWARDS ACE STUDENT
SCHOLARSHIPS FUND**

Fourth Annual
ACE IN THE HOLE
GOLF TOURNAMENT



ACE MENTOR PROGRAM
ARCHITECTURE • CONSTRUCTION • ENGINEERING

Benefiting the ACE Mentoring Program of Greater Charleston

SPONSORSHIP DEADLINE – March 15th, 2018

Please help support the ACE Mentor Program of Greater Charleston – thank you!

- Title Sponsor** - \$3,000 (2 available). Two (2) complimentary foursomes; top billing & company logo on all promotional media; company banner displayed at tournament; company logo on event signage; special recognition at lunch and dinner / awards presentation; one complimentary hole sponsor.
- Dinner Sponsor** - \$1,500 (1 available). One (1) complimentary foursome; company logo on all promotional media; company logo on event signage; special recognition at dinner / awards presentation; one complimentary hole sponsor.
- Lunch Sponsor** - \$1,500 (1 available). One (1) complimentary foursome; company logo on all promotional media; company logo on event signage; special recognition at lunch / awards presentation; one complimentary hole sponsor.
- Beverage Cart Sponsor** - \$1,000 (1 available). One (1) complimentary twosome; company logo on all promotional media; company logo on event signage; one complimentary hole sponsor.
- Foursome** - \$500 Includes lunch, and dinner for all golfers and hole sponsor
- Twosome** - \$225 Includes lunch, and dinner for all golfers.
- Individual** - \$125 Includes lunch, and dinner for all golfers.
- Hole Sponsor** - \$200 (*Multiple*) Company signage on one hole.
- Name Scholarship Sponsor** - \$1,000 (*Multiple*) All money will go to a student's ACE Scholarship in your company's name; May 17th, 2017 Scholarship Banquet Inclusions: Company recognition, picture with students is encouraged, company logo on promotional material. For Sponsors that don't want to play golf, but want to support ACE Mentoring Students.
- Co-Named Scholarship Sponsor** - \$500 (*Multiple*) All money will go to a student's ACE Scholarship in your company's name; May 17th, 2017 Scholarship Banquet Inclusions: Company recognition, picture with students is encouraged, company logo on promotional material. For Sponsors that don't want to play golf, but want to support ACE Mentoring Students.

SPONSORSHIP DEADLINE – March 15th, 2018

The registration form and payment details can be found on the following page

Fourth Annual ACE IN THE HOLE GOLF TOURNAMENT



ACE MENTOR PROGRAM
ARCHITECTURE • CONSTRUCTION • ENGINEERING

Benefiting the ACE Mentoring Program of Greater Charleston

SPONSORSHIP DEADLINE – March 15th, 2018

Please indicate your desired sponsorship level:

Title Sponsor - \$3,000 (2 Available)

Dinner Sponsor - \$1,500 (1 available)

Lunch Sponsor - \$1,500 (1 available)

Beverage Cart Sponsor - \$1,000 (1 available)

Foursome - \$500

Twosome - \$225

Individual Golf & Dinner - \$125

Hole Sponsor - \$200 Multiple)

Named Scholarship - \$1000 (Multiple)

Co-Named Scholarship - \$500 (Multiple)

Primary Contact _____

Company Name _____

Address _____

City, State, Zip _____

Phone _____

Email _____

Player 1 Name _____

Player 2 Name _____

Player 3 Name _____

Player 4 Name _____

All fees are due in full at time of registration. There are three ways to register and pay;

- **Option 1:** Mail this registration form and a check
 - Made payable to: **The ACE Mentor Program of Greater Charleston,**
Attn: Rob Turner 125 Wappoo Creek Dr # B, Charleston, SC 29412 by March 15, 2018; OR
- **Option 2:** Online registration at www.eventbrite.com [ACE in the Hole Golf Tournament](#)
 - Search for this tournament name in the Charleston, SC area; OR
- **Option 3:** To pay by credit card,
 - Email a copy of this registration form to Rob Turner rob@charlestonengineering.com;
 - Then please log on to the [ACE Greater Charleston affiliate website](#) and click the Sponsors Tab and then the "donate now" button.

For any questions regarding the sponsorships / tournament, please contact:

Rob Turner at (843)813-4441 rob@charlestonengineering.com
LaShaun Key @ (912)596-0619 lashaun.key@novusarchitects.com
Bobby Teachey @ (704)239-9420 bteachey@bstonegroup.com

Thank you for your generous support of the ACE Mentor Program of Greater Charleston and for investing in the architects, contractors, engineers and the skilled workforce of tomorrow!