

**MARCH  
2009 EDITION**



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SHRAECHAPTERS.ORG](http://www.charleston.ashraechapters.org)  
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# “THE GEE CHEE”

THE OFFICIAL PUBLICATION OF THE REGION 4 CHARLESTON CHAPTER 113  
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING  
ENGINEERS, INC.



## MEETING SCHEDULE

**LOCATION: NORTH  
CHARLESTON RADISSON  
HOTEL**

**B.O.G. – 5:00-5:30PM**

**“HAPPY HALF HOUR”  
5:30-6:00PM**

**TECH PROGRAM  
7:00-8:00PM**

**8:01PM. . . . .SEE YOU NEXT  
MONTH**

**ASHRAE**  
*Engineering  
for  
Sustainability*

**THIS MONTHS PRESENTATION  
BY:  
DENNIS KNIGHT  
LIOLLO ARCHITECTURE**



***THIS MONTH'S  
ARTICLES:***

- The Monthly Topic and Speaker
- The Presidential Message
- The CTT Corner
- Member News
- Chapter Research
- Awards and Honors
- The Wall of Honor
- Sponsorships and Investors
- Announcements and Advertisements
- Chapter Involvement

## **This Month's Topic: Modeling Reality in the Built Environment**

Dennis Knight a Partner and Director of Technical Support at Liollo Architecture. He is responsible for specification writing, code analysis, LEED documentation, and quality control. He also offers engineering support energy modeling and commissioning.

Dennis has been a member of the Charleston Chapter of ASHRAE since 1980, and has served as chapter President, Student Activities Chair and Research Promotion Chair. He has also served as the Region IV Research Promotion Chair. Dennis has participated on several National Steering and Technical Committees.

Along with ASHRAE, Dennis is also a member of AIA, the Building Enclosure Council and the US Green Building Council

### **THE PRESIDENTIAL MESSAGE**

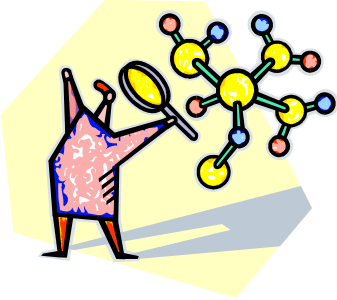
I just wanted everybody to know that the BOG is actively working on filling the position of the secretary. This is the third time around, but that is just part of the challenges of life. As I am sure everybody agrees, we greatly appreciate the service from Gerri. Even with these challenges, I think we are having a terrific year. I have witnessed increased attendance, increased enthusiasm, and general trend towards improvement. Having said that, I can say that we will surely look forward to this coming month's seminar by our own Dennis Knight. Dennis is now an ASHRAE distinguished lecturer and we get to enjoy a seminar by him before he gets really famous. See you at the meeting.

Best Regards,  
Rob Turner, P.E.  
Charleston Chapter President

## THE CTT CORNER

By: Gene Brown

Our February meeting was held with the Joint Engineers Council. Dr Qian Wang spoke on advances in bionanotechnology. As we listened closely a number of interesting concepts were presented. A nanometer (nm) is ten to the minus nine meters. His work involves dimensions of 1 nm to 100 nm. These dimensions are much smaller than a human hair. Nanotechnology is real.



You use it every day. Examples are: liquids with nano-sized particles in suspension and batteries for cordless tools with nano-sized particles. Living cells are natural nanotechnology. Artificial nanotechnology is about to give the cells a helping hand. A nanotech glucose sensor can be implanted to activate automatic glucose injections. There are unexpected properties at nano-scale. Gold divided into nano-sized particles is a beautiful red color.

Gold particles from 3 to 5 nanometer in solution will produce several different colors. Organization at nanometer scale results in special properties. Dr Wang’s work involves plant virus isolation. The plants are frozen and then cracked. The virus sizes can be 30 nm to 100 nm. Workers handling the plant virus do not have to take special precautions because the viruses do not infect humans. Dr Wang showed a slide illustrating a 30 nm virus. The use of a virus to deliver a vaccine to the site of a cell can increase the amount of vaccine delivered to the site by a factor of 17,000. A robo-roach has been developed. A computerized device has been connected to the insect’s head and signals sent to the device can cause the roach to stop, go, turn left or turn right. Microbial fuel cells utilize electrons released bacteria as they feed.



## Sponsorships and Investors

2008-2009 ASHRAE RESEARCH INVESTORS

**THE CHAPMAN COMPANY**  
**JAMES M. PLEASANTS CO.**  
**TRIAD MECHANICAL**  
**SMITH & VANDENBULCK**  
**SANTEE COOPER**  
**EPTING DISTRIBUTORS**



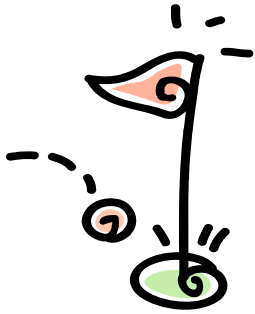
## Member News

WE HAVE SEEN MANY OF OUR LOCAL ENGINEERING FIRMS GROWING THEIR BUSINESSES AND BRINGING NEW FOLKS ON BOARD. IF YOU HAVE RECENTLY MOVED TO THE CHARLESTON AREA AND WISH TO TRANSFER YOUR MEMBERSHIP, PLEASE CONTACT OUR MEMBERSHIP CHAIR, **CHARLES HIPPI**, OR MAKE THE CHANGE ONLINE AT [WWW.ASHRAE.ORG](http://WWW.ASHRAE.ORG).



" The Gee Chee"

## Announcements and Advertisements



# ASHRAE GOLF

CHARLESTON CHAPTER'S

**"SPRING RESEARCH PROMOTION"**

GOLF TOURNAMENT

**FRIDAY , May 1, 2009**

**1:00 PM**

**CHARLESTON NATIONAL  
MT. PLEASANT, S.C.**

**\$75.00 includes GOLF, CART, BOX LUNCH, BEVERAGES, and PRIZES!!!!  
Raffle contest for CASH PRIZE.**

**Are You Ready!**

### **CRC 2009 is coming to the Florida West Coast Chapter!**

This August, the FWC Chapter will be hosting the Chapters Region Conference for two regions – Region IV and XII. This will be quite the event. ASHRAE members and Society dignitaries will come from all over Florida, Georgia, North Carolina, South Carolina, Puerto Rico, Argentina, Brazil and other areas of Central and South America.

CRC 2009 will take place August 6-8, 2009, but our local chapter will be hosting events throughout the week including fishing charter, golf scramble, technical seminars and much more. The conference will be held at the Tradewinds Beach Resort in lovely St. Pete Beach.

If you are interested in volunteering and being part of the fun, we welcome you. Please feel free to contact me at 813-731-2203 ([jjisenbec@admin.usf.edu](mailto:jjisenbec@admin.usf.edu)) for more details.

We are also looking for sponsorships. This will be an ideal opportunity to get your name out to over 200 ASHRAE participants! Please contact Debie Horsey 813-748-9406 ([dhorsey@carrollair.com](mailto:dhorsey@carrollair.com)) if you are interested.

[ashraecrc2009-region4-12.org](http://ashraecrc2009-region4-12.org)

## A Brief Discussion on Chapter Research

### ASHRAE Research

As of the first of February, our research contributions for the year are about \$9,200.00. We set a safe goal for the year to match last years goal and we need to step it up and not wait until the last minute to get these contributions in. Those who made contributions last year and have not done so this year, help us out! Those of you who have pledged for this year and have not written the checks, let's go! Our March meeting is Research Promotion Night. Dennis Knight will be recognizing last years sponsors and contributors and great appreciation will be awarded to those who did so. Now is the time to make the list for this year. I am just as busy as the next guy and I have been a little slow in making some calls. Help me out. Help out ASHRAE Research.

Dan Cartin

## What is the CRC?

The Chapters Regional Conference a gathering of all chapter members, associates, officers and guests to coordinate efforts, provide training, and carry out the business of ASHRAE. This is a very important event and should be considered to be attended by all chapter officers any interested chapter members.

The 2009 CRC is a joint event with Regions IV and XII, and this will be a great opportunity to meet with our colleagues in the Florida, Central America and South American Chapters. A TREMENDOUS OPPORTUNITY!!

Please plan NOW to attend, and mark your calendars!

## The Charleston Chapter Wall of Honor

### For

### Individual Donations of \$100 or more

**MUCH OF ASHRAE RESEARCH FUNDING COMES IN THROUGH INDIVIDUAL DONATIONS, SO PLEASE GIVE.**

*Rob Turner      Randy Jones      Dave Tomayko*  
*Dan Cartin      Pete Conroy      Louis Schweers*  
*Dennis Knight      Steve Marek      Ron Runyon*  
*Dr. Emad Afifi      Lee Abernathy      Jim Auten*



**CAN WE PUT YOUR NAME HERE?**

Please Support ASHRAE!!

## READY TO GET INVOLVED?

### CHAPTER OFFICERS

#### PRESIDENT

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#### TREASURER

Louie Schweers  
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Fax: 881-4859

[louis@glseengineering.com](mailto:louis@glseengineering.com)

We're on the Web!

See us at:

[www.charleston.ashraechapters.org](http://www.charleston.ashraechapters.org)

CONTACT ONE OF OUR COMMITTEE CHAIRS TO SEE  
HOW YOU CAN MAKE A DIFFERENCE

### Chapter Committee Chairs

#### HISTORIAN

Dave Tomayko  
Phone: 819-2742

[dtomayko@knology.net](mailto:dtomayko@knology.net)

#### MEMBERSHIP

Charles Hipp, III  
Phone: 367-2404

#### MEMBERSHIP VICE

##### CHAIR

Barrett Williams  
Phone: 881-3201  
Fax: 881-3628

#### REFRIGERATION

Scott Peak:  
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#### TEGA/CTT

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#### PROGRAMS

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#### RESEARCH

Dan Cartin  
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Fax: 747-3399

#### SAVANNAH SECTION

##### CHAIR

VACANT  
Phone:  
Fax:

#### MYRTLE BEACH SECTION

##### VACANT

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#### NEWSLETTER EDITOR

Gerri Brown  
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#### HOME PAGE WEBMASTER

Tim Walker  
Phone: 553-5513  
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#### STUDENT ACTIVITIES

##### VICE CHAIR

Dr. Emad Afifi  
Phone: (912) 525-6876

#### HONORS AND AWARDS

Bo Nutting  
Phone: 745-6748  
Fax: 744-5553

#### CHARLESTON ENGINEERS JOINT COUNCIL LIASION

Eric Crawford  
Phone: 556-7272  
Fax: 556-7487

### CHARLESTON CHAPTER ANNUAL PROGRAMS FOR THE 2008-2009 YEAR

#### DECEMBER

Tuesday, December 9, 2008

"US Green Building Commission and Holiday Oyster Roast"

#### JANUARY

Tuesday, January 13, 2009

"Overview of Energy in South Carolina, by Trish Jerman, SC Energy Office"

#### FEBRUARY

Tuesday, February 17, 2009

National Engineers Week Banquet at the Citadel Alumni Center

#### MARCH

Tuesday, March 10, 2009

"Modeling Reality in the Built Environment, By Dennis Knight, Liollo Architecture"

Research Promotion Night

#### APRIL

Tuesday, April 14, 2009

"Green maintenance to KEEP HVAC Green, Robert Baker, ASHRAE Distinguished Lecturer"

Chapter History Night

#### MAY

Tuesday, May 12, 2008

"Test and Balance Procedures and tactics, Rodney Hinton, Palmetto Air Balance"

Student Activities Emphasis Night

#### JUNE

DATE AND LOCATION OF CHAPTER SOCIAL TBD