

# The Dewpoint

50 YEARS OF EXCELLENCE  
CENTRAL FLORIDA CHAPTER

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THEME: MEMBERSHIP PROMOTION MONTH

Happy New Year ASHRAE Central Florida! Now that the rush of the 2011 holiday season has come to an end it is time for us to tackle the final half of the 2011-2012 ASHRAE Central Florida Calendar year! Ahead of us in the coming months are four exciting technical sessions (including a bonus technical session in March!), our annual Shrimp boil, Dodgeball, our Spring Golf outing and our year will culminate with the ASPE-ASHRAE Product Show at the Central Florida Fairgrounds!

In addition to the exciting chapter activities taking place over the next six months, our chapter is also excited to participate in the Central Florida E-Week Banquet! We are actively seeking nominees for all of the following categories:

- Lifetime Achievement in Engineering
- Leadership Excellence
- Technical Excellence
- Outstanding Organization of the Year – Public Sector
- Outstanding Small Organization of the Year- Private Sector  
(Less than or equal to 100 employees)
- Outstanding Large Organization of the Year – Private Sector  
(More than 100 employees)
- Outstanding Engineering Project of the Year

For category details and nomination I can be reached at [jmiller@peifla.com](mailto:jmiller@peifla.com).  
Hurry because entrants are due on January 16<sup>th</sup>!

Thank you to everyone in the Central Florida Chapter who has helped us with our success in 2011, and we look forward to serving you to meet your needs to provide you with the best technical resources, the best social activities and networking opportunities of any professional organization in Central Florida!

## PRESIDENT'S MESSAGE

John Miller,  
PE



January 2012  
Volume 15, Issue 5

A monthly publication of the  
Central Florida Chapter  
of the American Society of Heating, Refrigeration,  
and Air Conditioning Engineers, Inc.

[www.ashrae-cfl.org](http://www.ashrae-cfl.org)

ASHRAE Society Website: [www.ashrae.org](http://www.ashrae.org)

## Upcoming Events

Cool Thermal Energy Storage in the Era of Sustainability

January 12, 2012

William Bahnfleth, PhD, PE

ASHRAE Winter Conference

January 21-25, 2012

Energy Efficient Window and Fenestration Technologies

February 9, 2012

R. Christopher Mathis

2012 YEA Dodgeball Tournament

February 25, 2012

E-Week Awards Banquet

February 25, 2012

Central Florida Shrimp Boil

March 8, 2012

Winter Park Farmers Market

Integrated IAQ and Energy Case Studies in the Tropics

March 21, 2012

Dr. S.C. Sekhar

YEA Technical Tour

Spring 2012

Commissioning Energy Recovery Equipment

April 5, 2012

Hoy R. Bohanon, Jr., PE

Spring Golf Tournament

April 20, 2012

May Technical Meeting

May 10, 2012

ASPE-ASHRAE Product Show

Central Florida Fairgrounds

June 7, 2012

# Programs

Chair:  
Megan LaHiff, PE



Happy New Year!

It was great to see everyone at the December meeting and I hope you all enjoyed our speaker, Dennis Knight, and his presentation on Building Information Modeling (BIM) as much as I did. The discussion following the presentation was excellent!

It was also a treat to have so many of our past presidents come out for the meeting. We appreciate everything you've done for our chapter and it was a delight to have you celebrate History night with us!

Coming up in January, our chapter has the distinct privilege of hosting Society Treasurer, William P. Bahnfleth, PhD, PE. Bill Bahnfleth is a professor and Penn State University and will be presenting to our chapter on "Cool Thermal Energy Storage in the Era of Sustainability". We're excited to have Bill in town and hope you'll join us for his presentation!

We have a lot of fantastic programs coming up in 2012 – some of which John gave you a preview of in his presidential message. Please keep an eye out for our meeting announcements and let me know if you have any questions about any of our special programs.

See you at the meeting!

## Refrigeration

Food for Thought

Chair:  
Joseph de Armas



Typically when most people go to the grocery store and get something cold, like steaks or ice cream, everyone just checks the date, looks at the color, and assumes hey this is good to go. Granted there are design standards and guidelines, not to mention federal laws concerning refrigerated display cases so that when you buy this product, you should feel pretty safe it's not going to make you sick due to spoilage. What most people don't take into consideration is that these standards and guidelines are only for when the case is in cooling mode. So what happens to the product when the unit goes into defrost mode?

As an example take a closed case that holds meat. In this example air from the coil discharges at 29°F (product temp should be same or close to discharge temp). Now when the case goes into defrost (which can happen 3-4 times a day for around 6-8 minutes) the heat that is applied to the coil to melt the ice will also radiate into the case. So what happens to the temperature inside the case while in defrost?

For the purpose of simplicity we'll make this a closed system.

*Assumptions:*

Actual area being cooled (product area) = 48 ft<sup>3</sup> @ 29°F

400 W (117.24 BTU/h) electric defrost

0.02 (BTU/h)/ft<sup>3</sup> = 1°F/h (*how many BTU/h to raise the temp 1°F in 1 ft<sup>3</sup> of air*)

*Solve:*

$$[(117.24(\text{BTU}/\text{h})) / (0.02(\text{BTU}/\text{h}) / (\text{ft}^3))] / 48(\text{ft}^3) \sim 122^\circ\text{F}/\text{h} \sim 2^\circ\text{F}/\text{min}$$

With a defrost cycle lasting anywhere from 6-8 minutes you are looking at a 12° to 16° increase (then decrease when the case starts running again) in temperature at least 4 times a day. While some food products are more sensitive to this kind of change than others, this up and down in temperature still results in a shortened shelf life. As the consumer this really doesn't affect us since stores know how long the product can stay on display before it has to be thrown out, but as an owner this equates to throwing away money if goods aren't sold in a time.

# Student Activities

## 2012 ASHRAE Chicago Winter Conference Student Program

Jan 21 – 25, 2012  
Palmer House Hotel

Chair:  
Amy Weaver, PE



### Saturday January 21, 2012

#### *Student Welcome and Orientation*

1:30 – 2:45 PM

Location: **Red Lacquer, 4<sup>th</sup> floor**

The conference kicks off with a student welcome and orientation where students can mix and mingle and find out how to make the best of their Chicago experience. Led by Student Activities Committee Chair Joel Primeau, students will be provided with an overview of the Sunday program, what technical sessions are recommended and an overview of the AHR Expo.

#### *Plenary*

3:00 – 5:00 PM

Location: **Grand Ballroom**

Students are encouraged to attend and see the winning design competition teams receive their awards from society President Ron Jarnagin.

#### *Student/YEA Mixer*

5:00 – 6:30 PM

Location: **Chicago (5)**

Games, giveaways, food and a chance for students to network with ASHRAE's young professionals group YEA. This is the perfect opportunity for students to learn about life after college!

#### *Welcome Party*

6:30 – 8:00 PM (Optional due to extra expense)

Location: **Art Institute of Chicago**

Students are encouraged to attend and get a chance to socialize with society members. Get in the right frame of mind with an evening of delicious food and networking.

### Sunday January 22, 2012

#### *2011 Solar Decathlon Technical Session: Lessons for Net Zero Residential Structures*

Track: *High Performance Buildings, Sponsored by 06.07 Solar Energy Utilization, 02.08 Building Environmental Impacts and Sustainability, Chair Janice Means*

8:00 AM - 9:00 AM

Location: **Salons 4/5**

Representative teams from the 20 international entries in the 2011 Solar Decathlon present the design, construction and performance of their high performance residential building entries. Students present their experience in the competition, their employment of computerized energy analysis and automation systems, integrated new solar (and other) technologies and techniques to maximize utilization of small living spaces while minimizing their impact on the environment. ASHRAE is one of the sponsors of the U.S. Department of Energy's 5th Solar Decathlon, which was first held in the fall of 2002 and then biennially in Washington, DC., beginning in 2005.

#### *ASHRAE Student Program*

9:00AM – 2:00PM

Location: **Red Lacquer, 4<sup>th</sup> floor**

The student program includes a small breakfast, buffet lunch, award presentations, poster sessions, professional development and a student technical tour overview. Sessions will show students just how employers search for new talent and how they should prepare for this process. Students will enjoy the poster session from their peers at University of Oregon who will present a poster session on their 2011-2012 ASHRAE Senior Grant Project entitled "Net Zero Energy (NetZED) Design ToolKit. Society President Ron Jarnagin will be present to welcome students to Chicago!

#### *ASHRAE Student Technical Tour, \$20*

2:30pm – 4:30pm (Buses will depart promptly at 2:30)

Location: **University of Chicago Library** (meet buses at **Wabash exit**)

Joe and Rika Mansueto Library, where unique engineering and bold design come together at the heart of campus to foster intellectual discovery.

The Mansueto Library creates new spaces and tools for collections, preservation, and collaboration. Designed by Helmut Jahn, its inviting research space includes the Grand Reading Room, where scholars from all disciplines can work under a soaring elliptical glass dome with views of the historic UChicago campus. The library can hold the equivalent of 3.5 million volumes, giving scholars and students immediate access to the materials they need for research.

This library is the chosen building for the ASHRAE 2012 Student Design Competition!

### Monday January 23, 2012

#### *Technical Session: How to Communicate Professionally in a Technical World with Technical Information*

Track: *Professional Skills*, sponsored by the Student Activities Committee, Chair Joel Primeau

11:00AM – 12:00PM

Location: **Monroe**

Many in our industry struggle with how to communicate effectively with technical information, keeping on target, providing the reader with a proper roadmap of information, delivering all necessary information in a logical, clear format, and doing so such that anyone within our industry can understand the objective and the solution to a given situation or problem. This session illustrates a thought process along with a structure such that anyone can present a technical problem or situation and provide a clear and logical solution in written communication for others.

#### *Student Congress (25 max, by advisor nomination only)*

10:00AM – NOON

Location: **Clark 5, 7<sup>th</sup> floor**

This leadership opportunity is for student branch officers to come together and share student member/branch feedback, communicate success stories/challenges from student branches, networking, and boosting Student Branch operations through an opportunity to learn what others are doing. More importantly, it allows us to identify future society leaders! Lunch will be served after the meeting and attendees will also receive a certificate of participation and a gift from ASHRAE.

#### *AHRAE Expo (at student's convenience)*

Location: **McCormick Place North & South**

The 2012 Show in Chicago is shaping up to be the largest AHR Expo ever, hosting more than 2,000 exhibiting companies from over 30 countries from around the globe. AHR Expo is the one event where leading manufacturers and innovative suppliers showcase their latest products: from the most energy efficient systems and more sustainable building technology to state-of-the-art automation and controls, software, innovative tools, services, and much more.



## CFL ASHRAE LEADERS ATTEND DEDICATION

On December 7, 2011, Central Florida ASHRAE attended the dedication of OUC's Stanton Solar Farm. The 5.9-megawatt (MW) photovoltaic (PV) array will generate enough energy to power more than 600 homes. The solar array is located along Innovation Way in Southeast Orange County and can be seen from the road. So, take a drive by and see what OUC is doing to provide green power to the central Florida area.

In addition to increasing OUC's portfolio of clean power generation, the Stanton Solar Farm will also allow OUC to study the impact of a large-scale solar array on its electrical distribution system. CFL ASHRAE was represented by John Miller, Megan Lahiff, Nate Boyd, and Tracey Whaley.

### *From the e-industry news.... Residential Power Use Declining*

It appears that energy conservation efforts are working. Even though we have more electronic gadgets than ever, residential electrical use is down. The average growth in power demand is down 0.5 percent in the last decade (2000-2010) when compared to the previous decade (1980-2000).

More recent numbers record a 1.3 percent drop in power demand for the first quarter of 2011. Utility executives are surprised by the dip. They don't know if the dip is related to the economy or that there is really a change in how we use power.



To read the complete article you can follow this link: <http://www.toledoblade.com/Energy/2011/09/18/Power-use-declines-as-numbers-of-gadgets-rise.html>

# Young Engineers in ASHRAE (YEA)

This Spring we have our 3<sup>rd</sup> annual Central Florida dethroning the reigning champs from Harper Don't miss your chance to "accidentally" nail he isn't looking.

The Dodgeball Tournament will be held in late February (Stay tuned for updates as we tournaments, this event is open to consist of 6 players, minimum. needed to participate in this exciting final- every A flyer event.

ASHRAE – YEA Dodgeball Tournament. Come take your best shot at Limbach and get to know your fellow YEA members in the process. John Miller with a dodgeball on the sidelines while

February (Stay tuned for updates as we tournaments, this event is open to consist of 6 players, minimum. needed to participate in this exciting final- every A flyer event.

[palbers@peifla.com](mailto:palbers@peifla.com).

Chair:  
Paul  
Albers



## Research Promotions

# NIGHT GOLF!

Chair:  
Ian LaHiff



December kicked off with a roaring good time thanks to all that came out for our second annual night golf tournament! The night started with a few rounds for everyone...and then came the golfing!

The folks at Weikiva Golf Club were helpful and patient hosts as the golfers tore through the dark course with flashlights and glow balls. Each fairway was lit with glow sticks and for once, the balls were super easy to find in the rough! We had a good showing of four-somes considering the start of the holiday season.

Those that showed up were in for a treat when Santa made an appearance to award the trophies!



For the second year in a row we had a great time, a few laughs, more than a few rounds and rose over \$500 for ASHRAE Research Promotion!

Make sure to mark your calendars - The Golf tournament of the year is just around the corner! Spring Golf 2012 is set for April! Look for more details in the next issue of the Dewpoint!

<b>James A. Oberlin</b>	<b>1962-63</b>
<b>James A. Driver</b>	<b>1963-64</b>
<b>Warren L. Chase</b>	<b>1964-65</b>
<b>Kenneth E. Hayes</b>	<b>1965-66</b>
<b>Lloyd H. Boissoneault</b>	<b>1966-67</b>
<b>William C. Denson, PE</b>	<b>1967-68</b>
<b>Maynard D. Reese</b>	<b>1968-69</b>
<b>William R. Penn</b>	<b>1969-70</b>
<b>Theodore H. Brooks</b>	<b>1970-71</b>
<b>J. Wesley Floreth</b>	<b>1971-72</b>
<b>Wiley M. Cauthen</b>	<b>1972-73</b>
<b>Edwin C. Pratt</b>	<b>1973-74</b>
<b>Lyle M. Houser, Jr, PE</b>	<b>1974-75</b>
<b>Hal A. Head, PE</b>	<b>1975-76</b>
<b>Garth E. Tristam</b>	<b>1976-77</b>
<b>Raymond E. Davis</b>	<b>1977-78</b>
<b>W. Hugh Wilson, Jr</b>	<b>1978-79</b>
<b>William M. Dillard</b>	<b>1979-80</b>
<b>John D. Simmonds, PE</b>	<b>1980-81</b>
<b>Joseph K. McCarthy</b>	<b>1981-82</b>
<b>Dwayne Lorenze</b>	<b>1982-83</b>
<b>David Wassman, PE</b>	<b>1983-84</b>
<b>David Krause</b>	<b>1984-85</b>
<b>Bill Watford</b>	<b>1985-86</b>
<b>John J. Asendorf, PE</b>	<b>1986-87</b>
<b>Melvin Borczynski</b>	<b>1987-88</b>
<b>Jack Zelsman</b>	<b>1988-89</b>
<b>Kenneth L. Eiermann, PE</b>	<b>1989-90</b>
<b>Kevin K. McKenzie, PE</b>	<b>1990-91</b>
<b>Todd S. Morgan, PE</b>	<b>1991-92</b>
<b>Firouz Keikavousi</b>	<b>1992-93</b>
<b>John Elsea</b>	<b>1993-94</b>
<b>Bernard Horne</b>	<b>1994-95</b>
<b>Mark Lanier</b>	<b>1995-96</b>
<b>Larry Snyder</b>	<b>1996-97</b>
<b>Bill Leaton</b>	<b>1997-98</b>
<b>Hossein Dayi, PE</b>	<b>1998-99</b>
<b>Gary Carver, PE</b>	<b>1999-00</b>
<b>Michael Sheerin, PE</b>	<b>2000-01</b>
<b>Traci Just</b>	<b>2001-02</b>
<b>Chris Bradford</b>	<b>2002-03</b>
<b>Dan Cross, PE</b>	<b>2003-04</b>
<b>Damon Lynn, PE</b>	<b>2004-05</b>
<b>Todd Moore, PE</b>	<b>2005-06</b>
<b>Tim Citek</b>	<b>2006-07</b>
<b>Mike Dillard</b>	<b>2007-08</b>
<b>Wade Conlan, PE</b>	<b>2008-09</b>
<b>Rich King, PE</b>	<b>2009-10</b>
<b>Jason Alphonso, PE</b>	<b>2010-11</b>
<b>John Miller, PE</b>	<b>2011-</b>



## Chapter Leadership

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