

### Upcoming Events

- **June 16th -**  
Golf Outing

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## Meeting Wednesday May 12, 2010

### Main Presentation: Infrared Thermography for Building Applications (1.0 PDH Pending)

Jack Kleinfeld, P.E. is the founder of Kleinfeld Technical Services, Inc., emphasizing infrared (IR) thermography, finite element analysis and process engineering as tools to help clients improve their operations, profitability and quality. He was previously employed in a senior position on the corporate technical staff of the Champion International Corporation, previously the St. Regis Paper Company. He is a licensed chemical engineer with over 28 years of varied experience in process analysis, steam and power systems, process simulation, process troubleshooting and improvement, finite element analysis, thermography, computer applications, pulp and paper technology, database application and design, and image analysis and use. He holds both a Master's of Chemical Engineering and a Bachelor's of Chemical Engineering (Magna Cum Laude) from CUNY/CCNY. He is President of the Bronx (NY) Chapter of the National Society of Professional Engineers.

Infrared thermography is taking "pictures of temperature." A brief introduction to the science and technology of infrared thermography will be presented. The seminar will then cover various aspects of building applications for infrared, including examples, how and why they work, how they should be carried out, and what to expect of them.

### Technical Presentation: Testing, Adjusting and Balancing (TAB) (1.0 PDH Pending)

John Mazza, P.E. has been practicing in the HVAC industry for over 30 years. He graduated from SUNY Stony Brook in 1978 and received his M.S. degree in mechanical engineering in the field of advanced energy technologies. From 1978 to 1991, John was an associate professor at SUNY Farmingdale, teaching in the Department of Air Conditioning Engineering Technologies. In 1991, John opened his own engineering firm, Airpath Engineering, P.C. in Hauppauge, New York. In addition to being a HVAC systems design firm, Airpath Engineering is certified by NEBB to perform TAB and building systems commissioning.

The ASHRAE definition of HVAC system testing, adjusting and balancing (TAB) is applied by various agencies, including the National Environmental Balancing Bureau (NEBB), Sheet Metal Contractors Testing, Adjusting, Balancing Bureau (TABBB), and the Associated Air Balance Council (AABC). All organizations provide procedural standards for air and water balancing activities. Each have similar procedures, but differ in the technical requirements, certification process of technicians and certified professionals (supervisors), report forms, report language, and quality control/compliance. Engineers who specify a TAB firm or agency assume responsibilities in selecting an independent firm and accepting (approving) a certified or non-certified report for the client. John Mazza's presentation will illustrate many of the features of a quality TAB report for air and water systems, explain the information provided in the report, and describe the implied warranties of certified balancing firms.

**Place:** Casa Rina, 886 Commerce Street, Thornwood, NY 10592

**Program:**

5:30 - 6:00 PM	Attitude Adjustment Time
6:00	Dinner
6:30 - 7:00 PM	Technical Presentation
7:00 - 7:15 PM	Coffee
7:15 - 9:00 PM	Main Presentation

### Directions to Casa Rina

From Saw Mill Parkway - North or South  
Exit at Marble Avenue - Exit # 27  
Make right - continue to second traffic light  
Make right onto Commerce Street  
Casa Rina is the second house on your left. Parking is on your right.

**Please make reservations by contacting:**

Nick Salomone 914.919.3140 info@ashraebistate.org

## President's Message

By Dennis LaVopa

I would like to thank Yonkers Mayor Phil Amicone PE for his presentation at last month's meeting. Unfortunately, I was unable to attend; however, I've been told his insight into the relationship between engineering and politics was priceless.

HVAC&R equipment is designed and installed to provide an acceptable environment in terms of temperature, humidity and ventilation levels. This is required not only for the health and comfort of the occupant, but also to ensure the health of the building and increasingly to control energy costs. This latter point is becoming increasingly significant as governments around the world are focusing more and more on energy efficiency, as the cost of energy is continually increasing.

Technology has brought HVAC&R to new levels with the use of Ultra sonic flow meters, Dedicated Outside Air Systems, Direct Digital Control Systems. The topic of this month's program is Thermography which will be presented by Jack Kleinfeld, PE.



Dennis LaVopa  
Bi-State Chapter President

## Historical Notes — Bob Roston, Bistate Historian

The ASHRAE JOURNAL is a by-product of the merger in 1959 of the American Society of Refrigerating Engineers and American Society of Heating and Air-Conditioning Engineers (ASHAE), and their publications. ASRE published Refrigerating Engineering and ASHAE published ASHAE Journal.

While there were four-page versions of ASHRAE Journal published in January and February 1959, the first issue of ASHRAE Journal as a magazine was published in March 1959.

## ASHRAE Guideline Addresses Interactions Affecting Indoor Environmental Quality

A proposed guideline, currently out for public comment, would provide guidance on achieving good indoor environments by considering the interactions of air quality and thermal conditions as well as lighting and acoustics. ASHRAE Guideline 10P, *Interactions Affecting the Achievement of Acceptable Indoor Environments*, calls attention to many interactions that designers might not have previously recognized or understood. The guideline opened for public comment on April 9 and remains open until May 24.

“The guideline summarizes what research and experience have taught us about the complex interplay of the wide range of factors that determine occupants’ reactions to the buildings they inhabit,” Hal Levin, chair of the committee writing the guideline, said. Levin explains that the guideline is intended to help users understand and use existing documents that deal with indoor environments, including the ASHRAE standards related to ventilation and indoor air quality and thermal conditions with a more complete understanding of the impacts of the indoor environmental on occupants.

“It can provide assistance to building design professionals and building operators by making them aware of the major interactions that have the potential to impact the indoor environment,” he said. “We believe the guideline will help draw attention to the narrowly-defined scopes of the widely-used standards and the significance of interactive effects in determining the acceptability of an indoor environment.”

## DOE Tightens Heating Equipment Efficiency Requirements

The U.S. Department of Energy (DOE) has finalized more stringent efficiency requirements for residential water heaters and other appliances. DOE recently announced that large electric water heaters (55 gallons [208 L] or more) will need to use 47% less energy than currently mandated, and large gas water heaters, 30% less. In addition to water heaters, DOE issued new efficiency requirements for pool heaters and direct heating equipment such as gas fireplaces. According to DOE, these appliances collectively account for about 18% of residential energy use. The new water heater requirements will go into effect in 2015. The other appliance regulations will apply to products manufactured in 2013 and later.

## Committee Reports

### Programs

**Enzo Carlesimo, Acting Chairman**

We are returning to our usual venue, Casa Rina Restaurant in Thornwood, New York, on May 12th for our monthly meeting. We have two CEUs pending for that evening. The Technical Session will be given by John Mazza, PE of Airpath Engineering, P.C. John will be discussing the procedures used to test, adjust and balance (TAB) the air-side and water-side components of HVAC systems, and also how to read and understand a quality TAB report. The Main Presentation will be given by Jack Kleinfeld, PE of Kleinfeld Technical Services, Inc. Jack will discuss how infrared thermography, the science of taking photographs of temperature, is performed and how it can be implemented in building envelope and MEP system applications. These should be very intriguing presentations so we hope to have you all present on the 12th.

### Student Activities

**Jim Dolan, Chairman**

Several Manhattan College Mechanical Engineering students and Dr. Litkouhi attended last month's April Meeting featuring Mayor of Yonkers Phil Amicone. A group picture featuring the students, Dr. Litkouhi, and Mayor Amicone was submitted to ASHRAE Insights. On April 26<sup>th</sup>, James Dolan presented at Manhattan College, providing an overview of Green Design Practices, insight into LEED and Energy Star and utilized the Jacob Burns Media Center as a case study. The presentation was part of the lecture series for students in the engineering department.

Photo: Mayor of Yonkers Phil Amicone (center) with Manhattan College Mechanical Engineering students and Dr. Litkouhi (left).

### Membership Promotion

**Enzo Carlesimo, Chairman**

We would like to extend our gratitude to Dr. Litkouhi and the contingent of student members from Manhattan College's ASHRAE chapter for attending our April meeting. Last month, we represented ASHRAE and the Bi-State Chapter at the Lower Hudson Valley High School Engineering Expo. I am pleased to report that a number of students stopped by our booth interested in learning more about what ASHRAE does and about the HVAC&R industry as a whole. Some of the students' fathers we met actually work as mechanical contractors in the area and were delighted to hear that there is an ASHRAE chapter in their own backyard. Hopefully, they will make it out to some of our future meetings. In regards to the May meeting, Jack Kleinfeld, our main presenter, is also the President of the Bronx Chapter of the New York State Society of Professional Engineers (NYSSPE). He has been kind enough to extend invitations to the other local NYSSPE chapters. Hopefully, we will have a good turnout at the upcoming meeting and gain a handful of new members in the process.



### Study Documents U.S. Industrial Water Use

Most water use by U.S. industry occurs indirectly as a result of processing, such as packaging and shipping of food crops to the supermarket, rather than direct use, such as watering crops, according to what is believed to be the first documentation of industry's use of water resources in the United States in nearly 30 years. The study, by a team at Carnegie Mellon University, found it takes almost 270 gallons (1020 L) of water to produce a \$1 worth of sugar; 140 gallons (530 L) to make \$1 worth of milk; and 200 gallons (757 L) of water to make \$1 worth of cat and dog food. "We discovered that among 96% of the sectors evaluated, indirect use exceeded direct uses throughout the supply chain," said lead researcher Chris Hendrickson, Ph.D.

### Data Center Industry Agrees on Energy Efficiency Metric

U.S., Japanese and European government agencies and industry have agreed to set the Power Usage Effectiveness (PUE) metric as a common measure of data center energy efficiency. The PUE is a simple formula, which divides total energy used in a data center by IT energy consumption. "The ultimate goal is to create a set of globally accepted metrics for data center energy efficiency. One of the first, and perhaps most important factors to successfully achieving this aim is establishing a unity of communication," said Tom Brey, an IBM executive and secretary of The Green Grid.

## Research Promotion Contribution Form

**PLEASE COMPLETE THE INFORMATION BELOW AND RETURN WITH YOUR CONTRIBUTION TO:**

Terry Connor  
Johnson Controls  
8 Skyline Drive  
Hawthorne, NY 10532

Phone: 914-593-5223 Fax: 914-593-5201

Please accept my research investment in the amount of \$ \_\_\_\_\_

Make checks out to **ASHRAE Research**.

Name \_\_\_\_\_ Member # \_\_\_\_\_

Company \_\_\_\_\_ Chapter \_\_\_\_\_ Bi-State \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please check one:             Personal contribution  
    Company contribution

Charge my gift to:     Visa     Master Card     American Express

Credit Card # \_\_\_\_\_ Expiration Date \_\_\_\_\_

Signature \_\_\_\_\_

Donors are recognized for their contributions as follows:

**Honor Roll** contributors are listed in the October ASRHAE Journal and receive the commemorative coin recognizing Giants in HVAC&R invention or innovation.

Individual Honor Roll beginning at \$100

Corporate Honor Roll beginning at \$150

**Investors** with contributions of \$250 or more receive a wall plaque that can display six commemorative coins.

*Contributions in any amount are gratefully received and 100% of the contribution goes directly to research. All contributions are tax deductible.*

## Officers and Governors 2009—2010

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<b>Governors</b>					
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Golf	Steven	Abbattista	sabbattista@olace.com	(914) 747-2800	(914) 747-0453

### Why Be Involved in a Local Chapter?

- Learn about the latest technologies presented in the program sessions
- Attain continuing education credits
- Meet industry associates and discuss local concerns
- Network amongst designers, installers, vendors, educators, in your local area to help improve business for all
- Share experiences with others
- Enjoy a social hour
- Carry out ASHRAE's mission on a local level

*"To advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world."*

## ASHRAE Region I Roster 2009-10 Executive Committee

**DRC – Director & Regional Chair**

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**ARC – Assistant Regional Chair & Treasurer**

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**Regional Refrigeration Chair**

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**Regional Electronics Comm. Chair & Newsletter Judge**

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# HELP WANTED

Employment ads may be submitted for inclusion in the following month's issue of **The Exchanger** as follows:

1. \$100.000 from companies placing ad for one (1) month.
2. \$150.00 from companies placing ad for two (2) months.
3. No charge for members looking for employment.

## Notice to business card advertisers:

We are currently accepting business card advertisements for this year's newsletters. The cost of a business card ad is \$125.00. The newsletter is published monthly, September through June (ten issues).

If you are interested in placing an ad, please forward a business card and check (payable to ASHRAE Bi-State) to:

**ASHRAE Bi-State Chapter**  
 DL Flow Tech  
 2421 Route 52  
 Hopewell Junction, NY 12533



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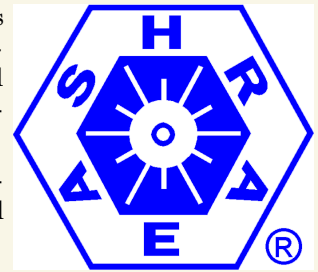
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The American Society of Heating, Refrigerating and Air-Conditioning Engineers advances the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world. Membership is open to any person associated with the field including indoor air quality, building design and operation, and environmental control for food processing and industry.



ASHRAE will be the global leader, the foremost source of technical and educational information, and the primary provider of opportunity for professional growth in the arts and sciences of heating, ventilating, air conditioning and refrigerating.

## Upcoming Meetings

Month	Date	Promotion	Main Presentation	Tech Session
May	5/12/2010	Student Activities	Infrared Thermography	Quality Assurance Testing & Balancing
June	6/16/2010	Golf Outing		

### Westchester Non-Profit Working to Make Solar Cheaper and Easier

The TriState Solar Alliance is a new non-profit whose mission is to dramatically lower the cost of installing solar by creating community-scale volumes and by doing so, increase the amount of local renewable energy installed in our region on both commercial and residential buildings.

Solar aggregation is a fundamentally different approach to driving change in that it uses market forces, including economies of scale and consumer advocacy to dramatically improve the economics of PV and escalate the adoption of solar.

**Time is of the Essence ...** The alliance has created a solar aggregation program because significant volume has the ability to fundamentally change the local solar industry by making it larger and more stable. Currently there are very good incentives at both the state and federal level but with many of these programs expiring at the end of 2010 as well as the six month application review process, every potential solar consumer should consider signing up on their website immediately.

This is a no-risk program, but the benefits including the group-volume prices, will only be available to those who opt-in before May 31<sup>st</sup>.

The TriState Solar Alliance is working to make the solar decision making process easier for everyone so that more people can spend their energy dollars on local energy, creating local jobs, buying American PV panels and strengthening our local economy.

Over 90% of Americans like the idea of solar energy, but they want help understanding if it is viable and what they should do because not everyone has the time to become a solar expert. This non-profit is providing real estate professionals with an easy solution so they can help their clients.

**Safety in Numbers ...** The TriState Solar Alliance is organizing a large number of potential solar consumers and as a collective of solar consumers, will get everyone's questions answered. Independent experts will evaluate the bids and get the best deal possible. Then, everyone who has opted-in can independently decide if they want to sign a contract with the selected installer at the pre-negotiated price.

For more information, see their website: [www.TriStateSolarAlliance.org](http://www.TriStateSolarAlliance.org) or contact Don van Rhyn at [Solar@TriStateSolarAlliance.org](mailto:Solar@TriStateSolarAlliance.org)

### China Leads the World in Clean Energy Investment

China invested more in clean energy in 2009 than any other nation, according to data compiled by The Pew Charitable Trusts. Last year, China invested \$34.6 billion in projects related to technologies such as wind, biomass and solar energy. China invested nearly double the United States' total of \$18.6 billion. Worldwide, clean energy investments were \$162 billion in 2009 and are expected to exceed \$200 billion this year.

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# ASHRAE Bi-State Chapter Annual Golf Outing



Wednesday, June 16, 2010  
The Links at Union Vale



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**Schedule:**

- 11:30 am: check-in/lunch
- 1:00 pm: shotgun start
- 6:00 pm: dinner/awards

**Costs:**

- \$200 per player
- \$750 per foursome
- \$65 for dinner only

**Return this form with payment by June 11, 2010**

**Note:** *If payment is not received prior to the golf outing, your reservation may not be accepted.*

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Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Email: \_\_\_\_\_

- |  |  |
|--|--|
| <input type="checkbox"/> Individual for lunch/golf/dinner .....\$200 | <input type="checkbox"/> Tee Sponsor .....\$200            |
| <input type="checkbox"/> Individual for dinner only.....\$65         | <input type="checkbox"/> Beverage Cart Sponsor .....\$1000 |
| <input type="checkbox"/> Foursome for lunch/dinner/golf.....\$750    | <input type="checkbox"/> Lunch Sponsor .....\$1500         |

Please check off participation level above and make checks payable to: *ASHRAE Bi-State Chapter.*

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**List names of golfers below.** *(If less than four, the golf committee will complete pairings.)*

1. \_\_\_\_\_ 3. \_\_\_\_\_

2. \_\_\_\_\_ 4. \_\_\_\_\_

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Mail completed reservation form and check to:  
ASHRAE Bi-State Golf c/o OLA Consulting Engineers, 50 Broadway, Hawthorne, NY 10532



# ASHRAE Bi-State Chapter Annual Golf Outing



## Directions to The Links at Union Vale

153 North Parlیمان Road, Union Vale, NY 12540 (845)223-1002

[www.thelinksatunionvale.com](http://www.thelinksatunionvale.com)



### *From New York City and South:*

- Take the Taconic State Parkway north to Route 82 North.
- Travel 4-1/2 miles and make a right onto County Route 89
- Take the first right onto North Parlیمان Road (1 mile).
- Golf Course is 1/2 mile on right.

### *From East or West:*

- Take Interstate 84 (east or west) to the Taconic State Parkway north (6-3/4 miles) to Route 82 North.
- Travel 4-1/2 miles and make a right onto County Route 89.
- Take the first right onto North Parlیمان Road (1 mile).
- Golf course is 1/2 mile on right.

### *From the North:*

- Take the Taconic State Parkway south to Route 55 east towards Pawling.
- Take a left at the first light (Route 82 north).
- Make a right onto County Route 89
- Take the first right onto North Parlیمان Road (1 mile).
- Golf Course is 1/2 mile on right.

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# Raising Efficiency to New Levels



2010 ASHRAE Annual Conference  
June 26-30 Albuquerque, New Mexico



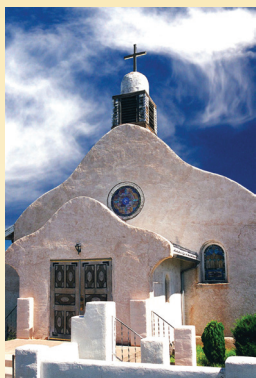
You are invited to join ASHRAE in Albuquerque, N.M. for the 2010 Annual Conference as we move onward and upward to improve energy use around the world; it's sure to be the height of your summer.

ASHRAE continues to set high standards concerning the latest technical guidance to increase the efficiency of buildings and systems: From the nation's first commercial green building standard to the release of a new version of the Society's energy conservation standard to the expansion of the Building Energy Quotient program, the sky is the limit when it comes to energy efficiency.



The 2010 Annual Conference also offers you the opportunity to take your career to the next level through a variety of educational courses and the technical program, which focuses on energy efficient system design for high elevations and dry climates. ASHRAE makes it easy for you to aim high and reach your full potential.

Don't forget, members who register before May 31 can save up to \$145!



Complete meeting information can be found at [www.ashrae.org/newmexico](http://www.ashrae.org/newmexico)

## ASHRAE Learning Institute Spring 2010 Online Course Series

### 2 WAYS TO REGISTER

**Internet:** [www.ashrae.org/onlinecourses](http://www.ashrae.org/onlinecourses)

**Phone:** Call toll-free at 1-800-527-4723  
(US and Canada) or 404-636-8400 (worldwide)

**Note:** You may register up to 24 hours prior to an online seminar.  
Courses are in US Eastern Standard Time.



### Courses in May

**District Cooling & Heating Systems: Central Plants**  
Monday, May 3, 2010 – 1:00 p.m. to 4:00 p.m. EDT

**Complying with Requirements of ASHRAE Standard 62.1-2007**  
Wednesday, May 5, 2010 – 1:00 p.m. to 4:00 p.m. EDT

**Understanding & Designing Dedicated Outside Air Systems (DOAS)**  
Monday, May 10, 2010 – 1:00 p.m. to 4:00 p.m. EDT



## Standard 189.1 Training

The ASHRAE Learning Institute (ALI) is bringing *Standard 189.1-2009* training to a city near you.

**Understanding Standard 189.1-2009 for High-Performance Green Buildings**  
May 25, 2010 – 1:30pm – 4:30pm, **San Francisco, CA**

**Understanding Standard 189.1-2009 for High-Performance Green Buildings**  
June 2, 2010 – 1:00pm – 4:00pm, **Arlington, TX**

**Implementing Standard 189.1-2009 for High-Performance Green Buildings**  
June 10, 2010 – 8:00am – 4:00pm, **Atlanta, GA**

**Implementing Standard 189.1-2009 for High-Performance Green Buildings**  
June 26, 2010 – 8:00am – 4:00pm, **Albuquerque, NM**

Visit [www.ashrae.org/189.1courses](http://www.ashrae.org/189.1courses) for more information and to register

## Hot Products from ASHRAE

A leader in HVAC&R technology, ASHRAE publications cover topics that impact every facet of the environment, both indoors and out.

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