

CURRENT BOG

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Meeting Location:

**The Learning Center
Lichterman Nature Center
5992 Quince (between Lynnfield and
Ridgeway, east of I-240)**

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**2025 MEMPHIS ASHRAE CALENDAR
AND ANNOUNCEMENTS**

Chapter Meetings/Events

Tuesday, February 25th - Load Calculations and Impact of Energy Codes, Nathan Kegel

Tuesday, March 11th - Self Sensing Pumps; Brett Zerba

Tuesday, April 8th - Humidification Tech for Hospitals & Critical Environments

Monday, April 14th – Engineering Palooza

Tuesday, May 13th – Dehumidification; David Schurk (DL)

TBD – Golf Tournament

Sponsor the Memphis Chapter of ASHRAE!

Memphis ASHRAE has a great way to for members to support our ASHRAE chapter and promote their business.

We are offering 2 tiers of support:

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The Memphis Chapter of ASHRAE thanks you for your support!

Contact Wesley Dacus (wesleyd@etairoshvac.com) to support your chapter today!

*All donations will go to the RP campaign and are TAX DEDUCTIBLE

*Sponsorship slides will be run before and after the speaker at every chapter meeting (virtual or in-person)

*RP chair will confirm final slide layout before presentation

President's Corner:

Hello ASHRAE Memphis Members,

I hope you're doing well! I wanted to take a moment to share a quick update on our recent activities and what's coming up in the next couple of months.

January Meeting Recap

Last month's meeting at Crosstown Concourse was a great success! We enjoyed a delicious lunch at a fantastic venue, thanks to Stephanie Cianciola and Greg Brown. We also gained valuable insights into lab exhaust fans, courtesy of Sarah Leiner with Strobic Air Technologies.

A big thank you to everyone who took time out of their day to join us!

February Meeting – 2/25

To avoid a conflict with AHR in Orlando, we've moved this month's meeting to February 25th. Nathan Kagel from IES will present on Load Calculations. Stay tuned for location details!

February Activities

Jennings Thigpen, our Student Activities Chair, is kicking off the year strong with a resume workshop for student chapter members from the UofM and CBU on 2/5. Additionally, there will be a tour of the FedEx Forum on 2/18.

Looking Ahead

Student Activities is keeping the momentum going with a tour of the Pyramid in late March (more details to come), an End of the Year Party for student chapter and YEA members on 4/2, and Engineering Palooza the week of 4/14.

Also, Charlie Reifenberger is leading this year's golf tournament, with Wesley Dacus assisting. We're excited to see what they have planned!

Best regards,

Max Graham

President, ASHRAE Memphis 24-25

Chapter Meeting Topic: Load Calculations and Impact of Energy Codes

Load calculations and HVAC system sizing are fundamental tasks in designing HVAC systems for all buildings. Considering load calculations have a dramatic impact on HVAC equipment size and HVAC system first cost, energy consumption, refrigerant quantity, and carry a significant amount of liability for the Engineer of Record, determining accurate loads is essential to any building, building owner, and design team.

Methods for calculating loads have changed significantly over time. “Traditional” methods assumed near instantaneous heat transfer or simplified the methods of estimating time-delay through weighting factors. These simplifications were made for a number of reasons including limited access to computing power and a lack of empirical tests for calculation methods.

Over 20 years ago, ASHRAE published (in the Handbook of Fundamentals) the Heat Balance Method for calculating loads. This method is considered to be the most accurate and has some empirical testing to validate the calculation methodology.

This session explores how the Heat Balance Method is different from other methods, how energy code has impacted HVAC sizing calculation assumptions, and the impact of oversized and undersized systems on energy, comfort, and environmental impact.

The new ASHRAE HQ building is used as a case study in applying the Heat Balance Method for calculating loads for a building.

Speaker Bio:



Nathan Kegal has over 20 years of design and building performance simulation experience using a variety of design and modeling tools and platforms. He has largely focused on lifecycle analysis, energy and carbon savings, and cost/benefit of building technologies. He has performed design and post-occupancy analysis on hundreds of buildings and dozens of building types all over the world. In addition, Nathan has built and led High Performance Design Teams, trained over 1,000 industry professionals on using and applying building performance simulation to the design process, and was the coach and captain of the ASHRAE Lowdown Showdown 2022 winners. He is ASHRAE BEMP certified, a LEED AP, and a RESET AP and serves as the co-chair of the Data Analysis and Reporting Working Group for MEP 2040.

Did Ya Know?:

I had dinner with Dan Int-Hout last night (I'm at the ASHRAE society meeting in Orlando).

I've known Dan for 25 years. He's been "chief engineer" at one or another air distribution manufacturer for most of that time.

Dan told me:

The state of Washington has decided that ventilation air must be introduced into a space via a separate ventilation system.

Dan was curious about the mixing that would occur using this philosophy, so he set up a test room. They then introduced smoke in the "OSA duct system" and observed the results.

He said the 2 air streams did not mix..... one side of the room stayed smoky and the other side was clear.

Who woulda thought?

They're now working on a double-inlet diffuser to see if it works

Please send me articles to publish (mbilderbeck@pickeringfirm.com)

Mike Bilderbeck
Government Affairs Chair



9720 Village Circle, Lakeland, TN 38002
901-260-7850
www.CSAengineeringinc.com
Structural | Electrical | Mechanical

Job Title: Staff Mechanical Engineer
Job Type: Full-Time
Salary: Competitive, based on experience

Company Overview:

CSA Engineering is a leading engineering firm in the Memphis area, dedicated to delivering innovative and high-quality solutions. We pride ourselves on fostering a collaborative work environment and are currently seeking a skilled and motivated Mechanical Engineer to join our team.

Job Description:

We are looking for a skilled Mechanical Engineer to design, consult, and provide detailing for building projects of all types. The ideal candidate will be experienced in the full product development cycle and capable of collaborating with multi-discipline teams to ensure products meet quality standards, specifications, and customer requirements.

Responsibilities:

- Design, model, and analyze mechanical systems using Revit Software
- Develop the design of HVAC, plumbing and fire protection systems, including HVAC and plumbing design calculations
- Perform field inspections, job site visits, and inspection reports on a periodic basis as needed
- Maintain and foster relationships with existing clients on any projects they have been assigned which includes meeting all client requirements and deadlines
- Collaborate with other engineers, designers, and departments to ensure design feasibility and compliance with regulatory requirements
- Mentoring and fostering the growth of up-and-coming engineers and associates

Qualifications:

- Bachelor's Degree in Mechanical Engineering
- Professional Engineering License in the state of Tennessee (and surrounding states preferred)
- Proven experience as a Mechanical Engineer (10-20 years minimum)
- Proficiency in Revit Software
- Strong understanding of mechanical design principles, materials, and manufacturing processes
- Excellent problem-solving skills and attention to detail
- Strong communication and teamwork abilities
- Knowledge of industry standards and safety protocols

Benefits:

- Competitive salary and Year-End bonuses based on profitability and personal performance
- Overtime Pay (Paid Out as Straight Time)
- Paid Time Off – accrued each bi-weekly pay period
- Paid Holidays (8 per Year)
- Health, Dental, and Vision Insurance
- Retirement plan with company matching
- Short-Term, Long-Term, and Life Insurance Provided
- Opportunities for professional development and career advancement

How to Apply:

Please submit all inquiries and resumes to amyj@csaengineeringinc.com