



2024 Annual Conference

Phoenix, Arizona · October 31 - November 2



NEBB 2024 PRE-CONFERENCE PROGRAM GUIDE

LEADING TRANSFORMATION INTO A BRIGHT FUTURE



MESSAGE FROM THE PRESIDENT



Welcome, Bienvenidos, to Sunny and Beautiful Phoenix, Arizona for the 2024 NEBB Annual Conference!!

Some great authors have expressed the notion that what we are today has been shaped by those experiences we have in life. Several years ago, I had the opportunity to live for a period in Chandler, Arizona, which was a life shaping experience for me. In this place I had the opportunity to meet wonderful people, develop new friendships and develop a connection with the outdoors and nature, which you can experience wherever you go in Arizona. Hopefully this year's location allows you to try some of these great experiences as well and that you will leave the NEBB Annual Conference with new friends and priceless experiences!

Some fun facts regarding Arizona are that it is the 48th state and the last of the contiguous states to be admitted to the Union, achieving statehood on February 14, 1912, coinciding with Valentine's day.

The etymology of the state name ranges from a Spanish name derived from the Oódam name alí sonak, meaning "small spring" to a Basque phrase that means "the good oak" to a final misconception on the state's name associated with the Spanish term Árida Zona "Arid Zone". The state is home to several native American groups and up to about one-quarter of the state is made up of Indian reservations. It also boasts a diversity of ancestry groups and has more than 10 non-English languages present.

Such a diverse landmark is a perfect scenario to host a group as unique as NEBB, with 8 different certifications for Firms, Professionals, and Technicians, 22 chapters and a technical individual's population of approximately 650+ Certified Firms, 1,900+ Certified Professionals, and 1,400+ Certified Technicians, worldwide.

Rocio and I sincerely hope that you can take advantage of the great venue for this year, enjoy the nice weather, the many activities planned and the renewed format for the annual conference. The new schedule was shaped to allow for more interaction of the attendees between themselves and the vendors, while staying acquainted with the topics presented and receiving an update on the progress made this year on our key programs, including deliverables by all of our Committees and our future plans.

I would like to close with a big Thank You to all the CTs, CPs, NEBB certified firms, NEBB Chapters, NEBB Staff, NEBB Committees, NEBB Board, NEBB EFC and external collaborators that contribute relentlessly to make NEBB an organization to be proud of.

Pura Vida,

A handwritten signature in black ink, which appears to read "Luis Chinchilla". The signature is stylized and fluid, with a large, sweeping flourish at the end.

Luis Chinchilla
NEBB President



2024 NEBB CONFERENCE SCHEDULE AT A GLANCE

TIME	MONDAY - OCTOBER 28
8:00 am – 5:00 pm	TAB CT Seminar - <i>Registration Required</i>
TUESDAY - OCTOBER 29	
8:00 am – 5:00 pm	TAB CT Seminar - <i>Registration Required</i>
WEDNESDAY - OCTOBER 30	
8:00 am – 5:00 pm	TAB CT Seminar and Exam - <i>Registration Required</i>
8:00 am – 5:00 pm	NEBB Exam Day - <i>Registration Required</i>
8:00 am – 5:00 pm	Closed Committee Meetings
12:00 pm – 6:00 pm	Annual Conference Pre-Registration Open
7:00 pm – 10:00 pm	Appreciation Dinner - <i>Invite Only</i>
THURSDAY - OCTOBER 31	
7:00 am – 6:00 pm	Annual Conference Registration and NEBB Store
7:00 am – 1:00 pm	NEBB 26th Annual Golf Tournament - <i>Registration Required</i>
3:00 pm – 4:00 pm	NEBB Past President's Meeting - <i>Closed</i>
4:30 pm – 6:00 pm	Opening Session: Welcome and Keynote Presentation Keynote Speaker: Aron Ralston
6:00 pm – 9:00 pm	Get Acquainted Reception - <i>Full Conference and Guest Registrants Only</i>
FRIDAY - NOVEMBER 1	
7:00 am – 8:00 am	Breakfast
7:00 am – 4:00 pm	Annual Conference Registration and NEBB Store
7:00 am – 5:00 pm	Exhibit Hall Hours
8:00 am – 10:00 am	NEBB Discipline Panel: How To Find NEBB Work
10:00 am – 10:30 am	NETWORKING BREAK
10:30 am – 11:30 am	TECHNICAL TRACK SESSIONS Track 1 (TAB): Measurement of Outdoor Air Intakes on Rooftop Air Handling Units Track 2 (Technology): A Business Prospect: Understanding How AI Permeates NEBB
11:30 am – 12:30 pm	NETWORKING LUNCHEON
1:00 pm – 2:30 pm	TECHNICAL TRACK SESSIONS Track 1 (Cx): Fault Detection and Diagnostics (FDD) Track 2 (Business & Leadership): Building Your Brand: Marketing Essentials for NEBB Professionals and Firms

*NOTE: Track sessions and meals are open to Full Conference Registrants only.
Schedule times subject to change.



2024 NEBB CONFERENCE SCHEDULE AT A GLANCE

TIME	SATURDAY - NOVEMBER 2
7:00 am – 8:00 am	Breakfast
7:00 am – 2:00 pm	Annual Conference Registration and NEBB Store
7:00 am – 6:00 pm	Exhibit Hall Hours
8:00 am – 10:00 am	Business and Leadership Panel: NEBB and Business Segment leading industry transformation
10:00 am – 10:30 am	NETWORKING BREAK
10:30 am – 11:30 am	TECHNICAL TRACK SESSIONS Track 1 (CPT and IAQ): Facility Qualification: Cleanroom Certification and IQ-OQ-PQ Track 2 (TAB / Cx): Working Together: TAB & Commissioning for a Successful Project
11:30 am – 12:30 pm	NETWORKING LUNCHEON
1:00 pm – 2:00 pm	TECHNICAL TRACK SESSIONS Track 1 (TAB): Methods of Visualization for Hotel Smoke Removal Systems Track 2 (CPT / FHT): How Not to Test a Fume Hood!
2:30 pm – 3:30 pm	Town Hall - <i>Full Conference Registrants Only</i>
3:30 pm – 4:00 pm	Closing Session - <i>Full Conference and Guest Registrants Only</i>
4:00 pm – 6:00 pm	Vendor Reception - <i>Full Conference and Guest Registrants Only</i>
SUNDAY - NOVEMBER 3	
8:00 am – 12:00 pm	Board of Directors Meeting – <i>OPEN</i>

*NOTE: Track sessions and meals are open to Full Conference Registrants only. Schedule times subject to change.



THANK YOU TO OUR 2024 CONFERENCE SPONSORS

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PLEASE PLAN ON VISITING OUR EXHIBITORS!

Exhibits will be set up for learning opportunities between sessions.
The following exhibitors have signed up with more to come!





2024 NEBB CONFERENCE ADVANCE PROGRAM

OPENING SESSION: THURSDAY, OCTOBER 31 • 4:30 PM – 6:00 PM

1-CONTINUING EDUCATION CREDIT (CEC) AND 1-AIA CREDIT (LU)



WELCOME AND KEYNOTE PRESENTATION

KEYNOTE SPEAKER: Aron Ralston

Between a Rock and a Hard Place: Turning Adversity to Advantage

Aron Ralston's extraordinary story of survival after an 800-pound boulder trapped him in a remote Utah canyon captured global headlines in 2003. In his New York Times best seller, *Between a Rock and a Hard Place*, the Oscar-nominated film, *127 Hours*, and on stage, Ralston takes audiences vicariously through those six days without water, means of communication, or hope of escape, to the ecstatic moments when he freed himself by severing his own arm.

Following a miraculous rescue spearheaded by his mom and with the aid of prosthetics he helped design, Aron returned to his outdoor passions, completing elite mountaineering projects which remain unrepeatable even to this day. He has interviewed with Tom Brokaw, David Letterman, and Jay Leno, and received standing ovations and industry-leading testimonials from over five hundred groups around the world. Attendees credit Ralston's story with encouraging them through disease, disability, and loss, even saving their lives from suicide and depression.

Aron's incredible triumph in the face of insurmountable odds inspires audiences to harness the power of their deepest motivations, relationships, and mindset to transform personal and professional "boulders" into their blessings. Today, Ralston continues to pursue high-altitude adventures, advocates for wilderness protection, and tries to keep up with his two spirited children, Leo and Elisabetta.



2024 NEBB CONFERENCE ADVANCE PROGRAM

MORNING PANEL SESSIONS: FRIDAY, NOVEMBER 1 • SATURDAY, NOVEMBER 2

FRIDAY PANEL SESSION: NEBB DISCIPLINE PANEL

2-CEC AND 2-AIA (LU) CREDITS

8:00 am – 10:00 am NEBB Discipline Panel



SPEAKERS: Luke Bumgardner – Commissioning Engineer, Newcomb & Boyd
Bohdan Fedyk – FHT Consultant, Independent Consultant
Mike Peak – TAB/BET Supervisor, Testcomm, LLC
Don Pittser – President, JEDI Balancing
Chad Mathews – Principal, Air Technologies, Inc.
Tiffany Russell – CEO, VTG, LLC



MODERATOR: Jeff Schools – Technical Director, NEBB



This will be a panel discussion that includes the Chairs of each NEBB technical committee (BET, Cx, CPT, FHT, S&V and TAB). We will be discussing how each discipline proceeds to find work in their specific aspect of building performance and what distinct methods they use for finding work in their respective fields.



SPEAKER BIOS: Panel speaker bios can be found on the NEBB 2024 conference website.

SATURDAY PANEL SESSION: BUSINESS AND LEADERSHIP PANEL

2-CEC AND 2-AIA (LU) CREDITS

8:00 am – 10:00 am NEBB and Business Segment Leading Industry Transformation



SPEAKERS: Aaron Blawn – Intel Corporate Services Site Manager, Intel Arizona
Chester Zelaya – Senior VP Implant Network Operations, Edwards Lifesciences Americas
Juan Madrigal – Commissioning and Qualification Coordinator for CAPEX Projects Americas, Bayer U.S. LLC
Greg Jackson – Director, Facility Operations, TSMC Arizona Corporation



MODERATOR: Luis Chinchilla – NEBB President / General Manager, OPIA C.R.



Today's business environment is changing at an astonishing pace. NEBB firms and professionals need to accelerate the continuous improvement cycle in our business and having representatives from leading companies in various key industry sectors is an excellent opportunity to directly interact with them and obtain information about those trends and make adjustments.

SPEAKER BIOS: Panel speaker bios can be found on the NEBB 2024 conference website.



2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: FRIDAY, NOVEMBER 1 • 10:30 AM – 11:30 AM

TRACK 1: TAB

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am **TAB: Measurement of Outdoor Air Intakes on Rooftop Air Handling Units**

SPEAKER: David Dougan – President, EBTRON, Inc.



This session will discuss the measurement uncertainties associated with the direct measurement of outdoor air intake flow rates using both permanently mounted and hand held measurement techniques based on laboratory testing. Best-practice solutions will be discussed.

SPEAKER BIO: David Dougan has more than 40 years of experience with EBTRON, Inc., a leading manufacturer of airflow measurement technology. Dougan has been the President of EBTRON since 1993 with prior experience as the Director of Product Development for the Company.

TRACK 2: TECHNOLOGY

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am **A Business Prospect: Understanding How AI Permeates NEBB**

SPEAKER: Javier Hernandez – Mecatronic Engineer, OPIA C.R.



AI leverages intelligence occurring in nature, such as learning, social behavior, biological evolution; commonly used for optimization, predictive controls, energy savings, weather forecasting, and fault detection. NEBB can decide how AI integrates with disciplines like TAB, CPT, and Cx. Some examples of NEBB-AI applications include Virtual Commissioning and Accelerated TAB.

SPEAKER BIO: Javier Hernandez is a Mecatronic Engineer from the Costa Rican Technology Institute, working for OPIA Operaciones e Ingenieria de Avanzada de Centroamerica S.A. in the area of process validation. At the University level, he was an active member of the Mecatronic Students association and has become self versed in several AI principles, even leveraging on this knowledge for his graduation project "Partial Automation Proposal for HVAC System Balancing Optimization". He likes to exercise during his free time, also working actively with his church.



2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: FRIDAY, NOVEMBER 1 • 1:00 PM – 2:30 PM

TRACK 1: Cx

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:30 pm

Fault Detection and Diagnostics (FDD)

SPEAKER: Ken Gilbert – Solutions Consultant, Automated Logic Corporation



This session will define Fault Detection and Diagnostics (FDD) and examine the origins and evolution of FDD. In addition, we will look at some of the types of FDD and how it is implemented on systems today. Lastly, how FDD and commissioning activities complement each other will be discussed.

SPEAKER BIO: Ken brings significant industry experience to ALC, having served in various sales and consultative roles. Ken graduated from Georgia Tech with a Bachelor of Science in Industrial Management and recently completed his MBA from the University of Georgia. Ken is a LEED AP actively involved with ASHRAE and BACnet International.

TRACK 2: BUSINESS & LEADERSHIP

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:30 pm

Building Your Brand: Marketing Essentials for Professionals & Firms

SPEAKER: Caroline Lane – Partner, ProperExpression



This workshop will equip NEBB Certified Professionals with actionable marketing strategies to enhance their reach and win more contracts. Learn how to improve your website and articulate your unique value, with opportunities for tailored advice and feedback.

SPEAKER BIO: Caroline Lane spent 10+ years helping start-ups and high-growth companies impact the bottom line. From being employee number 2 at a start-up to assisting a successful exit, she has built marketing functions from the ground up, including lead generation, product marketing, inbound marketing, and marketing communications for several tech companies in the B2C and B2B space.



2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: SATURDAY, NOVEMBER 2 • 10:30 AM – 11:30 AM

TRACK 1: CPT AND IAQ

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am Facility Qualification: Cleanroom Certification and IQ-OQ-PQ

SPEAKER: Mike Turnure – Contamination Control Product Specialist, TSI, Inc.



Cleanroom testing can be referred to using various terms including Certification, Validation, Qualification, Commissioning, and Monitoring. This presentation discusses what specific certification activities are required for various industry scenarios. This includes a detailed overview of formal Installation, Operational and Performance Qualification activities.

SPEAKER BIO: Mike Turnure is a cleanroom professional with 25 years of experience in design, construction, certification and qualification of cleanrooms and related infrastructure. Mike is a longstanding NEBB-Certified Professional in Cleanroom Performance Testing. His career has included managing teams in cleanroom certification, equipment qualification, formal facility and critical utility IQ-OQ-PQ, and metrology.

TRACK 2: TAB/Cx

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am Working Together: TAB & Commissioning for a Successful Project

SPEAKERS: Brian Keller – Principal, Cleary Zimmermann Engineers, LLC
Jonathen Lloyd – Commissioning Engineer, Lloyd's T.A.B Pty
Don Pittser – President, JEDI Balancing
Glenn Putnam – Director of Utilities, Texas Christian University



The NEBB TAB Procedural Standard 9 was approved in 2019. How does it affect what you and your business does on a day to day basis? NEBB CP's should understand the new changes in NEBB TAB Procedural Standard 9. Once their NEBB Certified TAB Reports are NEBB TAB Procedural Standard 9 compliant, they can mentor other NEBB Firms in their area as well as educate the local engineering community. We will clearly explain the NEBB TAB Procedural Standard 9 as we were the authors of the document. We will help the NEBB CP and Certified Firms avoid reporting problems by educating them on what is required to be included in a NEBB Certified TAB Report to remain NEBB TAB Procedural Standard 9 compliant.

SPEAKER BIOS: Panel speaker bios can be found on the NEBB 2024 conference website.



2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: SATURDAY, NOVEMBER 2 • 1:00 PM – 2:00 PM

TRACK 1: TAB

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:00 pm

Methods of Visualization Testing for Hotel Smoke Removal Systems

SPEAKER: Jim Kelleher – Regional General Manager, Integra Testing Services



This presentation illustrates methods of conducting smoke removal visualization testing in a hotel environment: atrium, ballroom, and corridor. In this review and discussion of an actual field performance test, we explore smoke generating equipment, effects on field of view, and factors that helped decide the best solution for each scenario.

SPEAKER BIO: Jim is the Regional General Manager for Integra Testing Services' Eastern Region with over 30 years' experience in the HVAC industry. He is Certified NEBB CP in TAB, BSC, RCx; and ICB TABB-S, FSD-S; ACAC CIEC; and holds Master HVAC licenses in the states of Maryland and Virginia.

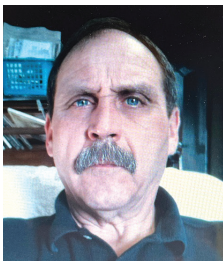
TRACK 2: CPT/FHT

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:00 pm

How Not to Test a Fume Hood!

SPEAKER: Bohdan Fedyk – FHT Consultant, Independent Consultant



The most important aspect of fume hood testing is the safe containment which in turn protects the user and environment. While this is the main concern, we cannot be distracted from this mission by trying to mask this issue with an environmentally unconscious concern of the tracer gas itself.

SPEAKER BIO: One of founding members of the NEBB FHT committee in 2006 and current chairman as well as member of the 2016 and current member of the ASHRAE 110 committee. Testing laboratory environs for over 35 years, whether fume hoods, bio-safety cabinets, or whatever!



2024 NEBB CONFERENCE INFORMATION

THE WIGWAM RESORT

300 E. Wigwam Blvd • Litchfield Park, AZ 85340 • (844) 239-1641



NEBB's Discounted Rates: \$279.00 (Single/Double Rooms)

To ensure the NEBB discounted room rate, reservations must be made by Thursday, September 26, 2024. Group rooms may sell out, so don't delay! Rooms are subject to availability. Reservations made after September 26 will be on a space-available-and-prevailing-rate basis. Taxes and resort fees are not included in room rates.

2024 NEBB Conference Fees

FULL CONFERENCE REGISTRATION	\$1350
<ul style="list-style-type: none"> • Opening Session on October 31 • Get Acquainted Reception on October 31 • Two Full days of Technical Track Sessions (November 1 and 2) • Breakfast, Lunch, Morning and Afternoon Breaks (November 1 and 2) • Vendor Reception and Prize Giveaway on November 2 	
GUEST REGISTRATION	\$450
<ul style="list-style-type: none"> • Opening Session on October 31 • Get Acquainted Reception on October 31 • NEBB Guest Event (Sedona Charter) on November 1 • Vendor Reception and Prize Giveaway on November 1 	
GUEST REGISTRATION - MINOR (18 AND UNDER)	\$200
<ul style="list-style-type: none"> • Opening Session on October 31 • Get Acquainted Reception on October 31 • NEBB Guest Event (Sedona Charter) on November 1 • Vendor Reception and Prize Giveaway on November 1 	



2024 NEBB CONFERENCE ACTIVITIES

GET ACQUAINTED RECEPTION: THURSDAY, OCTOBER 31 • 6:00 PM – 9:00 PM



Halloween Theme Reception at The Wigwam Resort Lawn!

Join us if you Dare... for a Trick or Treat Halloween Scare...We've got the tasty bites and booze, YOU get to bring the BOO'S. Enjoy an evening of mingling with your fellow conference attendees and showing off your most imaginative costume! This year's Get Acquainted Reception will be held on the Wigwam Lawn immediately following the Opening Session.

ATTIRE: If you've got it, haunt it. Costumes are highly encouraged! Prizes will be awarded for Scariest Costume, Funniest Costume and Overall Best Costume.

CONFERENCE GUEST EVENT: FRIDAY, NOVEMBER 1 • 8:00 AM – 4:00 PM



Sedona Bound!

Join us Friday, November 1st into Arizona's geological marvel, Sedona! Guests will be dropped off in Uptown Sedona which has one of the most happening shopping districts in town. Home to many different shops, one great museum, restaurants and red rock views! Spend the day strolling through this beautiful quaint town, popping in and out of boutiques and snacking at some local restaurants!

Please note, this excursion is a 2-hour drive from The Wigwam to Sedona, plus a 2 hour return. There will be bathrooms available on the charter bus.

**This event is included in the Guest Registration, with limited capacity - RSVP is required to attend.*



NEBB 26TH ANNUAL GOLF TOURNAMENT

THE WIGWAM RESORT'S GOLF RED COURSE

Join us for the the 26th Annual Golf Outing Thursday, October 31st, 2024 at Wigwam's Red Course! The Red Course was designed by Arizona Golf Hall of Fame member and golf course architect Robert "Red" Lawrence. Nicknamed the "Desert Fox" for his brilliant design of Desert Forest Golf Club in Carefree, Arizona, Lawrence's other notable designs include the Championship Golf Course at the University of New Mexico in Albuquerque and Tubac Golf Resort in Tucson where the movie Tin Cup was filmed.



If you are interested in playing golf during the 2024 Annual Conference, please send an email directly to events@nebb.org.

AGENDA

7:00 am – 7:45 am: Grab n' Go Breakfast

8:00 am: Shotgun Start

12:30 pm: Lunch and Awards



2024 NEBB CONFERENCE PAYMENT INFORMATION

PAYMENT INFORMATION

Online registration is payable by credit cards (American Express, MasterCard and Visa).

OPTIONAL ITEMS

Activity	Date/Time	Cost
26th Annual Golf Tournament	October 31, 2024 (7:00 am – 1:00 pm)	\$150
Golf Club Rentals	October 31, 2024	\$65
NEBB Logo Polo Shirt (S – 5XL)	Pick up at Conference Registration Desk	\$45
Optional NEBB Exam Day	October 30, 2024	Contact certification@nebb.org for details and pricing

CANCELLATION POLICY

Written request received on September 30, 2024	Full cancellation less a 25% admin fee
Written request received on/after September 30, 2024	Nonrefundable
No-show for any reason	Nonrefundable

CONTINUING EDUCATION CREDITS (CECs) AND AIA CREDITS (LUs)

- All of the educational sessions (including the Keynote speaker and the NEBB Town Hall) are awarded NEBB CECs and AIA LUs (Learning Unit through the American Institute of Architects).
- Electronic scanning will be done for each session in order to verify attendance and allocate the appropriate number of CECs and LUs to the CP or CT.



2024 NEBB CONFERENCE REGISTRATION

Please visit our 2024 Conference website by clicking: [NEBB 2024 WEBSITE LINK](#)

- Registration form and payment must be received and confirmed by NEBB Main Office by Monday, September 30, 2024
- Each attendee complete 1 registration form.
- After September 30, 2024, please register online.

Name (DISPLAYED ON BADGE): _____ Email Address: _____
 Company Name: _____ Phone Number: _____
 Address: _____ ADA/Dietary Restrictions: _____
 City/State/Zip: _____

ITEM DESCRIPTION / FEES	QUANTITY	TOTAL
Full Conference Registration: \$1350		One Per Sheet
Thursday ONLY Registration: \$500		
Friday ONLY Registration: \$700		
Saturday ONLY Registration: \$700		

OPTIONAL ITEMS	QUANTITY	Shirt Size	TOTAL
Guest Registration: \$450			
Minor Guest Registration (18 and Under): \$200			
Golf Tournament Registration: \$150			
Golf Club Rentals: \$65			
NEBB Polo Shirt (S – 5XL): \$45 *Please indicate Shirt Size (Small, Medium, Large, X-Large to 5X Large)			

Payment Method: Visa MasterCard AMEX Discover

Total Amount Due: _____ Date: _____

Name on Card: _____

Credit Card Number: _____ Expiration Date: _____

Signature: _____ Security Code: _____

NEBB Cancellation Policy: A 25% Cancellation Fee will be applied if written request is received/approved by September 30, 2024. On/After September 30, 2024 cancellation requests are non-refundable.

NEBB Main Office, 8575 Grovemont Circle, Gaithersburg, MD 20877