



The premier conference and  
exposition for occupational  
and environmental health  
and safety professionals

MAY  
20-22  
MINNEAPOLIS  
MN

PDCs: MAY 18, 19, and 23

# FINAL PROGRAM

[www.AIHce2019.org](http://www.AIHce2019.org)



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# Welcome to AIHce EXP 2019

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## Education Credits

AIHce EXP 2019 attendees can earn up to 18 contact hours by attending sessions Monday through Wednesday.

Miss a session or need additional hours for your certification? AIHce EXP OnDemand recordings bring conference sessions right to your doorstep. All full conference registrations receive free access to AIHce EXP OnDemand.

Recordings will be available in late July 2019, and you will have access through December 31, 2019. You will receive an email with access and credit instructions once the recordings are finalized in July.

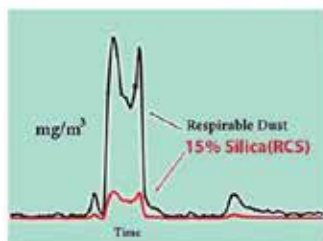
**2019 AIHce**  
Booth #1502

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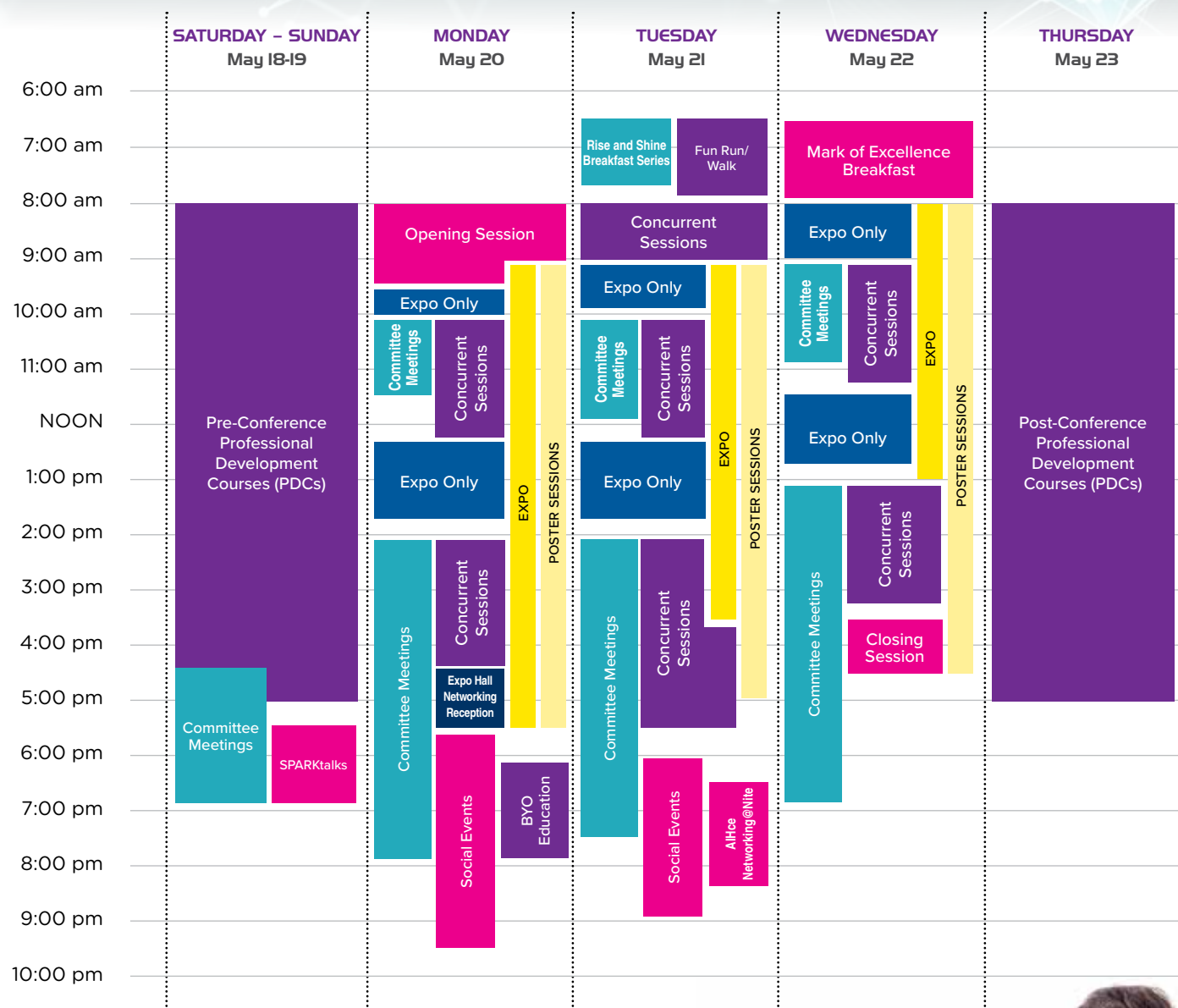


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# AIHce At-a-Glance



## Enhance Your AIHce EXPerience Through the App!

Download the conference mobile app today thanks to our app sponsor, SiteHawk!

- Access maps and search exhibitors to plan your Expo Hall visits
- Set a personalized schedule and agenda
- Network with colleagues and friends, both old and new
- Private message contacts
- **NEW!** Visit all of our Pathway Passport booths and scan QR codes to qualify for grand prize drawings
- Play EXP Quest for a chance at great prizes
- Info available even when you can't get WiFi or cellular connections



SiteHawk





# General Information

Conference events are held at the Minneapolis Convention Center (MCC) unless otherwise noted. This includes education sessions, the Expo, Pop-up and Health & Wellness education, Speaker Ready Room, and the CareerAdvantage Development Fair. Volunteer groups and committee meetings, BYO Learning, and social events will be held at the Hilton or Hyatt as noted. A full listing of events may be found in the Schedule-at-a-Glance in the Final Program and on the AIHce EXP 2019 Mobile App.

## BADGES

### Lobby B

Registrants **MUST** wear a name badge to be admitted to all AIHce EXP sessions and events, including social activities. Tours, AIHF activities, and selected social activities also require a ticket. Once tickets are purchased, fees are nonrefundable; however, ticket exchanges may be permitted pending availability. After one initial reprint, there is a \$5.00 charge for a lost badge or ticket replacement. *Badges sponsored by Nanozen. Lanyards sponsored by Casella.*



## BEHAVIOR STANDARDS

AIHce EXP is a professional conference. AIHA reserves the right to take any action deemed necessary and appropriate, including immediate removal from the meeting without warning or refund, in response to any incident of unacceptable behavior, and AIHA reserves the right to prohibit attendance at any future meeting. Examples of unacceptable behavior include, but are not limited to:

- Harassment, intimidation, or discrimination in any form
- Physical or verbal abuse of any attendee, speaker, volunteer, exhibitors, AIHA staff member, service provider, or other meeting guest
- Verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, national origin, inappropriate use of nudity and/or sexual images in public spaces or in presentations, or threatening or stalking any attendee, speaker, volunteer, exhibitor, AIHA staff member, service provider, or other meeting guest
- Disruption of presentations at session, in the exhibit hall, or at other events organized by AIHA at the meeting venue, hotels, or other AIHA-contracted facilities.

AIHA has zero-tolerance for any form of discrimination or harassment, including, but not limited to, sexual harassment by participants or staff at conferences. If you experience harassment or hear of any incidents of unacceptable behavior, AIHA asks that you inform Larry Sloan, CAE, [lsloan@aiha.org](mailto:lsloan@aiha.org) or Franky Spangler, Director, Human Resources, [fspangler@aiha.org](mailto:fspangler@aiha.org), or 703-849-8888 so that we can take the appropriate action. For more information on AIHA's Member Code of Conduct and Reporting Form, visit [www.aiha.org/membership](http://www.aiha.org/membership) and search AIHA Code of Conduct Acknowledgement.

## CHILDREN

Children and young adults 18 and under are not permitted at any AIHce EXP 2019 events (including courses, sessions, socials, or in the Expo).

## CIH REQUIREMENTS

For detailed information about CIH requirements, contact ABIH directly at [www.abih.org](http://www.abih.org) or visit the ABIH Booth (Booth 1124) while on-site.

## EMERGENCIES, FIRST AID, AND ASSISTANCE

The safety and security of attendees and staff is the first priority of AIHA and the MCC. If a medical emergency occurs in the MCC, contact Guest and Security Services by dialing ext. 2013 from any beige house phone. We respectfully request that you do not call 911 directly.

A first aid station staffed daily by an EMT, Saturday – Thursday, is located outside 101E on Level One.

## EVALUATIONS

PDC evaluations will be emailed to those who have attended courses or you can access them via the AIHce EXP mobile app. AIHce attendees can access education session evaluations via the AIHce EXP mobile app. Your feedback is appreciated and will be used to improve AIHce.

## EXPO

### Hall B

Monday..... 9:00 a.m.–5:30 p.m.  
Tuesday..... 9:00 a.m.–3:30 p.m.  
Wednesday..... 8:00 a.m.–1:00 p.m.

Do your gadgets need a boost after all the note taking, tweeting, and mobile app surfing you've been doing? Visit the AIHA Booth (1735).

## FINAL PROGRAM

Each attendee receives one copy of the Final Program as part of registration. Additional copies may be distributed on Wednesday, based on availability.

Descriptions of individual sessions may be found in the AIHce EXP 2019 mobile app.

## LOST AND FOUND

### Lobby B

Lost and found items may be taken to/requested from the Information Desk located in the Registration Area outside Hall B. AIHce will turn items into MCC security each evening.

## MOTHER'S ROOM

The MCC offers two suites for nursing mothers, both on level 2: one on the left side of the bridge to Seasons, and one next to the elevators across lobby from 200F. Visit the AIHce EXP Information Desk for the passcode to each door.

## PROOF OF ATTENDANCE AND PDC COMPLETION

Educational transcripts will be available by July 12, 2019. Member and nonmember educational transcripts will have contact hours uploaded for preconference courses (PDCs) and AIHce EXP 2019 attendance (up to 18 contact hours).

## ONDEMAND

AIHce EXP OnDemand is the package of session recordings included with full conference registrations. Recordings will be available 6-8 weeks following the conference through December 31, 2019. Credit is available for viewing the recordings. Once available, you will receive an email with access and detailed credit instructions.

Sessions being recorded for OnDemand are subject to each presenter's final decision. Sessions being recorded will be noted with this icon on signs outside each room.



## SPEAKER READY ROOM

### 102A

Friday..... 3:00 p.m.–4:00 p.m.  
Saturday – Sunday..... 7:00 a.m.–5:30 p.m.  
Monday..... 8:00 a.m.–4:00 p.m.  
Tuesday..... 7:00 a.m.–5:30 p.m.  
Wednesday..... 8:00 a.m.–3:00 p.m.  
Thursday..... 7:00 a.m.–5:00 p.m.

Check-in is mandatory. Visit the Speaker Ready Room at least 60 minutes prior to the start of the session.

#### Find AIHce EXP 2019 at these venues:

- Minneapolis Convention Center (MCC); 1301 2nd Ave S; Minneapolis, MN 55403
- Hilton Minneapolis (Hilton); 1001 S Marquette Ave; Minneapolis, MN 55403
- Hyatt Regency Minneapolis (Hyatt); 1300 Nicollet Mall, Minneapolis, MN 55403

#### TECHNICAL TOURS

Gather for your tour inside the doors of the main entrance to the MCC from Second Avenue South (outside Ballroom A) at least 15 minutes prior to published tour departure. Attendees interested in wait-listing for tours will be taken on a first-come, first-served basis after payment of tour fees if slots open on individual tours.



#### WIFI

Wireless Internet access is available throughout the MCC.

**Network:** AIHce2019

**Password:** iamIH2019

#### DISCLAIMER

The viewpoints and opinions expressed in the presentations, sessions, and discussions at AIHce EXP have not necessarily been approved or endorsed by AIHA or ACGIH.

#### SCHEDULE CHANGES

The AIHce EXP 2019 schedule is correct at the time of publication. AIHce reserves the right to change or cancel sessions, presentations, or speakers without notice due to circumstances beyond its control. For the most up-to-date schedule, check the mobile app.

# CareerAdvantage<sup>TM</sup>

## Development Fair 2019

Minneapolis Convention Center, Room M101B

*The #1  
Job Board  
for IH/OH/OEHS  
Professionals.*

#### Internships: All You Need to Know

**Monday, May 20, 11:00 a.m.–Noon**

Starting an internship is an exciting time in your life that provides an opportunity for you to gain a great deal of valuable experience. What's essential? How do you find the right fit? Learn what you need to know from a variety of perspectives: employer, human resources, academia, and student. Develop your internship search skills and gain a competitive advantage to your peers by joining this informative panel discussion for all you need to know to enhance your internship knowledge.

- Doug Pastore, CIH, MS
- Melissa Smith, CIH, MPH
- Franky Spangler, PHR, SHRM-SCP

#### Branding Yourself and Showing Confidence During Your Job Search

**Monday, May 20, 2:30 p.m.–3:30 p.m.**

During a job search, you want to brand (or market) yourself to show confidence in your abilities to include passion, purpose, and a realistic career plan. So how do you show your passion without coming across as overly confident? This presentation will offer advice to help you balance your passion and have the confidence to show a prospective employer that you care about the position and the organization to which you are applying, you will find meaning and direction in the work, and that you have carefully considered how the opportunity fits your career path. Employers will want to know if you think the job opportunity is a match with your skill set, values, and personal growth. Bringing new employees on board is an expensive process, and employers want to make good hiring decisions. Ultimately, you want to seek employment with the company that best matches your professional career path.

- Bill Nichols, CHMM
- Brandi Kissel, CIH

#### Mock Interviewing

**Tuesday, May 21, 10:00 a.m.–Noon**

See yourself through an employer's eyes when you meet with an experienced hiring manager during a mock interview. You will receive helpful feedback and learn the most effective presentation of skills, abilities, and professionalism. Reserve your slot today by contacting Wanda Barbour at [wbarbour@aiha.org](mailto:wbarbour@aiha.org) to schedule your own personal session.

#### Speed Networking

**Tuesday, May 21, 3:00 p.m.–4:00 p.m.**

Build lasting connections with colleagues from all professional levels and meet employers at this innovative and fun networking event. It's simple! Get to know a new colleague or employer every 10 minutes as you try to match what you learn about them with bingo spots on your "build your network" networking card. Use this opportunity to learn more about others and potential health and safety careers before you move on to your next speed networking connection. There will be prizes for the top networkers! Don't forget to bring plenty of business cards for this exciting networking event.

#### Résumé Critiquing

- **Monday, May 20**  
9:00 a.m.–11:00 a.m. and 1:00 p.m.–2:00 p.m.
- **Tuesday, May 21**  
9:00 a.m.–10:00 a.m. and 1:00 p.m.–3:00 p.m.
- **Wednesday, May 22**  
9:00 a.m.–Noon and 1:00 p.m.–3:00 p.m.

Bring your résumé to the CareerAdvantage Development Fair to sign up for your individual résumé critiquing session with an experienced hiring director. You will get helpful feedback directly related to style, length, focus, use of accomplishments, keywords, and more.

# Special Events

## SPARKtalks

**Sunday, 5:30 p.m.–7:00 p.m.**

**Hilton, Minneapolis Ballroom D**

A fusion of the best parts of Ignite and TedTalk presentations, SPARKtalks provides a casual, collegial atmosphere for attendees and will be a great start to this year's event. Selected speakers will share stories centered around the theme, "One Moment in Time." Come get inspired, meet up with friends – and make some new ones, and start off your AIHce EXP with a SPARK. A cash bar will be available. Your conference badge is required to attend this event.

## NEW! AIHA's Academic Track

This new track was developed for IH/OH students and early career professionals to help enhance their career goals. Participants will: present in front of peers and experienced professionals, share research with other conference attendees, participate in discussions, examine H&S career paths, and build work skills. Academic Track sessions will be held in room **200I** and are open to ALL AIHce EXP attendees.

## Refresh and Recharge Breaks

### Hall B

AIHce EXP is bringing back these great networking events on the Expo floor. Mix, mingle, network, and grab some snacks as you meet exhibitors, visit with colleagues, and learn about new products and services from AIHA and ACGIH. Your conference badge is required to attend these events.

**Monday, 12:00 p.m.–2:00 p.m.**

**The Energizer Break** – Healthy snacks will help boost your energy for more education, networking, and the evening's events!

**Monday, 4:30 p.m.–5:30 p.m.**

**Expo Hall Networking Reception** – This annual networking tradition gets the night started with some tasty nibbles and a free drink (ticket included in badge materials).

**Tuesday, 9:00 a.m.–10:00 a.m.**

**Coffee and Pastries** – Start your morning with some coffee and a bagel or pastry. This is a great time to chat with exhibitors about products and services that can help improve your workplace.

## Barista Bar

Presented by Catalyst –  
Exclusively in AIHA Booth 1735

Grab an espresso to jump start your Tuesday EXPerience, presented by AIHA's Catalyst Community! Visit Booth 1735 to walk through the system, sign up, and start posting.

**SPARKtalks**

**Tuesday, 11:00 a.m.–3:00 p.m.**

**AIHA's Head Shot Cafe** – Need a new professional head shot – or want an updated one for social media? AIHA is proud to present the Head Shot Cafe 2019, complete with makeup artists and a professional photographer. Appointments are first-come, first-served, and a minimum tax-deductible donation of \$20 to AIHF is required. Visit AIHA Booth 1735 for your head shot.

**Tuesday, 12:00 p.m.–2:00 p.m.**

**Health Nut Break** – Carrots and celery and granola bars, oh my! Quell that hangry feeling with some goodies that are good for you!

**Wednesday, 11:00 a.m.–1:00 p.m.**

**Build Your Own Trail Mix** – Fuel your brain for a strong finish to AIHce EXP 2019. What a perfect grab-and-go for your train, drive, or flight home!

## 33rd Annual AIHF Fun Run

**Tuesday, 6:30 a.m.–8:00 a.m.**

Lace up your running shoes and run 5k or walk 2k. All participants (individual runners, team runners, and sleep-in entries) must check-in at the Fun Run desk (Lobby B, MCC). Hours: Sunday, 12:00 p.m.–5:00 p.m. and Monday, 8:00 a.m.–5:00 p.m.

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## AIHce Networking@Nite

Sponsored by MSA

**Tuesday, 6:30 p.m.–7:30 p.m.**

**Hilton, Minneapolis Ballroom ABC**

The reception may be legendary, but this year, it has a brand new name! All are invited for networking and fun! Your conference badge is required to attend.



## Mark of Excellence Breakfast

**Wednesday, 7:00 a.m.–8:00 a.m.**

**Hall C**

The AIHce EXP Mark of Excellence Breakfast is a celebration of the extraordinary contributions made by members and the volunteer community to the industry and the profession. Celebrate the achievements of each awardee while networking and enjoying a delicious breakfast buffet.



## Pop-up Education and Health & Wellness Education

**200 Level and Mezzanine Level (M) Lobbies**

Ready for some quick tidbits of AIHA education? Want to learn some chair yoga moves to help you stay focused at your desk? AIHce EXP is thrilled to bring back Pop-up Education (200 Level Lobby) and Health & Wellness Education (Mezzanine Level (M) Lobby), featuring interactive learning in bite-sized chunks.

## New Product Pavilion – NEW!

**Hall B at the end of the 1200 aisle**

Dedicated to showcasing exhibitors' newly released products and services, you won't want to miss this on your Expo explorations! The New Product Pavilion is available during all open Exhibit Hall hours.

## NEW! Grain Bin and Trench Rescue Demonstrations

**Hall B at the end of the 1400 and 1500 aisles**

Live rescue demonstrations multiple times daily by South Central College! Due to capacity limitations during each live demo, videos of the live demos will air during all open Expo hours.

**Monday, May 20**

- **Grain Bin demos**  
10:00 a.m.–10:45 a.m. and 2:30 p.m.–3:15 p.m.
- **Trench demos**  
11:00 a.m.–11:45 a.m. and 3:30 p.m.–4:15 p.m.

**Tuesday, May 21**

- **Grain Bin demos**  
9:30 a.m.–10:15 a.m. and 1:00 p.m.–1:45 p.m.
- **Trench demos**  
10:30 a.m.–11:15 a.m. and 2:00 p.m.–2:45 p.m.

**Wednesday, May 22**

- **Grain Bin demo** — 9:30 a.m.–10:15 a.m.
- **Trench demo** — 10:45 a.m.–11:30 a.m.



# Student and Early Career Professional Activities

## Students and Early Career Professionals “Academic Track”

The newly created Academic Track was developed for IH/OH students and early career professionals to help enhance their career goals. Students and early career professionals will present in front of peers and experienced professionals, share research with other conference attendees, build work skills, and examine H&S career paths.

The following sessions – all held in room 200I – are targeted specifically for students and those new to the profession:

**Monday, May 20, 10:00 a.m.–11:00 a.m.**  
A13 Enhancing Mentor-Mentee Synergy and Effective Use of Self-Awareness Strategies

**Monday, May 20, 11:15 a.m.–12:15 p.m.**  
B13 The Ideal Internship Experience – Student and Mentor Perspectives

**Monday, May 20, 2:00 p.m.–3:00 p.m.**  
C13: Who Moved My Sampling Pump?

**Monday, May 20, 3:15 p.m.–4:15 p.m.**  
D13: Student Poster Session Author Attend Time (200 Level Lobby)

**Tuesday, May 21, 8:00 a.m.–9:00 a.m.**  
E13: Best in Show Student Poster Presentations

**Tuesday, May 21, 11:15 a.m.–12:15 p.m.**  
G13: Perspectives on Preparation for the CIH Exam – Version 14.0

**Tuesday, May 21, 2:00 p.m.–3:00 p.m.**  
H13: If I Knew Then What I Know Now – Lessons for Your Career Path

**Tuesday, May 21, 3:15 p.m.–4:15 p.m.**  
I13: University of Minnesota Student Presentations

**Tuesday, May 21, 4:30 p.m.–5:30 p.m.**  
J13: UCLA Student Presentations

**Wednesday, May 22, 9:00 a.m.–10:00 a.m.**  
K13: University of Central Missouri Student Presentations

**Wednesday, May 22, 10:15 a.m.–11:15 a.m.**  
L13: University of Iowa Student Presentations

**Wednesday, May 22, 1:00 p.m.–2:00 p.m.**  
M13: University of Oklahoma Health Sciences Center OEH Student Presentation

**Wednesday, May 22, 2:15 p.m.–3:15 p.m.**  
N13: UC Berkeley Student Presentations


## Student Lounge

**Monday, May 20 through  
Wednesday, May 22,  
Exhibit Hall open hours  
Hall B, Booth 1735**

Visit the exclusive Student Lounge in the AIHA Booth. Meet other students, network, and create connections. Stop by the lounge for pop-up student-related events.

## First Timers’ Meet and Greet

*Sponsored by DuPont Personal Protection*

**Monday, May 20, 6:30 a.m.–7:30 a.m.**   
**Hilton, Minneapolis Ballrooms EFG**

First time attending AIHce? Meet other first timers with whom you can network, partner with for sessions, and plan your evening activities.

## SECP Table Topics: Q&A

**Monday, May 20, 12:30 p.m.–1:30 p.m.**  
**Hall B**

Topics address issues of specific interest to young industrial hygienists and those new to the profession. Seating is first-come, first-served. The first 25 attendees to check in at this session will receive a discounted voucher for lunch.

- CIH Exam Prep Table 1 — Studying and Preparing for the Exam
- CIH Exam Prep Table 2 — Applying for the Exam
- Safety Matters
- Networking for the Industrial Hygienist
- Getting Research Published in JOEH
- Communication Etiquette in the Digital

## AIHA Mentoring Program

**Monday, May 20–Wednesday, May 22,  
Exhibit Hall open hours  
Hall B, Booth 1735**

There are so many benefits of joining AIHA’s Mentoring program — for both the mentor and the mentee. Stop by the mentoring table in the AIHA Booth to learn how to take advantage of this valuable member benefit.

## 29th Annual Student Poster Session

**Monday, May 20, 3:15 p.m.–4:15 p.m.**  
**Level 200 Lobby**

Check out the scientific findings of your peers. Students will be on hand to discuss their research methods and results. Three posters will be selected “Student Best in Show;” awards given by AIHA Volunteer Groups will be presented on Wednesday at the Mark of Excellence Breakfast.

## Student Local Sections Council Business Meeting

**Tuesday, May 21, 10:30 a.m.–11:30 a.m.**  
**Hyatt, Greenway Ballroom J**

Expand your network, and join the conversation. This is your opportunity to meet student local section officers and members, learn about the role of student local sections, and share best practices. Anyone interested in creating or joining a student local section is invited to attend.

## Volunteer Group Meetings

**Sunday, May 19 – Wednesday, May 22**

Unless otherwise noted, Volunteer Group meetings are open to everyone. Over the course of four days, more than 50 volunteer groups will meet to discuss a variety of technical and nontechnical topics, including many that address the specific needs of industrial hygiene students and early career professionals. Check the AIHce mobile app for a complete list of all AIHA Volunteer Groups meeting this week. The following are groups specifically focused on the needs of students and early career professionals:

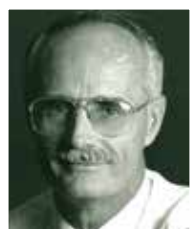
- **Monday, May 20, 3:30 p.m.–4:30 p.m.**  
**Hyatt, Greenway Ballroom C**  
Mentoring and Professional Development Committee Meeting
- **Monday, May 20, 2:30 p.m.–4:30 p.m.**  
**Hyatt, Greenway Ballroom I**  
Minority SIG
- **Tuesday, May 21, 4:30 p.m.–6:30 p.m.**  
**Hyatt, Greenway Ballroom H**  
Students and Early Career Professionals Committee Meeting

# AIHA® and ACGIH® Named Awards and Recognition

## AIHA® Fellows

The AIHA Fellows designation was established to recognize full members in good standing, with 15 years of continuous membership, who have made recognized contributions to industrial hygiene or related disciplines, either through research, leadership, publications, education, or service to AIHA.

The 2019 Fellows will be recognized at the Mark of Excellence Breakfast on Wednesday, May 22.  
The Fellow pin ceremony will take place during the Fellows SIG meeting on Tuesday, May 21.



**Finis L. Cavender,  
PhD, DABT, FAIHA**

*Nominated by  
George M. Rusch  
on behalf of the  
Emergency Response  
Planning Committee*



**Kermit G. Davis III,  
PhD, FAIHA**

*Nominated by  
Sean Gallagher,  
AIHA Member*



**John D. Elias, CIH,  
ROH, FAIHA**

*Nominated by  
Alison Reineke  
on behalf of the  
AIHA Manitoba  
Local Section*



**Peter B. Harnett,  
MS, MPH, CIH,  
CSP, FAIHA**

*Nominated by  
Timothy A. Rice on  
behalf of the AIHA  
New Jersey Local  
Section*



**Steven E. Lacey,  
PhD, CIH, CSP,  
FAIHA**

*Nominated by  
Bradley S. King,  
AIHA Member*



**Maharshi P. Mehta,  
CIH, CSP, FAIHA**

*Nominated by  
Richard B. Hirsh,  
on behalf of the  
International Affairs  
Committee*



**Robert N. Phalen,  
PhD, CIH, FAIHA**

*Nominated by  
Derek A. Newcomer  
on behalf of the  
Protective  
Clothing and  
Equipment  
Committee*



**Peter C. Raynor,  
PhD, FAIHA**

*Nominated by  
Deborah Brown on  
behalf of the AIHA  
Upper Midwest  
Local Section*



**David C. Roskelley,  
MSPH, CIH, CSP,  
FAIHA**

*Nominated by  
Thomas E. Smith  
on behalf of the  
AIHA Utah Local  
Section*



**Jennifer Sahmel,  
MPH, CIH, CSP,  
FAIHA**

*Nominated by  
Michael Larranaga,  
AIHA Member*



**Mohammed Abbas  
Virji, ScD, CIH,  
FAIHA**

*Nominated by  
Dana M. Hollins  
on behalf of the  
Occupational and  
Environmental  
Epidemiology  
Committee*



**Lawrence G. Wylie,  
PhD, CIH, CSP,  
FAIHA**

*Nominated by  
Robert Lieckfield, Jr,  
AIHA Member*

All awardees will be honored during the  
**AIHce EXP 2019 Mark of Excellence Breakfast on  
Wednesday, May 22, 7:00 a.m.–8:00 a.m. in Hall C**



## AIHA® Named Awards

AIHA is more than just an association. It is a community of thought leaders and a conduit for rewarding excellence. AIHA values the profession and our members by providing opportunities and resources to share about the profession and recognizing those professionals who have exemplified excellence and leadership.

### Edward J. Baier Technical Achievement Award



**Michael A. Jayjock, PhD, CIH** is recognized by his peers as an expert in multiple facets of industrial hygiene including the use of mathematical models for estimating occupational exposures, uncertainty analysis including the use of Monte Carlo simulations, development of criteria that serves as the basis for establishing occupational exposure limit guidelines, and in the conduct of occupational exposure and

risk assessments. As a mentor to colleagues and junior professionals, he is intense and challenging, but he is able to accomplish this with a very non-threatening demeanor. This is a very rare talent.

Sponsored by Bureau Veritas North America, Inc., this award is given to the individual or group of individuals, company, organization, or association that has made the most significant contribution to industrial hygiene in recent years through technical expertise, innovations, or scientific advancement. Mr. Jayjock was nominated by Mark Stenzel, CIH, FAIHA.

### Distinguished Service to AIHA Award



**Thomas P. Fuller, ScD, CIH, CSP, MSPH, MBA** has been active in AIHA since he became a member in 1996. Anyone who has worked with Fuller on AIHA® committees and projects will attest that he has an impressive ability to engage volunteers and get things done. Often selected for his "think outside the box" approach to solutions, he specializes in some topics that may not be considered pure industrial hygiene.

In January 2018, Tom represented IOHA at the International Labor Organization at the Meeting of Experts to Adopt a Code of Practice on Shipbuilding and Ship Repair in Geneva, Switzerland. In 2017-18, Tom was the chair of the AIHA® International Affairs Committee (IAC). During his term, the IAC created a Micro-Grants Subcommittee on Emerging Economy Projects Fund and earned the prestigious Soaring Star Award for ongoing excellence by a committee.

This award recognizes distinguished service in the advancement of industrial hygiene, unique technical contributions to the aims and goals of AIHA®, proven leadership in the industrial/occupational hygiene profession, influence on public policy or social reform, or public and community service. Mr. Fuller was nominated by Marianne Levitsky, MES, CIH, ROH, FAIHA and Charles F. Redinger, PhD, CIH, FAIHA.

### Donald E. Cummings Memorial Award



Throughout his career, **Dr. Noah Seixas, PhD, CIH** has conducted research evaluating exposures to, and subsequent health effects from, chemical, physical, and psychosocial hazards that impact worker health and safety. Frequently, he has turned that research into usable prevention materials and strategies for managers and workers in the field. Dr. Seixas's work research has assessed health effects re-

lated to exposures, developed methods to better assess exposures, developed and implemented interventions to control exposures, and demonstrated practical application of industrial hygiene knowledge to protect worker health. Dr. Seixas helped to develop, implement, and evaluate interventions to be used to decrease exposures in a variety of workplaces. Dr. Seixas has worked with community-based organizations to help them educate under-served and under-represented worker populations and receive practical health and safety training they would not have received at their workplaces.

This award is bestowed upon an individual who has made outstanding contributions to the knowledge and practice of industrial hygiene and who has been acknowledged for his/her contributions outside of the field of industrial hygiene. Dr. Seixas was nominated by Martin A. Cohen, ScD, CIH and Marissa Baker.

### Kusnetz Award



**Megan Canright, MPH, CIH** is one of our brightest, most respected, and most capable young leaders in the profession today. She is presently Director of Scientific Operations, Forensic Analytical, one of the most robust EHS management consulting firms today, with outreach both domestically and globally. From a leadership standpoint, Megan has served as chair of AIHA®'s Risk Assessment Committee;

president, San Diego Local Section; conference planning committee, California Industrial Hygiene Council (CIHC); officer, CIHC; and one of the primary leaders of the 2018 Future Leaders Institute. She is overwhelmingly passionate about industrial hygiene and seeing our profession grow through recruiting new members.

Sponsored by the late Howard Kusnetz and Florence Kusnetz, this award honors a certified industrial hygienist who has reached his/her 40th birthday by May 1 of the year in which the award is presented, is currently employed in the private sector, exhibits high ethical standards and technical abilities, has provided for the highest standards of health and safety protection, and shows promise of leadership in the industrial hygiene profession. Ms. Canright was nominated by Shannon H. Gaffney, PhD, MHS, CIH and Chris L. Laszcz-Davis, MS, CIH, COH, FAIHA, AIC Fellow.



# Named Awards and Recognition

## Alice Hamilton Award



With a professional career spanning over 50 years, it can be objectively stated that **Dr. Marilyn Fingerhut, PhD** may be one of the most successful, inspirational, innovative, and well-rounded champions of occupational health and industrial hygiene on the national and international levels. She retired from the National Institute for Occupational Safety and Health (NIOSH), where she worked for more

than 25 years as an epidemiologist, manager, and chief of staff. She also worked for NIOSH at the World Health Organization (WHO) in Geneva, Switzerland and continues as a consultant for NIOSH. Throughout her career at NIOSH and WHO, she was a never-ending champion of the industrial hygiene profession internationally. She served as International Commission on Occupational Health (ICOH) Vice President for Scientific Committees for the Trienniums 2006-2009 and 2015-2018.

This award is presented to an outstanding woman who has made a definitive, lasting achievement in the field of occupational and environmental hygiene through public and community service, social reform, technological innovation, or advancements in the scientific approach to the recognition, evaluation, and control of workplace hazards. Dr. Fingerhut was nominated by David M. Zalk, PhD, CIH, MPH.

## Social Responsibility Award



**Scott P. Schneider, CIH, FAIHA** is an active thought leader regarding the role of our profession in the world we support. He's a hard worker and caring individual, one who epitomizes the best of our profession. Scott has been a member of the AIHA® Ergonomics Committee for more than 20 years, as well as serving on the Social Concerns, Construction, and Noise Committees. He serves as co-chair

of the CPWR Institutional Review Board.

Sponsored by Bureau Veritas North America, Inc., this award is presented to an individual, entity, group, or organization who works inside organizations to develop and promote practical solutions to social responsibility issues related to industrial hygiene or environmental health and safety issues. Mr. Schneider was nominated by Colin J. Brigham, CIH, CSP, CPE, CPEA, CSPHP, FAIHA.

## Henry F. Smyth, Jr. Award



Throughout his career, **Dr. Charles L. Geraci, PhD, CIH, FAIHA** has been a problem solver and an innovator. He is highly skilled and successful in recognizing technical or scientific challenges that, when solved, benefit the industrial hygiene profession tremendously including his creative approaches to assess hazardous waste site workers' complex exposures in the early 1980s, developing analytical

sampling and analysis approaches, evaluating complex exposures in chemical and pharmaceutical industries, developing and delivering professional development training on topics ranging from hazardous waste site remediation evaluations, and his approaches to the contemporary issues of nanotechnology and advanced manufacturing. He is most noted for being able to translate complex scientific issues into action and language that is understood by a wide range of audiences including manufacturing line operators, CEOs, academic researchers, and students.

This award is presented to an individual who has recognized the needs of the industrial hygiene profession and has made major contributions to fulfill those needs, thereby contributing to the improvement of the public welfare. Dr. Geraci was nominated by Amanda Archer, CSP, CIH.

## Yant Award



**Marianne Levitsky, MES, CIH, ROH, FAIHA** has been actively engaged in the philanthropic endeavors of our profession for many years. Her efforts in organizing and sustaining the Workplace Health Without Borders organization are nothing short of amazing to those of us who are fortunate enough to work with her. The ongoing diligence she exhibits in growing an organization that has global impact is an

inspiration and truly illustrates the "power of one." She is very effective in engaging large numbers of other professionals around the world in a most humble and cooperative manner and consistently seeks opportunities with an open heart and mind. The effects of her dedication can be seen on specific projects including creating professional networks, directly organizing OH service delivery and training in developing economies, and addressing world-wide OH issues such as silica and asbestos. Because of her efforts, the WHWB organization has made major contributions toward directly impacting global occupational hygiene for the most underserved workers and has promoted the profession in the developing economies around the world.

Co-sponsored by MSA, this award is presented annually for outstanding contributions in industrial hygiene or allied fields to an individual residing outside the United States. Ms. Levitsky was nominated by Nancy McClellan, MPH, CIH, CHMM.

## President's Award

This award is named and presented annually at the Mark of Excellence Breakfast to an individual, task force, special interest group, or local section for outstanding contributions to efforts to achieve the mission of AIHA® during the presidency year.

## AIHA Volunteer Groups

### Lila Albin Award

Since 1997, the AIHA® Indoor Environmental Quality Committee has evaluated journal articles and recognized one each year. The article must: (a) be peer reviewed and published in the *Journal of Occupational and Environmental Hygiene*; (b) provide practical information and expand the knowledge base of IEQ professionals; (c) address a critical IEQ issue; and (d) present the topic clearly and engagingly. In 2012, the award was renamed in honor of a former Chair of the IEQ Committee, the late Lila Albin, PhD. This year's recipients are **Jaime Butler-Dawson, Kit Galvin, Peter S. Thorne, and Diane S. Rohlman** for "*Organophosphorus Pesticide Residue Levels in Homes Located Near Orchards*," JOEH, 15:12, 847-856.

### H. Kenneth Dillon Memorial Award

This award is present by the AIHA® Biosafety and Environmental Microbiology Committee to honor the memory of Dr. Ken Dillon, a former AIHA Fellow and the principal instructor for several years of the popular PDC "Prevention, Determination, and Remediation of Biological Contamination in Indoor Environments." The award is given to the best student poster presented at AIHce on biosafety or microbiology.

# Named Awards and Recognition

## Donna Doganiero Award

The AIHA® Safety Committee presents this award to the presenter of the best safety-related technical session at AIHce. The Safety Committee bestows this award in the name of Donna Doganiero, a truly outstanding individual, to recognize her achievements and vision in continuing to move the field of industrial safety and hygiene forward.

## The Golden Seed Award

The AIHA® Students and Early Career Professionals Committee established this award in 2007. It is presented to an individual who has demonstrated a commitment to promoting industrial hygiene and/or provided guidance and mentoring to students or early career professionals. This year's recipient is **Laurel A. Davis, MPH, CIH**.

## Hazard Prevention and Engineering Controls Best Paper

This award is given by the AIHA® Hazard Prevention and Engineering Controls Committee to the best paper that focuses on the use of engineering principles for the prevention and control of health hazards. The awardee is selected by a committee of peers from papers published in the *Journal of Occupational and Environmental Hygiene* during the calendar year that precedes the conference. This year's recipients are **B.M. Alexander, E.J. Esswein, M.G. Gressel, J.L. Kratzer, H.A. Feng, A.L. Miller, E. Cauda, and G. Heil** for "Evaluation of an Improved Prototype Minibaghouse to Control the Release of Respirable Crystalline Silica from Sand Movers."

## Nanotechnology Working Group Best Paper

The AIHA® Nanotechnology Working Group will inaugurate the Best Paper Award for peer reviewed research on Nanotechnology published in the *Journal of Occupational and Environmental Hygiene* during the previous year (2018). This award will be presented at the Nanotechnology Working Group meeting on Sunday, May 19.

## Margaret Samways Memorial Student Poster Award

This award honors the memory of Margaret Samways, past chair and long-time member of the AIHA® Communication and Training Methods Committee.

## David L. Swift Memorial Award

This award honors the memory of Dr. David L. Swift, professor at the Johns Hopkins University, for his outstanding contributions to aerosol and industrial hygiene research. Aerosol research papers published during the previous year in the *Journal of Occupational and Environmental Hygiene* are reviewed by the AIHA® Aerosol Technology Committee. This year's award is presented to **Julie F. Hart, Daniel A. Autenrieth, Emanuele Cauda, Lauren Chubb, Terry M. Spear, Siobhan Wock, and Scott Rosenthal** for their paper, "A Comparison of Respirable Crystalline Silica Concentration Measurements Using a Direct-on-Filter Fourier Transform Infrared (FT-IR) Transmission Method vs. a Traditional Laboratory X-ray Diffraction Method."

## Upton Sinclair Memorial Lecture Award

The Upton Sinclair Memorial Lecture on EHS Investigative Reporting is hosted by the AIHA® Social Concerns Committee. Journalist **Jeffrey Meitrodt** from the *Star Tribune* will discuss his expose on "Tragic Harvest – The Price of Neglecting Farm Safety in the Midwest" on Monday, May 20 from 3:15 p.m. to 4:15 p.m.

## John M. White Award

The John M. White Award was established by the AIHA® Respiratory Protection Committee to encourage scientific and application-oriented research in respiratory protection. This year's award goes to **Margaret Sietsema** and **Lisa M. Brosseau** for "Are Quantitative Fit Factors Predictive of Respirator Fit During Simulated Healthcare Activities?"

## 2018 AIHA® Bestseller

This award is presented to the editor of the publication that sold the most copies during the year. The 2018 best-seller is presented to **Daniel H. Anna, PhD, CIH, CSP**, the editor of *The Occupational Environment: Its Evaluation, Control, and Management*, 3rd edition. In 2018, AIHA® sold 309 copies of this publication.

## 2018 Critics' Choice Award

The Critics' Choice Award honors a publication completed in 2018. The AIHA® Publications Committee evaluates all publications and selects those based on their impact on the profession, originality, and quality of writing. This year's recipients are **Edward Primeau, CIH** and **Laura H. Weems, CIH, CSP, CHMM**, the editors of *Incident Safety and Health Management Handbook*, 2nd edition.

## AIHA® Local Section Awards

### Michigan Industrial Hygiene Society Best Paper Award

The Michigan Industrial Hygiene Society Best Paper Award was established by MIHS in 1957 for recognition of an outstanding publication in the *American Industrial Hygiene Association Journal*. In 1989, the MIHS board of directors voted to also recognize the authors of the best paper in applied industrial hygiene from the *Applied Occupational and Environmental Hygiene Journal*. Both journals combined in 2004 to form the current *Journal of Occupational and Environmental Hygiene*. MIHS continues to present a Best Paper Award each year. This year's winners are **Margaret E. Davidson, Joshua Schaeffer, Maggie L. Clark, Sheryl Magzamen, Elizabeth J. Brooks, Thomas J. Keefe, Mary Bradford, Noa Roman-Muniz, John Mehaffy, Gregory Dooley, Jill A. Poole, Frank M. Mitloehner, Sue Reed, Marc B. Schenker, and Stephen J. Reynolds** for "Personal Exposure of Dairy Workers to Dust, Endotoxin, Muramic Acid, Ergosterol, and Ammonia on Large-Scale Dairies in the High Plains Western United States," *JOEH*, 15:3, 182-193.

# Named Awards and Recognition

## ACGIH® 2019 Awards

### Meritorious Achievement Award



This award is given to members of ACGIH® who have made an outstanding, long-term contribution to the progress of occupational health and environmental hygiene. The recipient of this year's award is **Lynn C. O'Donnell, CIH, FAIHA**.

Ms. O'Donnell served as Executive Director of the American Board of Industrial Hygiene (ABIH) from 1991 until her retirement in 2014.

Notably during her tenure, ABIH achieved ANSI/ISO and other accreditations, transitioned to a computer-based examination that is offered internationally, streamlined application and certification maintenance processes, and increased the number of CIHs from under 3,900 to 6,700. In 2016, Ms. O'Donnell was appointed as a Director of the Occupational Hygiene Training Association and Chair of the Awards and Qualifications Committee. Ms. O'Donnell joined ACGIH® in 1978 and presented the distinguished Jeffrey S. Lee Lecture at AIHce in 2014. She also served as a member of the ABIH Board of Directors from 1983–1989 and as a Councilor for the American Academy of Industrial Hygiene. She was certified in the Comprehensive Practice of Industrial Hygiene by ABIH in 1981. Among her many accomplishments, Ms. O'Donnell is an AIHA Fellow, recipient of the ACGIH® John J. Bloomfield and AIHA Alice Hamilton Awards, and the first recipient of the ABIH Lynn C. O'Donnell Lifetime Achievement Award.

### William Steiger Memorial Award



This award honors individuals from the social/political sphere whose efforts have contributed to advancements in occupational health and safety. This year's recipient is **Michael J. Wright**.

Mr. Wright is the Director of Health, Safety, and Environment for the United Steelworkers (USW). Mr. Wright trained as an industrial engineer at Cornell and an industrial hygienist at

the Harvard School of Public Health. He joined the USW in 1977 and became department head in 1984. He has also served as the head of the union's education department where he directed the training for participants in the joint union-management partnership programs in the steel industry. Mr. Wright has participated in the fight for numerous OSHA and MSHA standards, including lead, arsenic, asbestos, chromium, hazard communication, process safety management, confined spaces, lockout/tagout, beryllium, and diesel exhaust in underground mines. He has worked extensively on international health, safety, and environment issues with the International Labour Organization and the International Trade Union Confederation. He has taught safety and health, visited workplaces, and worked with unions in South Africa, Zimbabwe, India, Brazil, Mexico, Argentina, Poland, Romania, Bosnia-Herzegovina, and Russia. Mr. Wright was a member of an international team that investigated the Bhopal disaster. He is a former member of the Program Advisory Committee of the International Program on Chemical Safety, set up under the ILO, the World Health Organization, and the United Nations Environment Program. He also served on the international coordinating group overseeing the effort to harmonize chemical classification and labeling systems throughout the world, whose work resulted in the Globally Harmonized System for Chemical Classification and Labeling.

## Herbert E. Stokinger Award



This award is given each year to an individual who has made a significant contribution in the broad field of industrial and environmental toxicology. This year's recipient is **Vincent Castranova, PhD**.

Dr. Castranova is a professor in the Department of Pharmaceutical Sciences at West Virginia University, Morgantown, West Virginia; an adjunct professor in the Department of Environmental and Occupational Health at the University of Pittsburgh; and is a Visiting Scientist in the Department of Environmental Health at the Harvard TH Chan School of Public Health. Before his retirement in 2014, Dr. Castranova was the Chief of the Pathology and Physiology Research Branch in the Health Effects Laboratory Division of NIOSH, Morgantown, West Virginia and held the grade of CDC Distinguished Consultant for many years. Dr. Castranova's research interests have been concentrated in pulmonary toxicology and occupational lung disease. He was coordinator of the Nanotoxicology Program in NIOSH from its inception in 2005 until his retirement. He has co-edited four books, has given over 175 invited presentations, and has co-authored over 635 manuscripts and book chapters. He received the Shepard Lifetime Scientific Achievement Award from CDC in 2008, the ATS Assembly on Environmental & Occupational Health Val Vallyathan Senior Investigator Award in 2012, and the Inhalation and Respiratory Specialty Section/SOT Career Achievement Award in 2013. He also previously received this prestigious award in 2009.

### John J. Bloomfield Award



This award is presented to a young industrial hygienist who pursues the problem of occupational health hazards primarily by doing fieldwork and who demonstrates significant contribution to the profession. This year's recipient is **Phillip Rauscher, MPH, CSP, CIH**.

Mr. Rauscher earned his BS degree in Public Health with a minor in Chemistry from Youngstown State University. He went on to

earn his MPH in Environmental/Occupational Health from the University of Toledo. He since has earned a graduate certificate in Quality Management Systems from Bowling Green State University. He is an Industrial Safety Hygienist at the State of Ohio Division of Safety and Hygiene. He works primarily in the field performing comprehensive industrial hygiene and engineering surveys to anticipate, identify, evaluate, and control airborne contaminants, noise levels, and heat/cold stress. He also assists employers of various industries with development of safety programs and implementation of best practice guidelines and works with stakeholders to educate employers on common hazards in the workplace and compliance with federal and state law through development and implementation of both classroom and online training as well as publicly available educational materials. Mr. Rauscher joined ACGIH® in 2014. He is also member of AIHA and has served as the Secretary of the AIHA Northwest Chapter since 2014. Mr. Rauscher acts as a Liaison/Facilitator of the Ohio Safety Congress – Chemical Committee, the nation's largest regional safety conference. He is a Certified Industrial Hygienist (CIH) and a Certified Safety Professional (CSP).



# Named Awards and Recognition

## Robert T. Hughes Memorial Award



This award was established in 2015 and recognizes outstanding individuals in the field of industrial ventilation. This year's Hughes Award recipient is **Norma Donovan**.

Tirelessly, and without pay, Mrs. Donovan served the ACGIH® Industrial Ventilation Committee as an Editorial Consultant from its inception in 1950 through 2008. She was a major contributor to the publication of the first edition of ACGIH®'s *Industrial Ventilation: A Manual of Recommended Practice*. As the Committee's official secretary, she held the primary responsibility for typing and assembly of 26 of the 30 editions of the Design Manual as well as the first edition of its companion manual, *Industrial Ventilation: A Manual of Recommended Practice for Operation and Maintenance*. In addition to her assistance with editing, typing, printing, and publishing of the ventilation manuals, Mrs. Donovan also provided for their storage in and distribution from the basement of her family home. She even ensured that when her family purchased a new home it possessed a walk-out basement, which greatly aided her Committee activities. For 35 years, eighteen editions of the Design Manual were stocked and sold from her home until 1986 when ACGIH® assumed this effort. Ken Robinson, a former member of the ACGIH® Industrial Ventilation Committee and its Chair from 1950 to 1952, stated, "There is no doubt in my mind that without Norma, the Manual would never have been printed." What a true testament of her loyalty and dedication to the Committee's activities and immeasurable contributions to the field of industrial ventilation! As a result of her years of loyal and devoted service to the Committee and ACGIH®, she was named an Honorary Member of ACGIH® in 1976.

## William D. Wagner Award



The William D. Wagner Award, established in 2003, is presented annually to a person in the field of national and international worker health and safety who is an outstanding example of commitment and dedication to the creation and dissemination of occupational exposure values (OEVs). **Thomas J. Armstrong, PhD, CIH** is the 2019 recipient of the William D. Wagner Award.

Dr. Armstrong is a Professor in the Industrial and Operations Engineering and Biomedical Engineering Departments at the University of Michigan's College of Engineering. Dr. Armstrong received PhD degrees in Industrial and Operations Engineering, Industrial Health, and Physiology, all from the University of Michigan. His work over the last 35+ years at the University of Michigan has contributed to attempts by OSHA and ANSI to develop ergonomics standards and to development of the first ACGIH® Ergonomics TLVs®. Dr. Armstrong is a Certified Industrial Hygienist in Comprehensive Practice and a Certified Professional Ergonomist. Dr. Armstrong joined ACGIH® in 1986 and has served on the ACGIH® Threshold Limit Values for Physical Agents (TLV®-PA) Committee from 1998-2017. His work on the Committee included contributing to development of the TLV® for musculoskeletal disorders of the upper limbs, collaborative work on materials handling and localized fatigue TLVs®, and exploring bases for new TLVs® with leading investigators in the field. Dr. Armstrong is an active member and Fellow of the Human Factors and Ergonomics Society and the International Ergonomics Society of Great Britain. He is a long-standing member and Fellow of AIHA.

## Announcing a new era at the 2019 **ABIH** Forum

american board of industrial hygiene



**Certified Industrial Hygienist®**  
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**Environmental Practitioner In-Training®**  
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**Qualified Environmental Practitioner®**  
Protecting the Health and Quality  
of Every Environment

This year, the American Board of Industrial Hygiene® (ABIH®) will discuss an historic change to ABIH® and the Institute of Professional Environmental Practice® (IPEP®). Attendees at the session will all have the opportunity to receive newly-minted 2019 medallions designed to mark this important occasion.

Following the discussion, we will present two outstanding Certified Industrial Hygienists® with the Lynn C. O'Donnell Lifetime Achievement Award and the ABIH Impact Award, as well as recognize recently-credentialed and newly-retired CIHs.

We look forward to having you join us at the ABIH Forum during the AIHce meeting in Minneapolis on Monday, May 20<sup>th</sup> from 11:15 AM to 12:15 PM in Minneapolis Convention Center Room L100F. Be sure to also visit our booth at the AIHce Expo!

Request your free consultation on how to begin your journey to success by becoming a Certified Industrial Hygienist® or Qualified Environmental Practitioner®.

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As the premier credentialing organization for professions based on the science of protecting and enhancing the health, safety, and environment of people at work and in their communities, ABIH® serves its credentialed practitioners by establishing and administering a valid, reliable, and rigorous credentialing process to protect the public and meet the needs of employers.

# Friday/Saturday At-a-Glance

As of March 28, 2019

## Friday, May 17

3:00 p.m.–4:00 p.m.

- Speaker Ready Room, **102A**

5:00 p.m.–7:00 p.m.

- Registration, **Lobby B**

## Saturday, May 18

6:30 a.m.–5:30 p.m.

- Registration, **Lobby B**

7:00 a.m.–7:30 a.m.

- PDC Monitor Meeting, **102A**

7:00 a.m.–5:30 p.m.

- Speaker Ready Room, **102A**

8:00 a.m.–Noon

- PDC 201: Introduction to Toxicology for the IH Professional, **101D**

8:00 a.m.–5:00 p.m.

- PDC 101: If I'm Teaching, Why Aren't They Learning? **200E**
- PDC 102 **NEW!**: Fentanyl and High-Potency Drugs Operational Safety, **M100C**
- PDC 103: Exposure Judgement — Inhalation Assessments, **101G**

- PDC 104: Design, Select, Operate, and Manage Laboratory Ventilation Systems, **L100F**
- PDC 105: Strengthening EHS Leadership & Teamwork, **L100C**
- PDC 106: Non-Ionizing Radiation Hands-On Measurements, **101C**
- PDC 107: The Good, the Bad, and the Ugly — EHS at the Worst Plant, **101J**
- PDC 108: Introduction to Chemical Exposure Modeling, **200B**
- PDC 109: Advanced Application of 4-Gas/ PID Sensor Technology, **101H**
- PDC 110 **NEW!**: Total Worker Health® Maximizing Well-Being, **L100A**
- PDC 111: Ergonomics Assessment Tools for the Beginning Practitioner, **200H**
- PDC 112: Exposure Judgment — Dermal Exposure Assessment, **L100E**
- PDC 113: Whole Air Sampling Techniques, Application, and Execution, **101A**
- PDC 702: NFPA 70E (2018) Electrical Safe Work Practices — Day 1, **L100H**

- PDC 703: OHS Management System Auditor — Day 1, **200C**
- PDC 704: Exposure Assessment Strategy & Statistics for Managing Occupational Exposures — Day 1, **200F**
- PDC 705 **NEW!**: NFPA 652 and Advanced DHA Workshop — Day 1, **200I**
- PDC 706: Business Case for Prevention Through Design (PtD) Interventions — Day 1, **M100F**
- PDC 707: Process Safety and Risk Management for the IH — Day 1, **M100E**

10:00 a.m.–4:00 p.m.

PDC 2001: Women in IH Leadership Summit

**Hyatt, Lakeshore**

**Ballrooms ABC**

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Noon–1:00 p.m.

- PDC Luncheon, **Ballroom A**

1:00 p.m.–5:00 p.m.

- PDC 301: Comparative Ethics, **101D**



Full session descriptions may be found in the mobile app. Events take place at the Minneapolis Convention Center unless otherwise noted.

## AIHA University POP-UP

**CHICAGO 2019 • OCT 27 & 28 • University of Illinois at Chicago**

AIHA is bringing our professional development courses (PDCs) to **Chicago, IL!**

This the first of many regional AIHA University Pop-Ups intended to provide additional education opportunities for IH/OH professionals nationwide.

Learn more at  
**[bit.ly/AIHAuniversity](http://bit.ly/AIHAuniversity)**

# Sunday At-a-Glance

As of March 28, 2019

## Sunday, May 19

6:30 a.m.–5:30 p.m.

- Registration, *Lobby B*

7:00 a.m.–7:30 a.m.

- PDC Monitor Meeting, *102A*

7:00 a.m.–5:30 p.m.

- Speaker Ready Room, *102A*

8:00 a.m.–Noon

- PDC 501 **NEW!** Selection and Use of Powered Air Purifying Respirators, *L100E*
- PDC 502: Nanotechnology — Old Theories and New Concepts, *101A*

8:00 a.m.–4:00 p.m.

- ACGIH® Board of Directors Meeting (by invitation only), *Hyatt, Lakeshore A*

8:00 a.m.–5:00 p.m.

- AIHA Board of Directors Meeting, *Hilton, Minneapolis Ballroom A*
- PDC 401: Ergonomics Assessment Tools for the Advanced Practitioner, *101G*
- PDC 402 **NEW!** Cannabis Legalization — Workplace Health and Safety, *M100C*
- PDC 403 **NEW!** Tell a Story — Creative Narratives for Better Training, *200E*
- PDC 404: Ensure Safe Entry Into Oddball Confined Spaces, *101H*
- PDC 405 **NEW!** Classification and Management of Hazardous Waste, *200B*
- PDC 406 **NEW!** Emergency Responder Health Monitoring and Surveillance™, *M100H*
- PDC 407: Leadership Principles for OHS Professionals, *L100B*
- PDC 408: Noise Control — Effective Engineering Solutions, *101C*
- PDC 409: Welding Exposures and Controls, *101J*

- PDC 410 **NEW!** Forecasting Exposures Using Well Mixed Room Models, *L100F*
- PDC 411: Risk Assessment for IHs — Organics, Metals, Nanoparticles, *101D*
- PDC 702: NFPA 70E (2018) Electrical Safe Work Practices — Day 2, *L100H*
- PDC 703: OHS Management System Auditor — Day 2, *200C*
- PDC 704: Exposure Assessment Strategy & Statistics for Managing Occupational Exposures — Day 2, *200F*
- PDC 705 **NEW!** NFPA 652 and Advanced DHA Workshop — Day 2, *200I*
- PDC 706: Using the Business Case for Prevention Through Design (PtD) Interventions — Day 2, *M100F*
- PDC 707: Process Safety and Risk Management for the IH — Day 2, *M100E*

Noon–1:00 p.m.

- PDC Luncheon, *Ballroom A*

1:00 p.m.–5:00 p.m.

- PDC 601: How to Assess and Manage Nanomaterial Risks, *L100E*
- PDC 602: Preparing for the Next Highly Hazardous Communicable Disease, *101A*
- PDC 603: How to Choose the Correct Radiation Detection Instrument, *200H*

1:00 p.m.–6:00 p.m.

- SDS & Label Authoring Registry Exam, *Hyatt, Skyway A*

4:30 p.m.–6:30 p.m.

- Biological Monitoring Committee, *Hilton, Board Room 1*

5:00 p.m.–6:30 p.m.

- Exposure Assessment Strategies Committee, *Hilton, Marquette IX*
- Healthcare Working Group, *Hilton, Marquette IV*

5:00 p.m.–7:00 p.m.

- Nanotechnology Working Group, *Hilton, Marquette VI*

5:30 p.m.–6:30 p.m.

- Academic Accreditation Committee, *Hyatt, Skyway B*
- Communication and Training Methods Committee, *Hilton, Board Room 3*
- Legal Issues Committee, *Hilton, Board Room 2*

5:30 p.m.–7:00 p.m. **SPARKtalks**

- SPARKtalks, *Hilton, Minneapolis Ballroom D*

6:00 p.m.–7:30 p.m.

- ACGIH® Membership Reception and Annual Meeting of the Membership, *Hilton, Marquette I-III*

6:00 p.m.–9:30 p.m.

- Kanomax/AccuTec Distributor Meeting (by invitation only), *Hilton, Rochester*

6:30 p.m.–8:00 p.m.

- American Industrial Hygiene Foundation (AIHF) Donor and Scholarship Recipient Reception (by invitation only), *Crave Minneapolis; 825 Hennepin Avenue*

8:00 p.m.–9:30 p.m.

- Future Leaders Institute Alumni Reception (by invitation only), *Seven Steakhouse Sushi + Rooftop; 700 Hennepin Avenue*

Sponsored by **3M** Science. Applied to Life.™  
**Insight Risk**  
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## Going GREEN!

To help reduce waste and AIHce EXP's footprint on the environment, AIHA, the MCC, and our suppliers have partnered on the following initiatives:

- Elimination of tote bags (and the papers stuffed in them) at registration.
- Digital Pathway Passport program. This year's Passport is part of the AIHce EXP Mobile App EXPerience.
- Session descriptions and exhibitor company descriptions are available online and in the app, versus being printed as part of the Final Program.
- Recycle stations for paper, cans and bottles, and other items are located throughout the MCC meeting space.
- All single-use food containers and utensils used at the MCC are compostable.
- Food is sourced locally, and excess food is donated to the local non-profit, People Serving People.





# Monday At-a-Glance

As of March 28, 2019

## Monday, May 20

6:30 a.m.–7:30 a.m.

- AIHA State of Affairs Volunteer Breakfast (by invitation only), *Hilton, Minneapolis Ballrooms ABC*
- First Timers' Meet and Greet **DU PONT**  
Sponsored by DuPont Personal Protection, *Hilton, Minneapolis Ballrooms EFG*

7:00 a.m.–5:30 p.m.

- Registration, *Lobby B*



8:00 AM – 9:30 AM

### Opening General Session and Coffee

Lessons In Leadership  
*Hall C*  
Carey Lohrenz

Sponsored by

**SGS** GALSON

8:00 a.m.–4:00 p.m.

- Speaker Ready *102A*

8:15 a.m.–12:15 p.m.

- TT-01: Andersen Corporation, *Second Avenue South entrance (outside Ballroom A)*

9:00 a.m.–4:00 p.m.

- CareerAdvantage Development Fair Open, *M101B*

9:00 a.m.–5:30 p.m.

Exhibit Hall Open, *Hall B*

- AIHA Resource Center, Booth 1735
- Exhibitor Learning Pavilion
- New Product Pavilion – NEW!
- Grain Bin and Trench Rescue Demonstrations

Grain Bin LIVE demos:

10:00 a.m.–10:45 a.m. and  
2:30 p.m.–3:15 p.m.

Trench LIVE demos:

11:00 a.m.–11:45 a.m. and  
3:30 p.m.–4:15 p.m.

- Expo Hall Networking Reception

10:00 a.m.–11:00 a.m.

- A1: Size-Selective Aerosol Sampling, *101J*
- A2: What Is Total Worker Exposure, and Why Is It Important to the Practice of Occupational and Industrial Hygiene?, *M100C*

- A3: 10 Proven Techniques and Practices to Turn Around a Problem Manufacturing Plant, *101G*
- A4: Visual Literacy — How Learning to See Benefits Occupational Safety, *L100B*
- A6: Assessing the Efficacy of Safety Protocols in the Lab, *L100I*
- A7: Maximizing the Efficacy of Exposure Assessment Methodologies, *M100H*
- A8: Asbestos and Nanoparticles — Discoveries, Experience, Lessons, *101A*
- A9: Fix Your IH and EHS Management, *L100F*
- A10: Hot Tub Confessionals, Part 1 — Perspectives on Implementing a Legionella Water Management Plan — The Filtration Expert, the Treatment Scientist, and the Industrial Hygienist, *200B*
- A11: Ask the Expert with Carey Lohrenz, *L100E*
- A12: Amplifii Your Influence, Part 1, *200E*
- A13: Enhancing Mentor-Mentee Synergy and Effective Use of Self-Awareness Strategies, *200I*

10:00 a.m.–11:00 a.m.

- Publications Committee, *Hilton, Directors Row 2*

10:00 a.m.–11:30 a.m.

- Biosafety and Environmental Microbiology Committee, *Hyatt, Greenway Ballroom A*
- Women in IH Open Forum, *Hyatt, Greenway Ballrooms CD*

11:15 a.m.–12:15 p.m.

- B1: Sampling & Analysis Studies in Unique Settings, *M100C*
- B2: The Home Health Care Worker — Emerging Occupational Safety and Health Challenges and Opportunities for Home Health Care Workers and Their Clients, *101A*
- B3: Global Occupational Safety and Health Education and Mainstreaming Collaborations, *101J*
- B4: Case Studies in Emergency Preparedness — Focus on Training, *101G*
- B5: Cloud Computing and the Internet of Things in Industrial Hygiene Field Analysis, *L100I*
- B6: A Critical Review of the Development, Use, Advantages, and Disadvantages of Various Banding Approaches in Industrial Hygiene, *M100H*

- B7: Yucca Mountain Project — Protecting the Health of Workers at the Nuclear Waste Site, *101D*
- B8: State of the Art in Biological Monitoring, *L100B*
- B9: Notable Confined Space — Inert Atmosphere, *L100E*
- B10: Hot Tub Confessionals, Part 2 — Perspectives on Preparing for, and Reacting to, a Legionnaires' Disease Outbreak — A Physician, an Attorney, and an Industrial Hygienist, *200B*
- B11: ABIH Forum, *L100F*
- B12: Amplifii Your Influence, Part 2, *200E*
- B13: The Ideal Internship Experience — Student and Mentor Perspectives, *200I*
- Poster Session 1 — Author Attend Time, *Lower Level (L) Lobby*

12:15 p.m.–4:45 p.m.

- TT-02: St. Croix Sensory, Inc. — Sensory Evaluation Center, *Second Avenue South entrance (outside Ballroom A)*

12:30 p.m.–1:30 p.m.

- Student Table Topics, *Hall B*

2:00 p.m.–3:00 p.m.

- C1: Scientific Research Studies in PPE — Performance Challenges, *101J*
- C2: The Changing Workforce, *M100H*
- C3: What You Write Matters! A Discussion of the Challenges and Legal Perspectives of Written Documentation in the IH Profession, *M100C*
- C4: War Stories — Lessons From the Corporate Suite, *L100I*
- C5: What Is Your Real-Time Detector Really Telling You? (What You Always Needed to Know but Were Afraid to Ask), *L100B*
- C6: Case Studies in Construction, *L100F*
- C7: AIHR Shark: The Future of Directional Air Sampling, *L100E*
- C8: Glyphosate and Cancer — Are We in the Midst of a Regulatory Crisis?, *200B*
- C9: Increasing Engagement & Empowerment of Workers Utilizing a Recurrent Risk Assessment Approach, *101D*
- C10: Demonstrating the Value of IEQ Investigations, *101A*
- C11: SDS and Label Authoring — Considerations for the Author, *200E*
- C12: Current NIOSH Risk Assessment Activities for Chemicals, *101G*
- C13: Who Moved My Sampling Pump?, *200I*
- OHTA Annual General Meeting (by invitation only), *Hilton, Marquette IX*

Events take place at the Minneapolis Convention Center, unless otherwise noted.

MONDAY

**2:00 p.m.–2:30 p.m.**

- Guideline Foundation Board Meeting, *Hilton, Directors Row 2*

**2:00 p.m.–3:30 p.m.**

- Academic Special Interest Group, *Hyatt, Greenway Ballroom A*

**2:00 p.m.–4:00 p.m.**

- Cannabis Health & Safety Task Force, *Hyatt, Greenway Ballroom J*

**2:30 p.m.–4:00 p.m.**

- AIHA Finance Committee, *Hilton, Marquette II*

**2:30 p.m.–4:30 p.m.**

- Confined Spaces Committee, *Hyatt, Minnehaha*
- Minority Special Interest Group, *Hyatt, Greenway Ballroom I*

**3:00 p.m.–4:00 p.m.**

- Joint Industrial Hygiene Ethics Education Committee (JIHEEC), *Hilton, Board Room 3*
- Virtual Section Meeting Meet & Greet, *Hyatt, Conference Room*

**3:15 p.m.–4:15 p.m.**

- D1: Effective Use of Aerosol Measurements, *L100E*
- D2: Case Studies in Health Care, *L100B*
- D3: Selling Safety — Perspective From a Former Front-Line Supervisor, *M100H*
- D4: Bridging Community Emergency Response Plans and Industry EHS Compliance, *101A*
- D5: Global Child Labor — A World of Issues and Dilemmas, *L100I*
- D6: Exoskeletons and Exosuits in the Workplace — Assessing and Applying Current Knowledge, *200B*
- D7: Applied Exposure Assessment and Control, *L100F*
- D8: Legionella and Secondary Treatment Systems — An Evaluation of Cumulative Risk From Exposure to Disinfectants and Byproducts, *200E*
- D9: Modern History of Indoor Air Quality (1973-Present), *101D*
- D10: Derek E. Dunn Lecture Series: Hearing Loss Prevention — Barriers and Solutions to Success, *101J*
- D11: Upton Sinclair Lecture: Tragic Harvest — The Price of Neglecting Farm Safety in the Midwest, *M100C*
- D13: Student Poster Session Author Attend Time, *200 Level Lobby*

**3:30 p.m.–4:30 p.m.**

- Computer Applications Committee, *Hilton, Marquette VI*

- Hazard Prevention and Engineering Controls Committee, *Hyatt, Skyway AB*
- Mentoring and Professional Development Committee, *Hyatt, Greenway Ballroom C*

**4:00 p.m.–5:30 p.m.**

- Continuing Education Committee (CEC) Meeting, *Hilton, Directors Row 2*

**4:30 p.m.–5:30 p.m.**

- Expo Hall Networking Reception, *Hall B*

**5:30 p.m.–6:30 p.m.**

- Women in IH Committee, *Hyatt, Greenway Ballroom D*

**5:30 p.m.–7:30 p.m.**

- Friends of the Deep South ERC Reception, *The Local, 931 Nicollet Mall*

**5:45 p.m.–6:45 p.m.**

- Toxicology Committee, *Hilton, Board Room 3*

**5:45 p.m.–7:15 p.m.**

- Ergonomics Committee, *Hilton, Directors Row 1*

**5:45 p.m.–7:45 p.m.**

- Risk Committee, *Hilton, Marquette IX*
- Social Concerns Committee, *Hilton, Red Wing Room*

**6:00 p.m.–7:00 p.m.**

- Academic Track Reception (by invitation only), *Hilton, Minneapolis Ballroom A*
- Ionizing Radiation Committee, *Hilton, Marquette VII*

**6:00 p.m.–7:30 p.m.**

- Safety Committee, *Hilton, Marquette VIII*

**6:00 p.m.–8:00 p.m.**

- Aerosol Technology Committee, *Hilton, Board Room 1*
- Standards Advisory Panel, *Hilton, Directors Row 3*

**6:00 p.m.–9:30 p.m.**

- U.S. Department of Energy (DOE) and DOE Contractor Industrial Hygiene Meeting, *Hilton, Minneapolis Ballroom C*

**6:30 p.m.–7:30 p.m.**

- AIHA International Reception, *Hilton, Minneapolis Ballroom D*

**Bring Your Own (BYO) Education**

*Hilton, Minneapolis Ballroom E*

Grab a bite to eat and then join us for these education opportunities

**6:00 p.m.–7:00 p.m.**

- The Thrill and Challenge of Managing (Potentially Big) IH Data

**7:00 p.m.–8:00 p.m.**

- Strategies for Mobilizing and Using Archived Occupational Exposure Data

SAVE the DATE

**AIHce**  
**EXP2020**  
Advancing Worker Health & Safety

**JUNE 1-3**  
**ATLANTA, GA**

# Monday, May 20 Education Sessions

MONDAY



## Opening General Session

### Lessons in Leadership

8:00 a.m.–9:30 a.m., Hall C



#### Presenter:

Carey Lorenz, *First Female U.S. Navy F-14 Tomcat Fighter Pilot, Team-Building/Leadership/Strategy Expert & Author*

Carey Lohrenz knows what it takes to win in one of the highest pressures, extreme environments imaginable: in the cockpit at Mach 2. As the first female F-14 Tomcat Fighter Pilot in the U.S. Navy, having flown missions worldwide as a combat-mission-ready United States Navy pilot, Lohrenz is used to working in fast moving, dynamic environments, where inconsistent execution can generate catastrophic results. Lohrenz's experience in the all-male environment of fighter aviation and her ability to pass on the lessons learned in her career allow her to deliver insight and guidance from a credible platform on leadership, high-performing teams, and peak performance. Lohrenz will kick off AIHce EXP 2019 with what promises to be an unforgettable presentation!

*Session and Coffee sponsored by*



## Morning Pop-Ups

Time	Mezzanine Level (M) Lobby	200 Level Lobby
9:30 a.m.–9:55 a.m.	<b>Office Chair Yoga Class, Session I</b> Lori Kearney	<b>Teen Workplace Health &amp; Safety Education: Isn't It Every IH's Responsibility?</b> Jennifer MacLachlan, PID Analyzers.
10:00 a.m.–10:25 a.m.	<b>The Power Of a Positive Mindset</b> Lori Kearney	<b>New from AIHA! Industrial Hygiene Reference &amp; Study Guide, 4th edition</b> Carter Ficklen III, CIH, CSP, Mission Technologies, Inc.
10:30 a.m.–10:55 a.m.	<b>Kick Your Sugar Habit + Increase Energy</b> Lori Kearney	<b>SNEAK PREVIEW: 2019 IH Salary and Compensation Survey Results</b> Adam Seery, CAE, AIHA

### 10:00 a.m.–11:00 a.m.

#### A1: Size-Selective Aerosol Sampling 101J

**Moderator:** Eduardo Reyes, University of Texas Houston Health Science Center.

##### 10:00 a.m.–10:20 a.m.

#### Development of a Respirable Virtual Cyclone Sampler

Chih-Chieh Chen, National Taiwan University, Taiwan.

##### 10:20 a.m.–10:40 a.m.

#### Performance Comparison of Parallel Particle Impactors (PPI) and Aluminum Cyclones for Respirable Crystalline Silica Sampling

Vincent Daliessio Jr., EMSL Analytical Inc.

##### 10:40 a.m.–11:00 a.m.

#### Proposed Conventions for PM Size-selective Sampling

Shin-Yu Weng, National Taiwan University, Taiwan.

#### A2: What Is Total Worker Exposure, and Why Is It Important to the Practice of Occupational and Industrial Hygiene?

M100C

**Moderator:** Gurumurthy Ramachandran, Johns Hopkins University. **Presenters:** Paul Schulte, National Institute for Occupational Safety and Health; Rebecca Burton, 3M; Jennifer Sahmel, Insight Risk LLC.

#### A3: IO Proven Techniques and Practices to Turn Around a Problem Manufacturing Plant

101G

**Moderator/Presenter:** Jean Ndana, Michigan Seamless Tube (MST).

#### A4: Visual Literacy – How Learning to See Benefits Occupational Safety

L100B

**Moderator:** Katherine Smith, Campbell Institute - National Safety Council. **Presenters:** Joy Inouye, John Dony, Campbell Institute - National Safety Council.

#### A6: Assessing the Efficacy of Safety Protocols in the Lab

L100I

**Moderator:** Lydia Renton, BluMetric Environmental Inc., Canada.

##### 10:00 a.m.–10:20 a.m.

#### Hazardous Drug Residues in Forensic Laboratories

Robert Kirkby, Michigan State Police.

##### 10:20 a.m.–10:40 a.m.

#### Disposable Glove Use in Forensic Science Laboratories

Robert Kirkby, Michigan State Police.

##### 10:40 a.m.–11:00 a.m.

#### Using Safety Climate Surveys to Measure the Impact of Faculty Engagement and Leadership on Laboratory Safety

Craig Merlic, UCLA.

Full session descriptions may be found in the mobile app. Events take place at the Minneapolis Convention Center unless otherwise noted.





## Exhibitor Product Demos and Presentations

9:35 a.m. – 2:25 p.m., Learning Pavilion, Hall B

9:35 a.m.–10:00 a.m.

### Integrating Cloud-Based Monitoring Into Your Portable Gas Detection Program



MSA | Safety io

MSA recently launched Safety io, a software service company with cloud-based tools that enable you to focus on safety, not detectors. Now is a great time to learn how Safety io's industrial services (Grid Fleet Manager & Live Monitor) can complement your safety program by assisting with compliance and changing worker behavior.



10:10 a.m.–10:35 a.m.

### Meet the Future of Area Monitoring

MSA



A world-class industrial safety product shouldn't be bulky and hard to use. That's why MSA is redefining area monitoring with a solution that just works and performance you can trust.

10:45 a.m.–11:10 a.m.

### Harnessing the Internet of Things to Enhance Worker Protection

3M



3M Connected Safety is platform that connects people, information, and systems to help improve productivity, increase worker situational awareness, and run an efficient health and safety program. The platform is an expanding eco-system of software programs, analytics, and digitally enabled personal protective equipment (PPE). The 3M Connected Safety, Inspection, and Asset Management system is a cloud-based web and mobile application for tracking workers, areas, PPE, and other safety equipment using RFID tags, barcodes, or other unique identifiers.

12:15 p.m.–12:40 p.m.

### Solving Air Quality Issues in the Workplace

Gasmet Technologies



The Model DX4040 portable FTIR gas analyzer can identify "unknown" gases within minutes of arriving at site by searching the NIST/EPA© reference library of over 5,000 gases. Measuring 25 gases simultaneously at sub-ppm levels, the DX4040 is also a cost-effective solution for performing workplace exposure assessments.

12:50 p.m.–1:15 p.m.

### 3M: FIRE! Oh Wait, It's Just IDLH

3M



3M™ Scott™ (known for the NFPA® Air-Pak™) offers industrial versions for use in IDLH environments. These systems contain features established in the fire service but tailored to industrial IDLH situations. This talk describes the Air-Pak™ 75i SCBA and the Ska-Pak™ AT Combination ESCBA/SAR and industries where they provide worker protection.

1:25 p.m.–1:50 p.m.

### Improve Your Diagnostics With Mycometer's New Relative Mold Content (RMC)

Mycometer, Inc.



Mycometer presents a new concept allowing rapid, reproducible, and representative air sampling results for mold. The concept consists of 1) standardized protocol for activated sampling and 2) double parallel sampling with analysis of both total mold and total allergens. This allows determination of the Relative Mold Content (RMC), which is a strong predictor of mold problems.

2:00 p.m.–2:25 p.m.

### The Ergonomics of Exoskeletons in the Workplace

Chubb Global Risk Advisors



Exoskeletons are an emerging technology in the workplace, which are designed to reduce torque load on joints (e.g., upper arms, shoulders, low back, knees), enhance strength capacities, and mitigate risk from the strain that can increase the probability of musculoskeletal disorders (MSDs). This presentation will cover the ergonomic pros and cons associated with these wearable powered devices.

# Education Sessions Monday, May 20

MONDAY

## A7: Maximizing the Efficacy of Exposure Assessment Methodologies

M100H

**Moderator:** Justin Hoover, Steel Dynamics, Inc.

10:00 a.m.–10:20 a.m.

### How Do We Get More Effective Exposure Control From Our Exposure Assessments?

Tom Morris, Morris Innovative IH & Safety Solutions, LLC.

10:20 a.m.–10:40 a.m.

### Protective Action Level Strategies When Exposure Data Are Limited

William Cyrs, Cardno ChemRisk.

10:40 a.m.–11:00 a.m.

### Nothing Detected – Nothing Gained?

Brent Altemose, SafeBridge Consultants.

## A8: Asbestos and Nanoparticles – Discoveries, Experience, Lessons

101A

**Moderator:** James Rasmuson, Chemistry & Industrial Hygiene, Inc. **Presenters:** Anna Shvedova, National Institute for Occupational Safety and Health; Andrey Korchevskiy, Chemistry & Industrial Hygiene, Inc.

## A9: Fix Your IH and EHS Management

L100F

**Moderator:** Elizabeth Amdahl, VelocityEHS/Humantech. **Presenter:** Greg Duncan, VelocityEHS.

## A10: Hot Tub Confessionals, Part I – Perspectives on Implementing a Legionella Water Management Plan – The Filtration Expert, the Treatment Scientist, and the Industrial Hygienist

200B

**Moderator:** Ben Kollmeyer, Forensic Analytical Consulting Services. **Presenters:** Megan Canright, Forensic Analytical Consulting Services; Michael Castro, Pall Medical; Alberto Comazzi, Sanipur US LLC.

## All: Ask the Expert with Carey Lohrenz

L100E

**Moderator:** Rob Rottersman, Ramboll. **Presenter:** Carey Lorenz, careylorenz.com.

## A12: Amplify Your Influence, Part I

200E

**Presenter:** René Rodriguez, Volentum & BetterLoanOfficers.com.

## A13: Enhancing Mentor-Mentee Synergy and Effective Use of Self-Awareness Strategies

200I

**Moderator:** Andrew Burgie, New York University College of Global Public Health.

**Presenter:** Nancy Lawrence, Embry-Riddle Aeronautical University; Tim Paz, Architect of the Capitol.

11:15 a.m.–12:15 p.m.

## B1: Sampling & Analysis Studies in Unique Settings

M100C

**Moderator:** Donald Elswick, University of Findlay.

11:15 a.m.–11:35 a.m.

### Use of Coburn-Forster-Kane Equation to Predict Carboxyhemoglobin Levels as a Redundant Control to Protect Soldier Health During Multi-day Range Test Events

Alice Weber, Army Public Health Center.

11:35 a.m.–11:55 a.m.

### Characterizing Workplace Hazards in Nail Salons in Toronto, Canada

Sheila Kalenge, Occupational Cancer Research Centre, Canada.

11:55 a.m.–12:15 p.m.

### Scope, Limits and Innovations of Different Devices for the Sampling of Isocyanates in Air

Tyler Erickson, Occupational Safety and Health Administration or M. Sébastien Gagné, IRSST Montréal, Canada.

## B2: The Home Health Care Worker – Emerging Occupational Safety and Health Challenges and Opportunities for Home Health Care Workers and Their Clients

101A

**Moderator:** Vanda Puhlovich, Kaiser Permanente. **Presenters:** James McGlothlin, McGlothlin Ergonomics, LLC; Colin Brigham, 1Source Safety and Health, Inc.; Shelley Carry, Kaiser Permanente.

## B3: Global Occupational Safety and Health Education and Mainstreaming Collaborations

101J

**Moderator:** Steven Thygerson, Brigham Young University. **Presenters:** Thomas Fuller, Illinois State University; Lester Claravall, Oklahoma Department of Labor.

## B4: Case Studies in Emergency Preparedness – Focus on Training

101G

**Moderator:** Laura Weems, U.S. Army Corps of Engineers.

11:15 a.m.–11:35 a.m.

### Current Opioids Responder Working Group Projects Relevant to Responder Safety

Peter Harnett, Leidos, Inc.

11:35 a.m.–11:55 a.m.

### NIEHS Prevention of Occupational Exposure to Opioids Awareness Level Training

Jonathan Rosen, National Clearinghouse for Worker Safety & Health Training.

11:55 a.m.–12:15 p.m.

### Response Lifelines – An Approach to Understanding Interdependencies in a Large-Scale Disaster Incident

Joselito Ignacio, US Public Health Service.

## B5: Cloud Computing and the Internet of Things in Industrial Hygiene Field Analysis

L100I

**Moderator:** Ron McMahan, SGS. **Presenters:** Tim Quinn; Ron McMahan, SGS Galson.

## B6: A Critical Review of the Development, Use, Advantages, and Disadvantages of Various Banding Approaches in Industrial Hygiene

M100H

**Moderator:** Louis Branca, Arconic- RTI Remmele Engineering. **Presenters:** David Downs, EHS Management Partners, LLC; Ron Pearson, Environmental Health & Safety, Inc.

## B7: Yucca Mountain Project – Protecting the Health of Workers at the Nuclear Waste Site

101D

**Moderator:** Andrey Korchevskiy, Chemistry & Industrial Hygiene, Inc. **Presenters:** Jacob Paz, Dr. Jacob Paz and Marty Paz Environment, Inc.; William Culbreth, University of Nevada Las Vegas.

# Monday, May 20 Education Sessions

## B8: State of the Art in Biological Monitoring

L100B

**Moderator:** Shane Que Hee, University of California, Los Angeles. **Presenters:** Shane Que Hee, University of California, Los Angeles; Lee Blum, NMS Labs Inc.

## B9: Notable Confined Space – Inert Atmosphere

L100E

**Moderator:** Bonnie Lockhart, Ameren. **Presenters:** Jay Gieseke, Marathon Petroleum; Robert Henderson, GfG Instrumentation Inc.

## BIO: Hot Tub Confessionals, Part 2 – Perspectives on Preparing for, and Reacting to, a Legionnaires' Disease Outbreak – A Physician, an Attorney, and an Industrial Hygienist

200B

**Moderator:** Megan Canright, Forensic Analytical Consulting Services. **Presenters:** J. David Krause, Forensic Analytical Consulting Services; Hung Cheung, Cogency Medical; Susan Smith, Beveridge & Diamond, PC.

## BII: ABIH Forum

L100F

**Presenters:** ABIH Board Chairs, CEO, and Lifetime Achievement Award recipient.

## BI2: Amplify Your Influence, Part 2

200E

**Presenter:** René Rodriguez, Volentum & BetterLoanOfficers.com

## BI3: The Ideal Internship Experience – Student and Mentor Perspectives

200I

**Moderator:** Darlene Powell, Department of Veterans Affairs. **Presenters:** Darlene Powell, Department of Veterans Affairs; Zachariah Brandes-Powell, University of South Florida.

## Poster Session I – Author Attend Time

Lower Level (L) Lobby

**Topics:** Construction, Emergency Preparedness & Response, Engineering Controls and Ventilation, Ergonomics, Exposure Assessment Strategies, Exposure Banding/Occupational Exposure Limits, IH Profession, Indoor Environmental Quality/Indoor Air Quality, Nanotechnology, Risk Assessment and Management, Sampling and Analysis

See page 46 for posters on this topic. \*For a full list of co-authors and detailed abstracts, see AIHce EXP 2019 website.

## Expo Hall Activities

Hall B

12:00 p.m.–2:00 p.m.

**The Energizer Break** – Healthy snacks will help boost your energy for more education, networking, and the evening's events!

12:30 p.m.–1:30 p.m.

**Students Table Topics** – Specially designed to address student needs, grab lunch in the Expo and join us to discuss: Studying and Preparing for the CIH Exam, Applying for the CIH Exam, Safety Matters, Networking for the Industrial Hygienist, Getting Research Published in JOEH, and Communication Etiquette in the Digital

## Afternoon Pop-Ups

Time	Mezzanine Level (M) Lobby	200 Level Lobby
2:00 p.m.–2:25 p.m.	<b>Me Time: Self-Care Secrets to Cope with Stress and the conference!</b> Lori Kearney	<b>How to Reach GenZ: Talking IH to Kids</b> Ben H. Rome, AIHA; Subena Colligan, Gulfstream Aerospace
2:30 p.m.–2:55 p.m.	<b>Superfoods to Supercharge your Brain</b> Lori Kearney	<b>Wildfire Cleanup: Hazard Identification and Illness Prevention Outreach Video</b> Michelle Rosales, MPH, CIH Forensic Analytical Consulting; Dennis French, CIEC, CRMI, ERM, DF Technical & Consulting Services Ltd., Canada
3:00 p.m.–3:25 p.m.	<b>Healthy Eating: Eating Out with Tips For Healthy Decisions During The Conference</b> Lori Kearney	<b>W2OI Basic Principles of Occupational Hygiene Online Course</b> Nancy M. McClellan, CIH, Occupational Health Management, PLLC
3:30 p.m.–3:55 p.m.	<b>Stretch and Restore for a well-balanced conference</b> (Weather permitting outside class will be located on the MCC Plaza) Lori Kearney	<b>Content Portfolio Advisory Group (CPAG) Update</b> Elizabeth L. Pullen, CIH, CPAG Chair; Dina M. Siegel, CIH, CPAG Board Liaison

MONDAY



# Education Sessions Monday, May 20

MONDAY

2:00 p.m.–3:00 p.m.

## CI: Scientific Research Studies in PPE – Performance Challenges 101J

**Moderator:** Alan Brown, Total Petrochemicals USA, Inc.

2:00 p.m.–2:30 p.m.

### Challenges with Existing ASTM Standard in Permeation Studies on Personal Protective Equipment

Sean Banaee, Old Dominion University.

2:30 p.m.–3:00 p.m.

### Evaluation of CBRN Canister Protection Levels Compared to SCBA in Overhaul Environments

Shawn Staack, University of Arizona.

## C2: The Changing Workforce

M100H

**Moderator:** David Hicks, Architect of the Capitol.

2:00 p.m.–2:20 p.m.

### A Closer Look at OSHA's Medical Screening and Surveillance Requirements

Rod Harvey, Carnow, Conibear & Associates, Ltd.

2:20 p.m.–2:40 p.m.

### Workplace Mental Health Hazards – The Role of the Occupational Hygienist

Diane Radnoff, Alberta Labour, Canada.

2:40 p.m.–3:00 p.m.

### Challenges in Doing Industrial Hygiene Work in South East Asia

Saurabh Saini, CIH, Golder Associates (Singapore) Pte Ltd., Singapore.

## C3: What You Write Matters! A Discussion of the Challenges and Legal Perspectives of Written Documentation in the IH Profession

M100C

**Moderator:** Pamela Dopart, Exponent. **Presenters:** Martin Barrie, Burns Charest; Kate Serrano, Los Alamos National Laboratory.

## C4: War Stories – Lessons From the Corporate Suite

L100I

**Moderator:** Celia Booth, McCaffery & Associates, Inc. **Presenters:** Celia Booth, McCaffery & Associates, Inc.; Aileen Yankowski, Safety Management Solutions/The Brand of U.

## C5: What Is Your Real-Time Detector Really Telling You? (What You Always Needed to Know but Were Afraid to Ask)

L100B

**Moderator:** Philip Smith, United States Department of Labor, Occupational Safety and Health Administration. **Presenters:** Philip Smith, United States Department of Labor, Occupational Safety and Health Administration; Steven Jahn, Savannah River Nuclear Solutions LLC.

## C6: Case Studies in Construction

L100F

**Moderator:** Alicia Frazier, Marathon Petroleum Company.

2:00 p.m.–2:20 p.m.

### Exposures to Street Maintenance Workers During Asphalt Paving Operations

Kyle Vogel, City and County of Denver

2:20 p.m.–2:40 p.m.

### Misplaced Polyurethane Spray Foam Troubleshooting and Remediation

Paul Haas, Building & Forensic Science.

2:40 p.m.–3:00 p.m.

### Clinton Creek Asbestos Mine Worker Exposure Assessment and Safety Program

Patrick Campbell, Wood Environment & Infrastructure Solutions, Canada.

## C7: AIHR Shark: The Future of Directional Air Sampling

L100E

**Moderator:** Donald Elswick, University of Findlay. **Presenter:** Michael Jordan, SGS Galson Laboratories.

## C8: Glyphosate and Cancer – Are We in the Midst of a Regulatory Crisis?

200B

**Moderator:** Kimberly Carlson, BSI EHS Services and Solutions. **Presenter:** Andrey Korchevskiy, Chemistry & Industrial Hygiene, Inc.

## C9: Increasing Engagement & Empowerment of Workers Utilizing a Recurrent Risk Assessment Approach

101D

**Moderator:** Kent Candee, Los Alamos National Laboratory. **Presenter:** Robert Shenering, Talos Energy.

## C10: Case Studies in Construction 101A

**Moderator:** Cheri Marcham, Embry-Riddle Aeronautical University.

2:00 p.m.–2:20 p.m.

### The Value of Proactively Maintaining Acceptable Indoor Environmental Quality

Vickie Hawkins, US Army Public Health Center.

2:20 p.m.–2:40 p.m.

### Chamber of IH – The Trade Secret Exemption in IEQ Investigations

Josef Britt, Forensic Analytical Consulting Services.

2:40 p.m.–3:00 p.m.

### A Ten-year Longitudinal IAQ Study of a Multi-story Commercial Building

Andrew Havics, pH2, LLC.

## C11: SDS and Label Authoring – Considerations for the Author

200E

**Moderator:** Denese Deeds, IHSC, LLC.

**Presenters:** Chandra Gioiello; Denese Deeds, IHSC, LLC.

## C12: Current NIOSH Risk Assessment Activities for Chemicals

101G

**Moderator/Presenter:** Paul Schulte, National Institute for Occupational Safety and Health.

## C13: Who Moved My Sampling Pump?

200I

**Moderator:** Michelle Coutu Fluck, Triumvirate Environmental. **Presenters:** Michael Larrañaga, Insight Risk; David Roskelley, R & R Environmental, Inc.

3:15 p.m.–4:15 p.m.

## DI: Effective Use of Aerosol Measurements

L100E

**Moderator:** Margaret Sietsema, University of Illinois at Chicago.

3:15 p.m.–3:35 p.m.

### Effect of Strap Tension and Comfort Nose Clip on Filtering Facepiece Respirator Fit

Ching-an Lu, National Taiwan University Taipei, Taiwan.

# Monday, May 20 Education Sessions

MONDAY

**3:35 p.m.–3:55p.m.**

## **Correlation between True Fit Factor and the Portacount Measurements**

Yu Lin Tseng, National Taiwan University  
New Taipei, Taiwan.

**3:55 p.m.–4:15 p.m.**

## **Performance Evaluation of Indoor Air Cleaners**

Chun-Ting Li, National Taiwan University,  
Taiwan.

## **D2: Case Studies in Health Care**

*L100B*

**Moderator:** Matthew Parker, ATC Group Services.

**3:15 p.m.–3:35 p.m.**

## **Assessment of Risk for Safe Handling of Hazardous Drugs**

Emma Hooks, Barnes-Jewish Hospital.

**3:55 p.m.–3:55p.m.**

## **I've Been Exposed! The Value of Risk Communication in Exposure Assessments – Nitrous Oxide in Labor and Delivery**

Allison Papenfuss, Mayo Clinic Health System.

**3:55 p.m.–4:15 p.m.**

## **Comparison Between the Industrial Hygiene Exposure Monitoring Using an Actual Active Pharmaceutical Ingredient (API) and a Surrogate for Most Common Pharmaceutical Unit Operations**

Gopal Chakravarthy, ISS (India) Consultancy Services Pvt. Ltd., India.

## **D3: Selling Safety – Perspective from a Former Front-Line Supervisor**

*M100H*

**Moderator/Presenter:** Patrick Karol, Karol Safety Consulting, LLC.

## **D4: Bridging Community Emergency Response Plans and Industry EHS Compliance**

*101A*

**Moderator:** Edward Primeau, United States Coast Guard. **Presenter:** Robert Campbell, Alliance Solutions Group, Inc.

## **D5: Global Child Labor – A World of Issues and Dilemmas**

*L100I*

**Moderator:** Marianne Levitsky, Workplace Health Without Borders/ECOH, Canada.

**Presenters:** Thomas Fuller, Illinois State University; Lester Claravall, Oklahoma Department of Labor.

## **D6: Exoskeletons and Exosuits in the Workplace – Assessing and Applying Current Knowledge**

*200B*

**Moderator:** Ellen Gallo, The Hartford. **Presenters:** Cathy White, The Dow Chemical Company; Vincent Cotto, The Hartford Financial Services Group, Inc.; Divya Srinivasan, Virginia Polytechnic Institute and State University.

## **D7: Applied Exposure Assessment and Control**

*L100F*

**Moderator:** Emily Goswami, Exponent.

**3:15 p.m.–3:35 p.m.**

## **Use of a Source Identification Strategy for Evaluation and Control of Occupational Exposure to Dust and Silica**

Chris Heady, The Scotts Miracle-Gro Company.

**3:35 p.m.–3:55p.m.**

## **Controlling Mercury Exposures During Maintenance Activities in an Oil and Gas Refinery**

Kevin Abernethy, Chevron Houston.

**3:55 p.m.–4:15 p.m.**

## **Evaluation and Control of Beryllium Exposure in Shipyards**

Daniel Chute, BSI EHS Services and Solutions.

## **D8: Legionella and Secondary Treatment Systems – An Evaluation of Cumulative Risk from Exposure to Disinfectants and Byproducts**

*200E*

**Moderator:** Megan Canright, Forensic Analytical Consulting Services. **Presenter:** Alex LeBeau, Forensic Analytical Consulting Services.

## **D9: Modern History of Indoor Air Quality (1973-Present)**

*101D*

**Moderator/Presenter:** Donald Weekes, InAIR Environmental, Ltd., Canada.

## **D10: Derek E. Dunn Lecture Series: Hearing Loss Prevention – Barriers and Solutions to Success**

*101J*

**Moderator:** Jeremy Slagley, United States Air Force. **Presenter:** Dennis Driscoll, Associates in Acoustics, Inc.

## **D11: Upton Sinclair Lecture: Tragic Harvest – The Price of Neglecting Farm Safety in the Midwest**

*M100C*

**Moderator:** Scott Schneider, Laborers' Health and Safety Fund. **Presenter:** Jeffrey Meitrodt, Star Tribune.

## **D13: Student Poster Session – Author Attend Time**

*200 Level Lobby*

**Topics:** Academic Track, Exposure Assessment Strategies, Sampling and Analysis

For a full list of co-authors and detailed abstracts, see AIHce EXP 2019 website.

## **Expo Hall Activities**

*Hall B*

**4:30 p.m.–5:30 p.m.**

## **Expo Hall Networking Reception**

This annual networking tradition gets the night started with some tasty nibbles and a free drink (ticket included in your badge materials).

**6:00 p.m.–7:00 p.m.**

## **Bring Your Own (BYO) Education**

*Hilton, Minneapolis Ballroom E*

## **The Thrill and Challenge of Managing (Potentially Big) IH Data**

**Moderator:** Michael Murphy, 3M. **Presenters:** Stephanie Battista, 3M; Jennifer Shin, Eric Ward, ExxonMobil Biomedical Sciences, Inc.

**7:00 p.m.–8:00 p.m.**

## **Bring Your Own (BYO) Education**

*Hilton, Minneapolis Ballroom E*

## **Strategies for Mobilizing and Using Archived Occupational Exposure Data**

**Moderator:** Hugh Davies, University of British Columbia, Canada. **Presenters:** Melanie Gorman Ng, British Columbia Construction Safety Alliance, Canada; Jérôme Lavoué, University of Montreal, Canada; Cheryl Peters, Alberta Health Services, Canada.

# Tuesday At-a-Glance

As of March 28, 2019

**Tuesday, May 21**

**6:30 a.m.–8:00 a.m.**

- AIHF 33rd Annual Fun Run



**6:30 a.m.–7:45 a.m.**

- Rise and Shine Breakfast Series (by invitation only)

**Draeger:** OSHA 1910.146: Keeping CSE Safe, [M100E](#)

**Industrial Scientific:** How New Technology Can Lead to Improved Safety & Productivity, [M100F](#)

**Mesa Labs:** Flow Calibration Pitfalls: How to Make Sure Your Data Is Defensible, [200F](#)



**7:00 a.m.–5:00 p.m.**

- Registration, [Lobby B](#)

**7:00 a.m.–5:30 p.m.**

- Speaker Ready Room, [102A](#)

**7:15 a.m.–12:00 p.m.**

- TT-04: 3M Innovation Center, Customer Abrasives Methods Center, and Personal Safety Division, [Second Avenue South entrance \(outside Ballroom A\)](#)

**8:00 a.m.–9:00 a.m.**

- E1: The New OSHA Silica Rule — What We Have Learned Thus Far, [M100C](#)
- E2: Guidance for the Design of Sampling Strategies for Microbial Surface Contamination and Bioaerosols in a Health Care Setting, [101J](#)
- E3: Safety Architecture — Cognitive Science for the Industrial Hygienist, [L100F](#)
- E4: A Systems Approach to Health, Well-Being, and Fatigue, [L100B](#)
- E5: Effective Use of Big Data, [101G](#)
- E6: Industrial Hygienists' Introduction to Radon, [101D](#)
- E7: Risk Assessment and Management Application in a Variety of Settings, [L100I](#)
- E8: Interesting OSHA Health Cases — Facts From the Field, Part 1, [M100H](#)
- E9: Remediating Mold Growth During Construction, [200B](#)
- E10: Fellows Debate, [101A](#)
- E11: William P. Yant Award Lecture, [L100E](#)
- E13: Best in Show Student Poster Presentations, [200E](#)

**9:00 a.m.–1:00 p.m.**

- TT-05: TSI Incorporated, [Second Avenue South entrance \(outside Ballroom A\)](#)

**9:00 a.m.–3:30 p.m.**

**Exhibit Hall Open, Hall B**

- Grain Bin and Trench Rescue Demonstrations

Grain Bin LIVE demos:

9:30 a.m.–10:15 a.m. and

1:00 p.m.–1:45 p.m.

Trench LIVE demos:

10:30 a.m.–11:15 a.m. and

2:00 p.m.–2:45 p.m.

**9:00 a.m.–4:00 p.m.**

- *CareerAdvantage* Development Fair Open, [M101B](#)

**10:00 a.m.–11:00 a.m.**

- F1: Gas and Vapor Sampling and Analysis, [L100B](#)
- F2: Biosafety Issues in IH, [L100E](#)
- F3: Emerging Technologies — When There Are No Rules, It's All in the Science and Engineering, [L100I](#)
- F4: What Do You Call the Boss of a CIH? Perspective on Leadership in the Industrial Hygiene Field, [101A](#)
- F5: Current Research Projects in Engineering Controls and Ventilation, [L100F](#)
- F6: Continued Increase in Prevalence of Coal Workers' Pneumoconiosis (CWP) in the United States and Around the World, [200E](#)
- F7: Innovative Calculations for Measuring Exposures With Greater Accuracy, [M100C](#)
- F8: Interesting OSHA Health Cases — Facts From the Field, Part 2, [M100H](#)
- F9: Fentanyl and Analogues — Occupational Exposure Hazards and Protection, [101J](#)
- F10: Rethinking Hearing Conservation Program Benchmarks, [101G](#)
- F11: Jeffrey S. Lee Lecture, [101D](#)
- F12: Win the Day: Using Emotional Intelligence to Be Intentional and Effective and Succeed in Leadership, [200B](#)

**10:00 a.m.–12:00 p.m.**

- Indoor Environmental Quality Committee Meeting, *Hyatt, Greenway Ballroom D*
- Making a Difference in Global EHS, *Hilton, Rochester*

**10:30 a.m.–11:30 a.m.**

- Student Local Sections Council Business Meeting, *Hyatt, Greenway Ballroom J*

**11:00 a.m.–12:00 p.m.**

- Teen Workplace Safety Task Force, *Hilton, Marquette II*

**11:15 a.m.–12:15 p.m.**

- G1: Aerosol Sensors and Sampling, [101J](#)

- G2: The Wide World of Lead Exposure — A Look Beyond the Workplace, [L100E](#)
- G3: Antimicrobial Resistance and the Industrial/Occupational Hygiene Professional, [L100I](#)
- G4: Doing More With Less — Building Competency to Develop Your On-Site EHS Teams, [L100B](#)
- G5: Case Studies in Opioid Decontamination and Cleanup, [L100F](#)
- G6: Computer Workstation Ergonomics — Guiding IHs out of Awkward Positions, [101A](#)
- G7: Using the [www.expostats.ca](#) Bayesian Calculation Platform to Interpret Industrial Hygiene Exposure Levels, [101D](#)
- G8: Enterprise Risk Management — An Intersection Between Risk Management Paradigms for Industrial Hygienists, [M100H](#)
- G9: Notable Confined Spaces — Unexpected Issues, [101G](#)
- G10: The Future Is Now: Occupational Robotics and Its Impact on Workers and the Field of Industrial Hygiene, [M100C](#)
- G13: Perspectives on Preparation for the CIH Exam — Version 14.0, [200I](#)
- Poster Session 2 — Author Attend Time, [Lower Level \(L\) Lobby](#)
- 11:30 a.m.–12:30 p.m.**
  - American Industrial Hygiene Foundation (AIHF) Board of Trustees Meeting, *Hilton, Directors Row 2*
- 12:30 p.m.–1:30 p.m.**
  - AIHA-ACGIH Interaction Committee (by invitation only), *Hilton, Directors Row 1*
  - NIOSH Table Talks, *Hall B*
- 12:30 p.m.–3:30 p.m.**
  - TT-07: Consolidated Precision Products, [Second Avenue South entrance \(outside Ballroom A\)](#)
- 1:00 p.m.–3:30 p.m.**
  - TT-06: City of Minneapolis, Department of Public Works, Division of Water Treatment and Distribution Services, [Second Avenue South entrance \(outside Ballroom A\)](#)
- 2:00 p.m.–3:00 p.m.**
  - H1: Developments in Sampling and Analysis Methodology, [M100C](#)
  - H2: Perspectives and Insights From the Surveillance for Anti-Cancer Drugs Exposure (SURFACE) Study, [101G](#)
  - H3: Total Worker Health — Demonstrating the Value of the IH Profession and Getting a Seat at the Table, [L100I](#)
  - H4: Achieving Zero Injuries, [L100B](#)
  - H5: Data, Data Everywhere, but Not a Drop to Drink: How to Prepare and Use Health and Safety Data for Actionable Insights, [M100H](#)



Events take place at the Minneapolis Convention Center, unless otherwise noted.

- H6: Novel Experimental Approaches to Study Emission and Exposure of Welding Fume, [101J](#)
- H7: Exposure Assessment in Mining, [101A](#)
- H8: Best Practices in Setting Up a Biological Monitoring Program — Advantages and Pitfalls, [L100E](#)
- H9: Healthy School Specialist and Building Assessment Training, [101D](#)
- H10: Emerging Issues in Beryllium Regulation and Related Topics, [L100F](#)
- H11: Movie Matinee: Dirty Laundry, [200B](#)
- H13: If I Knew Then What I Know Now — Lessons for Your Career Path, [200I](#)
- H14: Case Studies in Ethics: Making the Right Choices, Part 1, [200F](#)

**2:00 p.m.–4:00 p.m.**

- Local Sections Council Business Meeting, *Hyatt, Greenway Ballrooms BC*
- Protective Clothing and Equipment Committee, *Hyatt, Greenway Ballroom A*

**2:30 p.m.–5:00 p.m.**

- American Chemistry Council Health & Hygiene Network (by invitation only), *Hilton, Duluth Room*

**3:00 p.m.–4:30 p.m.**

- International Affairs Committee, *Hilton, Marquette I*

**3:00 p.m.–6:00 p.m.**

- CRBOH Annual General Meeting & Reception, *Hyatt, Mirage Room*

**3:15 p.m.–4:15 p.m.**

- I1: Emerging Developments in Consensus Standards for Sampling and Analysis, [L100F](#)
- I2: How Rosie the Riveter Became the Fore-runner of Today's Diverse Workplace, [101A](#)
- I3: Myths and Realities in Electric Arc Protection, [200E](#)
- I4: Safety Without Adjectives — Leveraging a Safety Management System Framework to Integrate Staff Safety Into Health Care (Patient) Safety Culture, [101J](#)
- I5: NIOSH Health Hazard Evaluations (HHEs) and Lessons Learned Responding to the Opioid Crisis, [M100C](#)
- I6: Current Research in Sensor Technologies, [101G](#)
- I7: Case Studies in Risk Assessment — Dust Collection, Pulp and Paper Mills, and Refineries, [L100I](#)
- I8: Respirable Crystalline Silica — Developing and Implementing a Multinational Medical Surveillance Program, [M100H](#)
- I9: Case Studies in IEQ Methods and Assessments — Fungus, Legionella, and Smoke, [101D](#)

- I10: Holistic Noise Exposure Issues — Studies in Military and Nonindustrial Environments, [L100B](#)
- I11: Movie Matinee: Dirty Laundry, [200B](#)
- I12: Mock Trial — Marijuana Employer Liability in Wrongful Death Case, Part 1, [L100E](#)
- I13: University of Minnesota Student Presentations, [200I](#)
- I14: Case Studies in Ethics: Making the Right Choices, Part 2, [200F](#)

**3:30 p.m.–4:30 p.m.**

- Museum, Historical Site & Collection Care Risk Management Open Forum, *Hilton, Marquette VI*

**3:30 p.m.–5:30 p.m.**

- Leadership and Management Committee, *Hilton, Marquette VII*

**3:30 p.m.–6:00 p.m.**

- OHSMS Auditor Registry Exam, *Hilton, Directors Row 3*

**4:00 p.m.–5:00 p.m.**

- Occupational and Environmental Epidemiology Committee, *Hilton, Marquette IV*

**4:00 p.m.–6:00 p.m.**

- Environmental Issues Committee, *Hyatt, Greenway Ballroom J*
- Kettering Fellows, University of Cincinnati Reception, *The Local, 931 Nicollet Mall*
- Laboratory Health and Safety Committee, *Hyatt, Greenway Ballroom I*
- Non-Ionizing Radiation Committee, *Hilton, Marquette IX*
- Philadelphia Section AIHA Reception, *Hyatt, Minnehaha*

**4:30 p.m.–5:30 p.m.**

- J1: Current Studies in Respirator Fit-Testing and Performance, [101G](#)
- J2: Biohacking and Industrial Hygiene — Protecting Pliable Populations, [101J](#)
- J3: Tools for Communicating Key Information — Hazards Assessment at a Former Hospital, [200B](#)
- J4: Current Topics in Management — Committees and Curriculum, [101A](#)
- J5: NIOSH Right Sensors Used Right — Real-Time Respirable Dust Monitors, [M100H](#)
- J6: Preventing Growth of Legionella and Other Waterborne Pathogens in Building Water Systems During Construction and Renovation, [L100I](#)
- J7: Exposure From Toluene in a Historical Product — Validating AIHA IH Mod Using a Fraction of Actual Scale, [101D](#)
- J8: Using Physiological Monitoring to Evaluate Worker Heat Stress Following the ACGIH TLV Guidance, [M100C](#)
- J9: Notable Confined Spaces — Solutions, [L100B](#)

- J10: Donald E. Cummings Memorial Award Lecture: Redefining Occupational Health for the New Economy, [L100F](#)
- J12: Mock Trial — Marijuana Employer Liability in Wrongful Death Case, Part 2, [L100E](#)
- J13: UCLA Student Presentations, [200I](#)

**4:30 p.m.–6:00 p.m.**

- Fellows Special Interest Group, *Hyatt, Greenway Ballrooms EF*
- Mining Working Group, *Hilton, Marquette II*
- Univ. of Texas and Univ. of Houston-Clear Lake Alumni and Friends Reception, *Hyatt, Lakeshore A*

**4:30 p.m.–6:30 p.m.**

- Students and Early Career Professionals Committee, *Hyatt, Greenway Ballroom H*
- University of Michigan Alumni and Friends Reception, *Hyatt, Skyway AB*

**5:00 p.m.–7:00 p.m.**

- Opioids Responder Working Group, *Hilton, Rochester*
- Stewardship and Sustainability Committee, *Hilton, Marquette V*

**5:30 p.m.–7:30 p.m.**

- Construction Committee, *Hyatt, Greenway Ballroom D*
- Sampling and Laboratory Analysis Committee, *Hyatt, Greenway Ballroom G*

**6:00 p.m.–9:00 p.m.**

- Johns Hopkins Reception, *The Local, 931 Nicollet Mall*

**6:00 p.m.–7:30 p.m.**

- Noise Committee, *Hilton, Marquette I*
- Respiratory Protection Committee, *Hilton, Red Wing Room*

**6:30 p.m.–7:30 p.m.**

- Exposure and Control Banding Committee, *Hilton, Marquette IV*

**6:30 p.m.–7:30 p.m.**

## AIHce Networking@Nite

Sponsored by MSA, *Hilton, Minneapolis Ballrooms ABC*

The AIHce Networking@Nite is an extremely fun, high-energy atmosphere perfect for networking. Take advantage of this opportunity to regroup before heading out to try some of Minneapolis's incredible restaurants.

Your conference badge is required to attend this event.

Sponsored by MSA



# Tuesday, May 21 Education Sessions

TUESDAY

6:30 a.m.–7:45 a.m.

## Rise and Shine Breakfast Series

Invited guests will start their Tuesday bright and early with a delicious breakfast and lively session hosted by one of our sponsors:



### OSHA 1910.146: Keeping CSE Safe

Sponsored by  
Dräger  
*M100E*



### How New Technology Can Lead to Improved Safety & Productivity

Sponsored  
by Industrial  
Scientific  
*M100F*



### Flow Calibration Pitfalls: How to Make Sure Your Data is Defensible

Sponsored by Mesa Labs

*200F*



8:00 a.m.–9:00 a.m.

## E1: The New OSHA Silica Rule – What We Have Learned Thus Far

*M100C*

**Moderator:** Amanda McKenney, Terracon Consultants Inc. **Presenter:** Scott Rohlf, EMSL Analytical.

## E2: Guidance for the Design of Sampling Strategies for Microbial Surface Contamination and Bioaerosols in a Health Care Setting

*101J*

**Moderator:** Matthew Nonnenmann, University of Iowa. **Presenters:** Corey Boles, University of Iowa; Rachael Jones, Linh Phan, University of Illinois at Chicago.

## E3: Safety Architecture – Cognitive Science for the Industrial Hygienist

*L100F*

**Moderator/Presenter:** Ryan Campbell, WhiteSwan Safety Inc.

## E4: A Systems Approach to Health, Well-Being, and Fatigue

*L100B*

**Moderator:** Katherine Smith, Campbell Institute - National Safety Council. **Presenters:** Joy Inouye, John Dony, Campbell Institute - National Safety Council.

## E5: Effective Use of Big Data

*101G*

**Moderator:** Stephanie Battista, 3M.

8:00 a.m.–8:20 a.m.

### Wearable Sensors for Exposure Monitoring with Data Analytics for Total Exposure Health

Kevin Montgomery, IoT/AI (Intelesense Technologies).

8:20 a.m.–8:40 a.m.

### Advances in Injury Risk Data Collection and Analysis: Wearable Bio-Ergo Technology

Anthony Harris, WorkCare, Inc.

8:40 a.m.–9:00 a.m.

### Personal Exposure Assessment Results and Interactive Database Tool from Washington State Department of Labor and Industries

Thomas Vroman, Washington State Department of Labor and Industries

## E6: Industrial Hygienists' Introduction to Radon

*101D*

**Moderator:** Judson Kenoyer, NV5/Dade Moeller Training Academy. **Presenter:** Jim Lewis, Maryland Department of the Environment.

## E7: Risk Assessment and Management Application in a Variety of Settings

*L100I*

**Moderator:** Alicia Frazier, Marathon Petroleum Company.

8:00 a.m.–8:20 a.m.

### Advancing Cumulative Risk Assessment in Occupational

Pamela Williams, E Risk Sciences, LLC.

8:20 a.m.–8:40 a.m.

### Applications of Industrial Hygiene in Military Training

Crystal Brown, United States Air Force.

8:40 a.m.–9:00 a.m.

### Lithium – A Novel Occupational Hazard in Electric Vehicle Battery Production and Life Cycle

Matthew Le, Tesla, Inc.

## E8: Interesting OSHA Health Cases – Facts From the Field, Part I

*M100H*

**Moderator:** Todd Jordan, United States Department of Labor/ Occupational Health and Safety Administration. **Presenters:** Emil Sotko, Michelle Gonzalez, Barbara Smith, United States Department of Labor/ Occupational Health and Safety Administration.

## E9: Remediating Mold Growth During Construction

*200B*

**Moderator/ Presenter:** Ed Light, Building Dynamics, LLC. **Presenter:** Paul Haas, Build-ing & Forensic Sciences.

## E10: Fellows Debate: To Certify or Not to Certify – Do OHS Professional Certifications Matter?

*101A*

**Moderator:** Donna Doganiero, United States Army Center for Health Promotion and Preventive Medicine. **Presenters:** Elizabeth Krivososov, KRMCI Inc.; Michael D. Larrañaga, Insight Risk, LLC; Charles R. Manning, Assay Technology Inc.; Carl O. Sall, Louis Berger; Jake Shedd, AIHA Student Local Section Council Chair; Donald M. Weekes, InAir Environmental.

## E11: William P. Yant Award Lecture – “Last” Name First – Cultural Challenges for Global Workplace Health

*L100E*

**Presenter:** Marianne Levitsky, Workplace Health Without Borders/ECOH.

## E13: Best in Show Student Poster Presentations

*200E*

## Expo Hall Activities

Hall B

9:00 a.m.–10:00 a.m.

### Coffee and Pastries

Stop by the Expo to visit the exhibitors and grab a pastry and a cup of joe!

### Espresso Bar in the AIHA Booth 1735

Need a stronger caffeine boost? Head to the AIHA booth for a complimentary espresso to supercharge your morning sessions.

Sponsored by catalyst



Full session descriptions may be found in the mobile app. Events take place at the Minneapolis Convention Center unless otherwise noted.

## Exhibitor Product Demos and Presentations

9:10 a.m. – 1:50 p.m., Learning Pavilion, Hall B

9:10 a.m.–9:35 a.m.

### Journey to SGS Galson's Innovative EDGE Through IOT

SGS Galson



The Internet of Things (IOT), networking smart devices to enable data collection and exchange, improves both home and office life. Now SGS Galson brings IOT to the IH industry. Learn how the EDGE (Enhanced Data Generation Exchange) offers you a single client portal login and state-of-the-art developments in real-time monitoring.

9:45 a.m.–10:10 a.m.

### Personal Wearable Real-Time Silica Monitoring Grabs Momentum

Nanozen



The use of direct-reading instruments to conduct real-time monitoring and Silica Assessment grabs momentum, with the release of OSHA New FAQs of Jan/2019. Nanozen DustCount 8899 V-2 is the most convenient way to monitor silica dust in the worker's personal breathing zone.

10:20 a.m.–10:45 a.m.

### Improve Your Diagnostics With Mycometer's New Relative Mold Content (RMC)

Mycometer, Inc.



Mycometer presents a new concept allowing rapid, reproducible, and representative air sampling results for mold. The concept consists of 1) standardized protocol for activated sampling and 2) double parallel sampling with analysis of both total mold and total allergens. This allows determination of the Relative Mold Content (RMC), which is a strong predictor of mold problems.

10:55 a.m.–11:20 a.m.

### Resin Acids – Are Your Workers Protected?

Chubb Global Risk Advisors



In 2018, ACGIH issued a Notice of Intended Change to withdraw the Rosin Core Solder Thermal Decomposition Products (Colophony) and proposed a new TLV for Resin Acids, as total Resin Acids to characterize chemical components during hand soldering. Exposures for Colophony (as Abietic acid) may not be detected, but when measured as total Resin Acids, may prove otherwise.

11:30 a.m.–11:55 a.m.

### Aura – A New Way to Capture Whole Personal Air Samples

Restek



Restek has developed a whole air sampling device that is now written into NIOSH Method 3900, which is designed to capture a whole air sample in the breathing zone of a subject that doesn't require bulky/heavy/noisy pumps. Simply attached Aura to an evacuated air sampling canister and begin sampling for up to 8 hours, and interrupt sampling by disconnecting Aura at any time.

12:15 p.m.–12:40 p.m.

### Advantages of Real-Time Aerosol Monitoring

TSI Inc.



Real-time measurements make it simple to quickly and cost-effectively monitor exposure levels and record the critical data needed to drive immediate corrective action. Learn how TSI instruments protect workers by integrating live data into personal exposure monitoring, work area exposure, and walk-through source monitoring.

12:50 p.m.–1:15 p.m.

### What Diffusive Samplers Can Do That You Didn't Know

Assay Technology Inc.



Discover what our air samplers can do for you. Sample more vapors on our air monitors than on any competing badge. Methanol? Yes. Acetic acid? Yes. Nitrous oxide? Yes. Learn about the easy way to sample problematic vapors. Bring your difficult chemical(s) and see what we are able to do for you.

1:25 p.m.–1:50 p.m.

### The Silica Data Is In... Cyclones vs PPIs

EMSL Analytical



EMSL ANALYTICAL, INC.

A presentation of the data analysis of over 15,000 silica samples and the trending that it shows. Along with best practices for sampling and the real world comparison between the tried and true cyclone setup and the new PPI samplers.



# Education Sessions Tuesday, May 21

## Morning Pop-Ups

Time	Mezzanine Level (M) Lobby	200 Level Lobby
9:30 a.m.–9:55 a.m.	<b>Office Chair Yoga Class, Session 2</b> Lori Kearney	<b>Dos, Donts, and Hints for Applying for the CIH Exam</b> Ulric Chung, ABIH
10:00 a.m.–10:25 a.m.	<b>Brain-Boosting Habits to increase productivity and happiness</b> Lori Kearney	<b>How to Get Published in Scientific Journals</b> Alexandra Haley, Taylor & Francis Group
10:30 a.m.–10:55 a.m.	<b>Mindfulness and Stress Release</b> Lori Kearney	<b>New from AIHA! Important Instrumentation and Methods for the Detection of Chemicals in the Field, 2nd edition</b> Philip Smith, PhD, CIH, FAIHA, USDOL – OSHA

**10:20 a.m.–10:40 a.m.**

**Perchloric Acid Fume Hood Decommissioning Case Study Lessons Learned — Design, Construction, Commissioning and Decommissioning**  
Paul Houle, Wood Environment & Infrastructure Solutions.

**10:40 a.m.–11:00 a.m.**

**Powered Industrial Sweeper Crystalline Silica Exposure Study**  
Jason Lang, RHP Risk Management, Inc.

## **F6: Continued Increase in Prevalence of Coal Workers' Pneumoconiosis (CWP) in the United States and Around the World** *200E*

**Moderator:** Ana Rule, Johns Hopkins University School of Public Health. **Presenters:** David Goldsmith, George Washington University- Milken Institute School of Public Health; Anthony Laney, National Institute for Occupational Safety and Health, Surveillance Branch, Respiratory Health Division, Sean Banaee, Old Dominion University.

## **F7: Innovative Calculations for Measuring Exposures With Greater Accuracy** *M100C*

**Moderator:** Richard Newman, Marathon Petroleum Company.

**10:00 a.m.–10:20 a.m.**

**A New Bayesian Calculation Platform for the Interpretation of Occupational Exposure Levels Compared to Exposure Limits**  
Jérôme Lavoué, University of Montreal, Canada.

**10:20 a.m.–10:40 a.m.**

**Predicting Hand Surface Area from a Two-dimensional Hand Tracing**  
Myles Omara, Oregon Occupational Safety and Health Administration.

**10:40 a.m.–11:00 a.m.**

**The Quantification of Ambient Asbestos Exposure for Human Health Risk Assessment**  
Amber Banducci, Cardno ChemRisk.

## **F8: Interesting OSHA Health Cases — Facts From the Field, Part 2** *M100H*

**Moderator:** Todd Jordan, United States Department of Labor/ Occupational Health and Safety Administration. **Presenters:** Sylvia Kundu-Orwa, Dena Stone, Ryan Wolschleger, United States Department of Labor/ Occupational Health and Safety Administration.

**10:00 a.m.–11:00 a.m.**

## **F1: Gas and Vapor Sampling and Analysis** *L100B*

**Moderator:** Vint Johnson, Antea Group.

**10:00 a.m.–10:20 a.m.**

**Development of Equipment for Testing of Short-Term Gas Detector Tubes Using ISO EN17621**

Ian Pengelly, Health and Safety Executive, United Kingdom.

**10:20 a.m.–10:40 a.m.**

**Gas Chromatography-Mass Spectrometry Should be Used More in Industrial Hygiene — OSHA's Plans for GC-MS**

Daniel Johansen, United States Department of Labor, Occupational Safety and Health Administration.

**10:40 a.m.–11:00 a.m.**

**Using Diffusive Samplers in Vapor Intrusion and Indoor Air Quality Studies**  
Charles Manning, Assay Technology.

## **F2: Biosafety Issues in IH** *L100E*

**Moderator:** Joy Erdman, Joy Solutions, LLC.

**10:00 a.m.–10:20 a.m.**

**Results from a U.S. Survey on Medical Examiner/Coroner Capabilities to Handle Highly Infections Remains**  
Aurora Le, Indiana University School of Public Health-Bloomington.

**10:20 a.m.–10:40 a.m.**

**The Synthetic Biology Revolution — Risks and Biosafety Considerations**  
Stephanie Cunha, BSI.

**10:40 a.m.–11:00 a.m.**

**The Globalization of Healthcare and its Impact on Sharps Injuries and Occupational Blood and Body Fluid Exposures in the U.S.**

Amber Mitchell, International Safety Center.

## **F3: Emerging Technologies — When There Are No Rules, It's All in the Science and Engineering** *L100I*

**Moderator:** Garth Graham, W. L. Gore & Associates. **Presenters:** Chuck Geraci, National Institute for Occupational Safety and Health; John Baker, BSI EHS Services and Solutions; Kevin Sheffield, Phillips 66.

## **F4: What Do You Call the Boss of a CIH? Perspective on Leadership in the Industrial Hygiene Field** *101A*

**Moderator:** Jason Kunz, 3M. **Presenter:** Michael Lutte, Naval Nuclear Laboratory.

## **F5: Current Research Projects in Engineering Controls and Ventilation** *L100F*

**Moderator:** Jun Wang, University of Oklahoma Health Sciences Center.

**10:00 a.m.–10:20 a.m.**

**Handling Highly Potent Compounds in Ventilated Balance Enclosures — Is This Acceptable?**  
Ariel Pickett, AbbVie Inc.

# Tuesday, May 21 Education Sessions

TUESDAY

## F9: Fentanyl and Analogues — Occupational Exposure Hazards and Protection

101J

**Moderator:** Paul Bozek, University of Toronto, Dalla Lana School of Public Health, Canada.

**Presenter:** John Murphy, Resource EHS.

## F10: Rethinking Hearing Conservation Program Benchmarks

101G

**Moderator:** Justin Hoover, Steel Dynamics', Inc.

10:00 a.m.–10:20 a.m.

**Hearing Conservation Program (HCP) Participation Evaluation Project – A Reassessment of HCP Assignments Using Noise Dosimetry**  
Stephen Siegel, DuPont.

10:20 a.m.–10:40 a.m.

**Protecting Employees' Hearing – The Case for Adopting a Lower Threshold for Noise Exposure Assessment**

Liz Vold, 3M.

10:40 a.m.–11:00 a.m.

**Assessment of Underlying Factors Leading to Inconsistent Use of Hearing Protection and How These Can Be Changed**

Inna Berezovskiy, Pacific Northwest National Laboratory.

## F11: Jeffrey S. Lee Lecture — Musings on a 40 Year Career in the Health, Safety, and Environmental Management Profession

101D

**Presenter:** Lawrence Gibbs, CIH, FAIHA, Stanford University (Retired).

## F12: Win the Day: Using Emotional Intelligence to Be Intentional and Effective and Succeed in Leadership

200B

**Presenter:** Keith Mercurio, Nexstar Network.

11:15 a.m.–12:15 p.m.

## G1: Aerosol Sensors and Sampling

101J

**Moderator:** Andreas Wagner, Golder.

11:15 a.m.–11:35 a.m.

**Laboratory Test of Low-cost PM Sensors**  
Hong-Yang Chen, National Taiwan University, Taiwan.

11:35 a.m.–11:55 a.m.

**Assessment and Improvement of the Sampling Train of PM CEMS**

Shibo Wang, National Taiwan University, Taiwan.

11:55 a.m.–12:15 p.m.

**The Evaluation and Improvement of Condensible Particulate Matter Measurement Method**

Ting Yu Lin, National Taiwan University, Taiwan.

## G2: The Wide World of Lead Exposure — A Look Beyond the Workplace

L100E

**Moderator:** Ben Kollmeyer, Forensic Analytical Consulting Services. **Presenters:** Alex LeBeau, Gerard Baril, Megan Canright, Forensic Analytical Consulting Services.

## G3: Antimicrobial Resistance and the Industrial/Occupational Hygiene Professional

L100I

**Moderator:** Margaret Quinn, University of Massachusetts — Lowell. **Presenter:** Aurora Le, Indiana University School of Public Health-Bloomington.

## G4: Doing More With Less — Building Competency to Develop Your On-Site EHS Teams

L100B

**Moderator:** Kelli Harstad, 3M. **Presenters:** Liz Vold, Paul Adams, Ann Lori, 3M.

## G5: Case Studies in Opioid Decontamination and Cleanup

L100F

**Moderator:** Edward Primeau, United States Coast Guard.

11:15 a.m.–11:35 a.m.

**Sampling and Analysis of Residual Synthetic Opioid Contamination in Uncontrolled Environments for the Assessment/Control of Risk and to Demonstrate Cleaning Efficacy**

Matthew Meiners, BV/Maxxam Pharmaceutical IH Laboratory.

11:35 a.m.–11:55 a.m.

**After the First Responders Leave — The Assessment and Cleanup of an Opioid Contaminated Residence**

Michael Polkabla, BioMax Environmental, Inc.

11:55 a.m.–12:15 p.m.

**Decontamination Options for Fentanyl-contaminated Materials**

Lukas Oudejans, United States Environmental Protection Agency, Office of Research and Development.

## G6: Computer Workstation Ergonomics — Guiding IHS out of Awkward Positions

101A

**Moderator/ Presenter:** Layne Hardison, UCOR. **Presenters:** Sheree Gibson, Ergonomics Applications; Cathy White, The Dow Chemical Company.

## G7: Using the www.expostats.ca Bayesian Calculation Platform to Interpret Industrial Hygiene Exposure Levels

101D

**Moderator/ Presenter:** Jérôme Lavoué, University of Montreal, Canada.

## G8: Enterprise Risk Management — An Intersection Between Risk Management Paradigms for Industrial Hygienists

M100H

**Moderator:** Rob Rottersman, Ramboll. **Presenter:** Paul Harper, Ramboll.

## G9: Notable Confined Spaces — Unexpected Issues

101G

**Moderator:** Warren Brown, GM, Delphi & DMAX (retired). **Presenters:** Neil McManus, NorthWest Occupational Health & Safety; Caroline Switzer, EPCOR Drainage Services, Canada.

## G10: The Future Is Now: Occupational Robotics and Its Impact on Workers and the Field of Industrial Hygiene

M100C

**Presenters:** Chuck Geraci, Naomi Swanson, National Institute for Occupational Safety and Health.

## G13: Perspectives on Preparation for the CIH Exam — Version I4.0

200I

**Moderator:** Kerry Schmid, Ecolab. **Presenters:** Melanie Nembhard, Cardno ChemRisk; Joe Dartt, United States Department of Labor/ Occupational Health and Safety Administration; Ning Lee, United Airlines.

# Education Sessions Tuesday, May 21

## Poster Session 2 Author Attend Time

L Lobby

**Topics:** Communication and Training, Engineering Controls and Ventilation, Healthcare, Noise, Occupational and Environmental Epidemiology, Risk Assessment and Management, Safety Management, Sampling and Analysis

See page 46 for posters on this topic.

\*For a full list of co-authors and detailed abstracts, see AIHce EXP 2019 website.

## Expo Hall Activities

Hall B

11:00 a.m.–3:00 p.m.

### Head Shot Cafe in AIHA Booth 1735

Need a new professional head shot? Want to update your social media profile picture? Makeup artists will give a quick touch-up to help you look your best. Appointments are first-come, first-served, and a minimum tax-deductible donation of \$20 to AIHF is required.

12:00 p.m.–2:00 p.m.

**Health Nut Break** – Carrots and celery and granola bars, oh my! Quell that hangry feeling with some goodies that are good for you!

12:30 p.m.–1:30 p.m.

**NIOSH Table Topics** — Grab lunch in the Expo and join the NIOSH team to discuss: The NIOSH Occupational Exposure Banding Process, Right sensors used right — Real-time respirable dust monitors, The NIOSH Center for Occupational Robotics Research, Standardization of Industrial Hygiene Data: Future Direction for Improved Quality and Use, and Infection Control Assessment Tools for Healthcare Settings

2:00 p.m.–3:00 p.m.

### H1: Developments in Sampling and Analysis Methodology

M100C

**Moderator:** Donald Elswick, University of Findlay.

2:00 p.m.–2:20 p.m.

**Method Development and Validation for Surface Sampling and Analysis of Acrylates**

Keith Rickabaugh, RJ Lee Group, Inc.

2:20 p.m.–2:40 p.m.

**A New Method for Beryllium Sampling and Analysis**

Tyler Erickson, United States Department of Labor/ Occupational Health and Safety Administration.

## Afternoon Pop-Ups

Time	Mezzanine Level (M) Lobby	200 Level Lobby
2:00 p.m.–2:25 p.m.	<b>Eating Healthy on a Budget</b> Lori Kearney	<b>The Next Generation of Leading Health Metrics</b> Alan Leibowitz, CIH, CSP, EHS Systems Solutions LLC
2:30 p.m.–2:55 p.m.	<b>Walking for Health</b> (Weather permitting we will walk and talk as we circle the MCC) Lori Kearney	<b>AIHA's Occupational Exposure Assessment Certificate Program</b> Steven Jahn, CIH, Savannah River Nuclear Solutions LLC
3:00 p.m.–3:25 p.m.	<b>Finding Balance: Work + Life</b> Lori Kearney	<b>What is a Body of Knowledge?</b> Steven Jahn, CIH, Savannah River Nuclear Solutions LLC
3:30 p.m.–3:55 p.m.	<b>Healthy Meal Planning and Prep Like a Pro</b> Lori Kearney	

2:40 p.m.–3:00 p.m.

**Use and Advantages of Online Analytics in Proficiency Testing and Method Development at a Dynamic Test Gas Facility**

Christiane Kaus, Institute for Occupational Safety and Health, Germany.

### H2: Perspectives and Insights From the Surveillance for Anti-Cancer Drugs Exposure (SURFACE) Study

101G

**Moderator:** Susan Arnold, University of Minnesota. **Presenters:** Hannah Kaup, University of Minnesota; Carole Chambers, Alberta Health Services, Canada; Matthew Jeronimo, The University of British Columbia OEH Laboratory, Canada.

### H3: Total Worker Health — Demonstrating the Value of the IH Profession and Getting a Seat at the Table

L100I

**Moderator:** Joseph Kapp, Hillmann Consulting, LLC. **Presenter:** John Suter, Assured Health and Safety Solutions, LLC.

### H4: Achieving Zero Injuries

L100B

**Moderator/ Presenter:** Donald Theune, Donnic Consulting Group, LLC.

### H5: Data, Data Everywhere, but Not a Drop to Drink: How to Prepare and Use Health and Safety Data for Actionable Insights

M100H

**Moderator:** Garth Graham, W. L. Gore & Associates. **Presenter:** Rustin Reed, Embry-Riddle Aeronautical University.

### H6: Novel Experimental Approaches to Study Emission and Exposure of Welding Fume

101J

**Moderator:** Kirsten Koehler, Johns Hopkins University School of Public Health. **Presenters:** Jun Wang, University of Oklahoma Health Sciences Center; Jhy-Charm Soo, National Institute for Occupational Safety and Health; Wei-Chung Su, University of Texas Health Science Center.

### H7: Exposure Assessment in Mining

101A

**Moderator:** Amanda Cote, Antea®Group.

2:00 p.m.–2:20 p.m.  
**Urinary PAH Metabolites as Biomarkers of Exposure to Diesel Exhaust in Underground Miners**

Christopher Simpson, University of Washington.

2:20 p.m.–2:40 p.m.

**Pilot Study — Nanoparticle Exposure Investigation Within a Subterranean Mine**

Daniel Theisen, Colorado State University.



# Tuesday, May 21 Education Sessions

2:40 p.m.–3:00 p.m.

## Respirable Coal Mine Dust and Quartz Exposures Among United States Underground Coal Miners

Brent Doney, National Institute for Occupational Safety and Health.

## H8: Best Practices in Setting Up a Biological Monitoring Program – Advantages and Pitfalls

L100E

**Moderator:** Ralph Froehlich, Helix Environmental, Inc. **Presenters:** Shane Que Hee, University of California Los Angeles; Constantine Dumas, Materion Brush Inc.; Reginald Wills, Waste Management Safety Services, LLC.

## H9: Healthy School Specialist and Building Assessment Training

101D

**Moderator:** Ryan Allenbrand, Children's Mercy Hospital. **Presenter:** Luke Gard, Children's Mercy Hospital.

## H10: Emerging Issues in Beryllium Regulation and Related Topics

L100F

**Moderator:** Michael Brisson, Savannah River National Laboratory. **Presenters:** Maureen Ruskin, Occupational Safety and Health Administration; Dan Field, National Nuclear Security Administration; Lisa Barker, National Jewish Health.

## H11: Movie Matinee: Dirty Laundry

200B

**Moderator:** Katherine McNamara. **Presenter:** Conor Lewis, Conor B. Lewis.

## H13: If I Knew Then What I Know Now – Lessons for Your Career Path

200I

**Moderator:** Michael Finnermore; Baxter Healthcare Corporation. **Presenters:** Aileen Yankowski, Safety Management Solutions/The Brand of U; Abby Ferri, Hays Companies; Chris Laszcz-Davis, The Environmental Quality Organization, LLC.

## H14: Case Studies in Ethics: Making the Right Choices, Part I

200F

**Moderator/ Presenter:** Mark Katchen, The Phylmar Group, Inc.

3:15 p.m.–4:15 p.m.

## I1: Emerging Developments in Consensus Standards for Sampling and Analysis

L100F

**Moderator:** Kenneth White, Consultive Services. **Presenters:** Michael Brisson; Savannah River National Laboratory; Frank Ehrenfeld, International Asbestos Testing Laboratories; Nicola Watson, Markes International.

## I2: How Rosie the Riveter Became the Forerunner of Today's Diverse Workplace

101A

**Moderator/ Presenter:** Celia Booth, McCaffery & Associates, Inc.

## I3: Myths and Realities in Electric Arc Protection

200E

**Moderator/ Presenter:** Gavin Burdge, safety and industrial hygiene freelance researcher. **Presenter:** Mikhail Golovkov, ArcFlash-CRT.

## I4: Safety Without Adjectives – Leveraging a Safety Management System Framework to Integrate Staff Safety Into Health Care (Patient) Safety Culture

101J

**Moderator:** Jeffrey Nesbitt, Mayo Clinic. **Presenter:** Matthew Austin, Mayo Clinic.

## I5: NIOSH Health Hazard Evaluations (HHEs) and Lessons Learned Responding to the Opioid Crisis

M100C

**Moderator:** Penelope Pietrowski, United States Army Materiel Command. **Presenters:** Jennifer Hornsby-Myers, National Institute for Occupational Safety and Health, Emergency Preparedness and Response Office; Kendra Broadwater, Centers for Disease Control/ National Institute for Occupational Safety and Health; Sophia Chiu, National Institute for Occupational Safety and Health.

## I6: Current Research in Sensor Technologies

101G

**Moderator:** Edward Primeau, United States Coast Guard.

3:15 p.m.–3:35 p.m.

## Evaluation of Inexpensive Dust Sensors for Measuring Respirable Dust in Surface Mines

William Groves, Penn State University.

3:35 p.m.–3:55 p.m.

## Some Like it Hot – Estimation of Core Temperature in Underground Mining Using External Physiology and Artificial Neural Networks

Rustin Reed, Embry-Riddle Aeronautical University.

3:55 p.m.–4:15 p.m.

## Rapid Worker Feedback to Reduce Musculoskeletal Injuries (MSK)

Andy Chan, VIT Initiative.

## I7: Case Studies in Risk Assessment – Dust Collection, Pulp and Paper Mills, and Refineries

L100I

**Moderator:** Laura Weems, United States Army Corps of Engineers.

3:15 p.m.–3:35 p.m.

## Reducing Workers' Exposure to Metal Particulates During Bag Changing Operation

Joseph Capuzzi, Chubb Global Risk Advisors.

3:35 p.m.–3:55 p.m.

## Exposure Assessment Challenges in a Pulp and Paper Mill

Peter Bergholz, Wood Environment & Infrastructure Solutions.

3:55 p.m.–4:15 p.m.

## Mercury Management During Refinery Turnarounds

Claudia Alvarado, Chevron.

## I8: Respirable Crystalline Silica – Developing and Implementing a Multinational Medical Surveillance Program

M100H

**Moderator:** Karen O'Hara, WorkCare, Inc. **Presenters:** Patrick O'Callahan, WorkCare, Inc.; Maryellen Johns, GCP Applied Technologies.

## I9: Case Studies in IEQ Methods and Assessments – Fungus, Legionella, and Smoke

101D

**Moderator:** John Moore, Control EHS.

3:15 p.m.–3:35 p.m.

## Review of the ASTM Method for Quantification of Airborne Fungal Structures in and Inertial Impaction Sample by Optical Microscopy – Basics, Assumptions, and Limitations

Andrew Havics, pH2, LLC.

3:35 p.m.–3:55 p.m.

## Legionella Study Comparing CDC Culture Method to a 7-Day MPN Method

Jason Dobranic, EMSL Analytical, Inc.

# QUALITY DATA NOW. WORKER SAFETY ALWAYS.

Your safety program begins with actionable data. Accurate measurements in the moment allow you to identify risks, report on them with confidence and make informed decisions.

TSI's versatile suite of occupational health and safety products are trusted by safety managers, industrial hygienists and environmental consultants for a host of applications.

From real-time readings to audio/visual alarms, from the factory floor to explosive environments, TSI instruments allow industrial hygienists to take corrective action before symptoms arise. That means compliance and worker safety.





# SPECIALIZED INSTRUMENTATION FOR HARSH ENVIRONMENTS

- + Respirable Dust Monitoring
- + Heat Stress Monitoring
- + Quantitative Respirator Fit Testing
- + Noise Detection for Hearing Safety
- + Direct Reading Gas Monitoring
- + Outdoor Environmental Monitoring



Visit us at  
**Booth #1615**





# Education Sessions Tuesday, May 21

TUESDAY

3:55 p.m.–4:15 p.m.

## Assessment of Wildfire Smoke on the Indoor Environment

Ushang Desai, Geosyntec Consultants.

## I10: Holistic Noise Exposure Issues – Studies in Military and Nonindustrial Environments

L100B

**Moderator:** Dirk Yamamoto, United States Air Force School of Aerospace Medicine.

3:15 p.m.–3:35 p.m.

## Helping Solve Military Hearing Loss through Total Exposure Health

Philip Goff, Air Force Surgeon General.

3:35 p.m.–3:55 p.m.

## 24-Hour Noise Exposure Aboard U.S. Navy Aircraft Carriers

N. Cody Schaal, United States Navy - Uniformed Services University.

3:55 p.m.–4:15 p.m.

## Noise Exposures in Nonindustrial Settings

Neva Jacobs, Cardno.

## III: Movie Matinee: Dirty Laundry

200B

**Moderator:** Katherine McNamara. **Presenter:** Conor B. Lewis.

## I12: Mock Trial – Marijuana Employer Liability in Wrongful Death Case, Part I

L100E

**Moderator:** Steven Sherman, United States Department of State. **Presenters:** Margaret Norman, Dan Napier, DNA Industrial Hygiene; Kurt Dreger, Lawrence Livermore National Laboratory.

## I13: University of Minnesota Student Presentations

200I

**Moderator:** Susan Arnold, University of Minnesota. **Presenters:** Hannah Kaup, Adepeju Adesina, University of Minnesota; Rebecca Burton, 3M.

## I14: Case Studies in Ethics: Making the Right Choices, Part 2

200F

**Moderator/ Presenter:** Mark Katchen, The Phylmar Group, Inc.

4:30 p.m.–5:30 p.m.

## J1: Current Studies in Respirator Fit-Testing and Performance

101G

**Moderator:** Margaret Sietsema, University of Illinois at Chicago.

4:30 p.m.–4:50 p.m.

## Performance of Field Portable Instruments for Assessing Particle Exposure and Respirator Performance

Bingbing Wu, National Institute for Occupational Safety and Health National Personal Protective Technology Laboratory.

4:50 p.m.–5:10 p.m.

## The Importance of Aerosol in Ambient Aerosol Respirator Fit Testing

Greg Olson, TSI Incorporated.

5:10 p.m.–5:30 p.m.

## An Assessment of Powered Air-Purifying Respirators Using a Robotic Manikin Headform

Michael Bergman, National Institute for Occupational Safety and Health.

## J2: Biohacking and Industrial Hygiene – Protecting Pliable Populations

101J

**Moderator/ Presenter:** Spencer Pizzani, PepsiCo.

## J3: Tools for Communicating Key Information – Hazards Assessment at a Former Hospital

200B

**Moderator:** Bill Beadie, Maul Foster & Alongi, Inc. **Presenters:** Jacquelyn McMaster, Emily Curtis, Maul Foster & Alongi.

## J4: Current Topics in Management – Committees and Curriculum

101A

**Moderator:** Kimberly Carlson, BSI EHS Services and Solutions.

4:30 p.m.–5:00 p.m.

## Corporate Board EHS Committees – Do They Make Any Difference?

John Murphy, Resource EHS.

5:00 p.m.–5:30 p.m.

## Occupational Hygiene Masters Degrees in the Anglophone World – A Comparative Analysis of Curricula

John Murphy, Resource EHS.

## J5: NIOSH Right Sensors Used Right – Real-Time Respirable Dust Monitors

M100H

**Moderator/ Presenter:** Emanuele Cauda, National Institute for Occupational Safety and Health. **Presenters:** Corey Bender, Washington Metropolitan Area Transit Authority; John Snawder, Centers for Disease Control/ National Institute for Occupational Safety and Health.

## J6: Preventing Growth of Legionella and Other Waterborne Pathogens in Building Water Systems During Construction and Renovation

L100I

**Moderator:** Megan Canright, Forensic Analytical Consulting Services. **Presenters:** John Martinelli, Forensic Analytical Consulting Services; Lewis Johnson, Lee Health System; Matthew Soltis, Tetra Tech.

## J7: Exposure From Toluene in a Historical Product – Validating AIHA IH Mod Using a Fraction of Actual Scale

101D

**Moderator:** Thomas Armstrong, TWA8HR Occupational Hygiene Consulting, LLC.

**Presenters:** Jacob Persky, Fred Boelter, Frank Pagone, RHP Risk Management Inc.

## J8: Using Physiological Monitoring to Evaluate Worker Heat Stress Following the ACGIH TLV Guidance

M100C

**Moderator:** James Ilar, Four Rivers Nuclear Partnerships. **Presenters:** Michael Schmoldt, Argonne National Laboratory; Edward Sinclair, Washington River Protection Solutions.

## J9: Notable Confined Spaces – Solutions

L100B

**Moderator:** Warren Brown, GM, Delphi & DMAX (retired). **Presenters:** Michael Palmer, EnSafe, Inc.; Matthew Macomber, Michigan Occupational Safety and Health Administration (MIOSHA)

## J10: Donald E. Cummings Memorial Award Lecture: Redefining Occupational Health for the New Economy

L100F

**Presenter:** Noah Seixas, University of Washington.

## J12: Mock Trial – Marijuana Employer Liability in Wrongful Death Case, Part 2

L100E

**Moderator:** Steven Sherman, United States Department of State. **Presenters:** Margaret Norman, Dan Napier, DNA Industrial Hygiene; Robert Kleinerman, Kleinerman & Associates EHS Consulting, LLC.

## J13: UCLA Student Presentations

200I

**Moderator:** Shane Que Hee, University of California Los Angeles. **Presenters:** Travis Cribbs, Xingmei (Sherry) Liu, University of California Los Angeles.



# Stop by and see what's happening at AIHA's RESOURCE CENTER!

**Booth  
1735**



**SMILE...** and get ready for your close up at our NEW Headshot Café!

**RECHARGE...** and refresh yourself with snack breaks and the NEW Barista Bar, presented by Catalyst.

**MEET...** opening keynote Carey Lohrenz! Her book signing is Monday, May 20 from 12:15 to 1:00 p.m.

**DISCOVER...**ways you can engage with your peers using AIHA's Catalyst Community.

**LEARN...**more about the latest AIHA products and member benefits.

**Visit the AIHA booth (#1735) & enjoy 20% off AND free shipping on the Top 20 AIHA Best-sellers, as well as these NEW titles:**

- Industrial Hygiene Reference & Study Guide, 4th edition
- Important Instrumentation and Methods for the Detection of Chemicals in the Field, 2nd edition
- Toxicology Principles for the Industrial Hygienist, 2nd edition
- An Ergonomics Guide to Computer Workstations, 3rd edition
- Odor Thresholds for Chemicals with Established Occupational Health Standards, 3rd edition
- 2019 ERPG/WEEL Handbook

# Wednesday At-a-Glance

As of March 28, 2019

## Wednesday, May 22

### Mark of Excellence Breakfast

7:00 a.m.–8:00 a.m.

(doors open at 6:30 a.m.)

Hall C



7:30 a.m.–4:00 p.m.

- Registration, *Lobby B*

8:00 a.m.–1:00 p.m.

Exhibit Hall Open, *Hall B*

- Grain Bin and Trench Rescue Demonstrations

Grain Bin LIVE demos:

9:30 a.m.–10:15 a.m.

Trench LIVE demos:

10:45 a.m.–11:30 a.m.

8:00 a.m.–3:00 p.m.

- Speaker Ready Room, *102A*

9:00 a.m.–10:00 a.m.

- K1: New Frontier — Metagenomic Sequencing for Microbial Community Analysis as a Potentially Powerful Tool for Industrial Hygienists to Investigate Microbial Contamination, *L100I*
- K2: Notable Confined Spaces — Unique Rescues, *L100F*
- K3: Safety Management Case Studies — Successful Approaches and Programs, *L100E*
- K4: Making the Sale — IHS as the Greatest Salespeople in the World, *101J*
- K5: Unique Approaches Using Big Data, *101G*
- K6: The Global Standard of Care — How Consensus Standards Help Industrial Hygienists, *L100B*
- K7: Perceptions of Odor — Applying Odor Parameter Data to Toxicological Risk Assessments, *M100C*
- K8: Occupational Legionellosis Risk Management — Should Current Guidance Standards Be Applied to Industrial Process Water Systems?, *101A*

- K9: Results of Interesting and Unusual NIOSH Health Hazard Evaluations, Part 1, *M100H*
- K12: New Approaches, Challenges, and Opportunities in Laboratory Testing, Part 1, *200E*
- K13: University of Central Missouri Student Presentations, *200I*
- Real Time Detection Systems Committee, *Hyatt, Minnehaha*

9:00 a.m.–4:00 p.m.

- CareerAdvantage Development Fair Open, *M101B*

10:15 a.m.–11:15 a.m.

- L1: The Validation and Evaluation of Samples and Samplers, *M100C*
- L2: The Practical Role of the Industrial Hygienist in Total Worker Health — Tools and Methods for Integrating Total Worker Exposure Into IH Core Competency and Practice Areas, *101G*
- L3: Why We Need to Add Creative Nonfiction in Our Training — How to Do So, *L100B*
- L4: Defining EHS Excellence — Best Practices From Campbell Award Winners, *101J*
- L5: Emergency Response From the Framework to the Field, *101A*
- L6: Wearable Sensor Technologies in the Workplace — How Can We Address Ethical Concerns, Potential Risks, and Benefits of Their Adoption?, *L100F*
- L7: IH Mod 2.0. Mathematical Models With Monte Carlo Simulation in Excel — Contents and Use via Case Studies, *L100I*
- L8: Community-Based Approaches in Risk Assessment — Odors, Heat Strain, and Lead, *L100E*
- L9: Results of Interesting and Unusual NIOSH Health Hazard Evaluations, Part 2, *M100H*
- L10: Assessing Noise Measurement Methods, *101D*
- L11: Herbert E. Stokinger Award Lecture, *200B*
- L12: New Approaches, Challenges, and Opportunities in Laboratory Testing, Part 2, *200E*
- L13: University of Iowa Student Presentations, *200I*
- Poster Session 3 Author Attend Time, *Lower Level (L) Lobby*

1:00 p.m.–2:00 p.m.

- M1: Aerosols in Various Environments, *M100C*
- M2: Trace the Flow — Risk and Transmission of Waterborne Pathogens in Health Care Settings, *L100I*
- M3: Elevate Your Presence — Strategies for Leveraging Social Media for Health and Safety Professionals, *101J*
- M4: How Far Is Far? Industrial Hygiene Services at Remote Locations, *L100F*
- M5: A Practical Chemical Risk Assessment and Management Process — The NIOSH Occupational Exposure Banding Strategy, *M100H*
- M6: Exposure Assessment of Nonionizing Radiation Sources to Protect Workers With Implanted Medical Devices, *101G*
- M7: Cosmetic Talc and Asbestos: State of the Science, *101D*
- M8: The 6th Edition of the Noise Manual — It Really Was Worth Waiting for!, *L100B*
- M9: Henry J. Smyth, Jr. Award Lecture — The Future of Work and the Future of Industrial Hygiene — Are They in Harmony?, *101A*
- M10: Big Data Late Breaking, *L100E*
- M11: AIHA Sampling Strategy and Bayesian Users Group Forum, *200B*
- M12: New Approaches, Challenges, and Opportunities in Laboratory Testing, Part 3, *200E*
- M13: University of Oklahoma Health Sciences Center OEH Student Presentations, *200I*
- Incident Preparedness and Response Working Group, *Hyatt, Greenway Ballroom A*

1:00 p.m.–3:00 p.m.

- ACTIONS Committee, *Hyatt, Skyway AB*

1:00 p.m.–5:00 p.m.

- TT-08: University of Minnesota St. Paul Campus — Bell Museum and Raptor Center, *Second Avenue South entrance (outside Ballroom A)*

1:30 p.m.–3:30 p.m.

- Workplace Health Without Borders Meeting, *Hilton, Marquette VI*

2:00 p.m.–3:00 p.m.

- Oil and Gas Working Group, *Hilton, Marquette II*



#### 2:15 p.m.–3:15 p.m.

- N1: Sampling and Analysis of Air Contaminants — Peracetic Acid Vapor, Tear Gas and Pepper Spray, and Diffusive Samplers for Vapor Intrusion and IAQ, [L100I](#)
- N2: When Highly Infectious Diseases Are Knocking at Your Door, [L100B](#)
- N3: Mysteries of Industrial Hygiene — Solutions to Difficult IH Projects, [M100C](#)
- N4: Unique Emergency Management Studies, [L100E](#)
- N5: How Can IH Data Use Be Improved? Standardization of Data Collection Forms, the Current State of Data Storage, and Future Aggregation of Data for More Effective Use, [101J](#)
- N6: Avoiding the Pitfalls of OSHA Silica Standard Compliance Across Large and Small Construction Organizations, [M100H](#)
- N7: Assessing Workplace Exposures in a Variety of Industries, [101G](#)
- N8: The Link Between Human and Organizational Performance (HOP) and Fatal and Serious Injury Prevention — Key Concepts and How Companies Are Implementing Them, [101A](#)
- N9: From Dust to IDLH — Respiratory Protection for Confined Spaces, [L100F](#)
- N11: AIHA Sampling Strategy and Bayesian Users Group Forum, Continued, [200B](#)
- N12: New Approaches, Challenges, and Opportunities in Laboratory Testing, Part 4, [200E](#)
- N13: UC Berkeley Student Presentations, [200I](#)

#### 2:45 p.m.–3:15 p.m.

- Closing Session VIP Meet and Greet (by invitation only), [Hall C](#)

#### 3:30 p.m.–4:30 p.m.

### Closing General Session

Reinventing Health Care and the Importance of Story

[Hall C](#)

**Presenters:** Leslie Saxon MD, USC Center for Body Computing; Edward Saxon, Edward Saxon Productions.



#### 4:45 p.m.–5:15 p.m.

- AIHA Annual Business Meeting, [Hilton, Duluth](#)

#### 5:00 p.m.–6:30 p.m.

- AIHA Board of Directors Meeting (by invitation only), [Hilton, Minneapolis Ballroom A](#)

#### 5:00 p.m.–7:00 p.m.

- Career and Employment Services Committee, [Hilton, Marquette I](#)

#### 6:00 p.m.–8:00 p.m.

- USF Sunshine ERC Alumni & Friends Reception, [The Local, 931 Nicollet Mall](#)



Full session descriptions may be found in the mobile app. Events take place at the Minneapolis Convention Center unless otherwise noted.

## Thursday, May 23 At-a-Glance

#### 6:30 a.m.–10:00 a.m.

- Registration, [Lobby B](#)

#### 7:00 a.m.–7:30 a.m.

- PDC Monitor Meeting, [102A](#)

#### 7:00 a.m.–5:00 p.m.

- Speaker Ready Room, [102A](#)

#### 8:00 a.m.–Noon

- PDC 901 **NEW!**: Effective Communication Skills for the EHS Professional, [101C](#)
- PDC 902 **NEW!**: Environmental Surface Disinfectants in Health Care — Part 1, [M100C](#)
- PDC 903 **NEW!**: California Proposition 65 Requirements Are Changing, [101J](#)
- PDC 904: Risk Assessment to Expand the IH Profession, [L100A](#)
- PDC 905 **NEW!**: Legionella Assessments — Sampling, Measurement, and Interpretation, [M100H](#)

#### 8:00 a.m.–5:00 p.m.

- PDC 801 **NEW!**: On-Scene Crisis Leadership and Decision Making for Hazmat Incidents, [M100F](#)
- PDC 802 **NEW!**: Selling IH Improvements to Management — Regulations Are Not Enough, [200B](#)
- PDC 803 **NEW!**: Chemical Emergencies — Guidelines, Practices, and Procedures, [101G](#)
- PDC 804: The Sub-Microgram World — The OSHA Beryllium Standard, [L100E](#)
- PDC 805: Understanding Leadership From the Masters, [L100I](#)
- PDC 806: Hearing Loss Prevention — Beyond the Basics, [200F](#)
- PDC 807: Fundamentals of an Effective Respiratory Protection Program, [M100E](#)
- PDC 808: You Are the New Radiation Safety Officer. Now What?, [L100H](#)
- PDC 809: Surface Sampling — Issues, Methods, and Strategy for Metals, Metalloids, Organics, and Biologicals, [200E](#)
- PDC 810: The Industrial Hygienist as Expert Witness, [200I](#)

#### Noon–1:00 p.m.

- PDC Luncheon, [Seasons](#)

#### 1:00 p.m.–5:00 p.m.

- PDC 1001: How Clean Is Clean? Evaluating Indoor Surface Contamination, [M100H](#)
- **NEW!** PDC 1002: Environmental Surface Disinfectants in Health Care — Part 2, [M100C](#)

# Wednesday, May 22

## Education Sessions

### Mark of Excellence Breakfast

7:00 a.m.–8:00 a.m.

(doors open at 6:30 a.m.)

Hall C



9:00 a.m.–10:00 a.m.

**K1: New Frontier – Metagenomic Sequencing for Microbial Community Analysis as a Potentially Powerful Tool for Industrial Hygienists to Investigate Microbial Contamination**

L100I

**Moderator:** Xikun (Brook) Liu, AEMTEK, Inc.  
**Presenter:** Florence Wu, AEMTEK, Inc.

**K2: Notable Confined Spaces – Unique Rescues**

L100F

**Moderator:** Jay Gieseke, Marathon Petroleum. **Presenters:** Thomas McDonough, Michael Aspnes, City of Saint Paul Fire Department.

**K3: Safety Management Case Studies – Successful Approaches and Programs**

L100E

**Moderator:** Nancy Orr, Sage Health and Safety, LLC.

9:00 a.m.–9:20 a.m.

**Looking for Near Misses and Unsafe Behaviors in all the Right Places – Behavior Based Safety**

Thaddeus Pajak, QBE North America.

9:20 a.m.–9:40 a.m.

**Machine Shop Safety – A Look at Woods Hole Oceanographic Institution's Program**

Ron Reif, Woods Hole Oceanographic Institution.

9:40 a.m.–10:00 a.m.

**Focus Four for Health – An Initiative for the Construction Industry**

Diane Radnoff, Alberta Labour, Canada.

**K4: Making the Sale – IHs as the Greatest Salespeople in the World**

101J

**Moderator:** Jeff Gifford, Genesis Energy, L.P.  
**Presenters:** Justin Hoover, Steel Dynamics, Inc.; Jason Kunz, Perry Logan, 3M.

### Morning Pop-Ups

Time	Mezzanine Level (M) Lobby
9:30 a.m.–9:55 a.m.	<b>Office Chair Yoga Class, Session 3</b> Lori Kearney
10:00 a.m.–10:25 a.m.	<b>Brain-Boosting Habits to increase productivity and happiness</b> Lori Kearney
10:30 a.m.–10:55 a.m.	<b>Emotional Intelligence: Cultivating Resilience in a High-Stress World</b> Lori Kearney

**K5: Unique Approaches Using Big Data**

101G

**Moderator:** Lydia Renton, BluMetric Environmental Inc., Canada.

9:00 a.m.–9:20 a.m.

**Summarizing Metal Fume Compliance Monitoring Results to Guide Industrial Hygiene Planning**

Paul Wambach

9:20 a.m.–9:40 a.m.

**Heat-related Illness in the U.S. Mining Industry**

Stephanie Griffin, University of Arizona Tucson.

9:40 a.m.–10:00 a.m.

**Artificial Intelligence and Industrial Hygiene Analysis**

Michael Nguyen, xRapid Group.

**K6: The Global Standard of Care – How Consensus Standards Help Industrial Hygienists**

L100B

**Moderator:** Andrey Korchevskiy, Chemistry & Industrial Hygiene, Inc. **Presenters:** Thomas Slavin, Cardno ChemRisk; Jim Lewis, Maryland Dept of the Environment; John Martinelli, Forensic Analytical Consulting Services.

**K7: Perceptions of Odor – Applying Odor Parameter Data to Toxicological Risk Assessments**

M100C

**Moderator/Presenter:** Michael McGinley, St. Croix Sensory, Inc. **Presenters:** Richard Pleus, Intertox, Inc.; Jennifer Shin, ExxonMobil Biomedical Sciences, Inc.

**K8: Occupational Legionellosis Risk Management – Should Current Guidance Standards Be Applied to Industrial Process Water Systems?**

101A

**Moderator:** Charles Redinger, Redinger 360.  
**Presenters:** Fred Boelter, Frank Pagone, Jacob Persky, RHP Risk Management Inc.

**K9: Results of Interesting and Unusual NIOSH Health Hazard Evaluations, Part I**

M100H

**Moderator/Presenter:** Leonard Zwack, National Institute for Occupational Safety and Health. **Presenters:** Catherine Beaucham, Jessica Li, National Institute for Occupational Safety and Health.

**K13: University of Central Missouri Student Presentations**

200I

**Moderator:** Georgi Popov, University of Central Missouri. **Presenters:** Lyndsey McFarland, Nova Consulting; Morghan Buerky, Yang Zhan, University of Central Missouri.

10:15 a.m.–11:15 a.m.

**L1: The Validation and Evaluation of Samples and Samplers**

M100C

**Moderator:** Jonghwa Oh, University of Alabama at Birmingham.

10:15 a.m.–10:35 a.m.

**Reference Material for the Measurement of Metals in Workplace Air**

Dietmar Breuer, IFA, Germany.

10:35 a.m.–10:55 a.m.

**Performance Comparison of Three Formaldehyde Diffusive Samplers and one Active Sampler**

Vincent Daliessio Jr., EMSL Analytical Inc.

10:55 a.m.–11:15 a.m.

**Generation and Evaluation of Reference Samples as Part of an Evacuated Canister Interlaboratory Study**

Dru Burns, National Institute for Occupational Safety and Health.

## Wednesday, May 22 Education Sessions

### Exhibitor Product Demos and Presentations

8:30 a.m. – 12:15 p.m., Learning Pavilion, Hall B

8:30 a.m.–8:55 a.m.

#### How Smart Companies Build World-Class Ergonomics Processes



VelocityEHS Humantech

The Humantech industrial software as a service (SaaS) application is used by some of the world's largest companies to manage workplace ergonomics. It is built on three key components: 1. Learn: Users build knowledge quickly with interactive online training modules; 2. Do: Assessment tools enable users to identify and fix problem jobs; and 3. Manage: Process owners can monitor the progress and activities of their team.

11:15 a.m.–11:40 a.m.

#### Quieter Is Better – Debunking The Noise Control Urban Legends



Noise Control Engineering LLC

Excessive noise in the work place is dangerous. Not only could exposures to high levels result in hearing loss, tinnitus, and costly disability claims, but loss of focus, concentration, and situational awareness - all increase likelihood of accidents. This presentation documents the effectiveness and advantages of engineering controls.

11:50 a.m.–12:15 p.m.

#### Gas Detection IOI & Beyond



Draeger Inc.

What does it mean when error code 105 displays? How do you know when you need to calibrate? Proper gas detection can save your life. And those around you. In this seminar, we will provide practical information on gas detection products with a focus on single and multi-gas detectors.



Full session descriptions may be found in the mobile app. Events take place at the Minneapolis Convention Center unless otherwise noted.

## Laboratory Services Driving Innovative Solutions



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WEDNESDAY



# Education Sessions Wednesday, May 22

## L2: The Practical Role of the Industrial Hygienist in Total Worker Health — Tools and Methods for Integrating Total Worker Exposure Into IH Core Competency and Practice Areas

L101G

**Moderator:** Jennifer Sahmel, Insight Risk LLC. **Presenters:** Natalie Schwatka, Center for Health, Work & Environment at the Colorado School of Public Health; Susan Arnold, University of Minnesota; Gerardo Durand, 3M.

## L3: Why We Need to Add Creative Nonfiction in Our Training — How to Do So

L100B

**Moderator/ Presenter:** Jonathan Klane, Arizona State University.

## L4: Defining EHS Excellence — Best Practices From Campbell Award Winners

L101J

**Moderator:** John Dony, Campbell Institute — National Safety Council. **Presenters:** Joy Inouye, Katherine Smith, Campbell Institute — National Safety Council.

## L5: Emergency Response From the Framework to the Field

L101A

**Moderator:** Brian Haynack, Sherwin Williams Company. **Presenters:** Edward Primeau, United States Coast Guard; Laura Weems, United States Army Corps of Engineers.

## L6: Wearable Sensor Technologies in the Workplace — How Can We Address Ethical Concerns, Potential Risks, and Benefits of Their Adoption?

L100F

**Moderator:** Emanuele Cauda, National Institute for Occupational Safety and Health. **Presenters:** John Snawder, Centers for Disease Control/ National Institute for Occupational Safety and Health; Wayne Maynard, Liberty Mutual Insurance.

## L7: IH Mod 2.0. Mathematical Models With Monte Carlo Simulation in Excel — Contents and Use via Case Studies

L100I

**Moderator:** Heather Avens, Cardno ChemRisk. **Presenters:** Thomas Armstrong, TWA8HR Occupational Hygiene Consulting, LLC.; Pamela Williams, E Risk Sciences, LLC.

## L8: Community-Based Approaches in Risk Assessment — Odors, Heat Strain, and Lead

L100E

**Moderator:** Brandi Kissel, Cornell University. 10:15 a.m.–10:35 a.m.

**Risk Assessment of Urban Odors — The Hedonic Tone and Odor Perception's Fourth Dimension**

Frank Pagone, RHP Risk Management Inc. 10:35 a.m.–10:55 a.m.

**Heat Strain Assessment — Use of Meteorological Data as a Cost Effective Means to Estimate Wet Bulb-Globe Temperature**

Dirk Yamamoto, United States Air Force School of Aerospace Medicine. 10:55 a.m.–11:15 a.m.

**Lead Health Fairs — A Community-based Approach to Addressing Lead Exposure in Chicago**

Julia Lippert, DePaul University.

## L9: Results of Interesting and Unusual NIOSH Health Hazard Evaluations, Part 2

M100H

**Moderator:** Leonard Zwack, National Institute for Occupational Safety and Health.

**Presenters:** Michael Grant, Centers for Disease Control/ National Institute for Occupational Safety and Health; Scott Brueck, Nancy Burton, National Institute for Occupational Safety and Health.

## L10: Assessing Noise Measurement Methods

L101D

**Moderator:** John Moore, Control EHS.

10:15 a.m.–10:45 a.m.

**Evaluating the Risk of Noise-induced Hearing Loss Using Different Noise Measurement Criteria**

Benjamin Roberts, Cardno ChemRisk. 10:45 a.m.–11:15 a.m.

**A Sound Meter in Every Pocket — An Evaluation of the NIOSH SLM Application for Nontechnical Users**  
Benjamin Roberts, Cardno ChemRisk.

## L11: Herbert E. Stokinger Award Lecture: Recent Advances in the Knowledge Base of Nanotoxicology: Pulmonary Responses to Carbon Nanotubes (CNTs)

L200B

**Presenter:** Vincent Castranova, Department of Pharmaceutical Sciences, West Virginia University.

## L12: The Importance of Conformity Assessment and Opportunities and Challenges for Testing to Help the IH Profession, Part I: Understanding the Differences Between AIHA Laboratory Programs

L200E

**Presenters:** Cheryl Morton, Angela Oler, American Industrial Hygiene Association.

## L13: University of Iowa Student Presentations

L200I

**Moderator:** Misha Griffis, University of Iowa, College of Public Health. **Presenters:** Shelby Clark, Kathryn Crawford, Alessandra Pratt, University of Iowa, College of Public Health.

## Poster Session 3 Author Attend Time

L Lobby

**Topics:** Protective Clothing and Equipment/ Respiratory Protection, Radiation (Ionizing and Nonionizing), Regulation & Legislation, Risk Assessment and Management, Sampling and Analysis, Sensor Technologies, Technology

See page 46 for posters on this topic.

\*For a full list of co-authors and detailed abstracts, see AIHce EXP 2019 website.

## Expo Hall Activities

Hall B

11:00 a.m.–1:00 p.m.

### Make Your Own Trail Mix Break

Fuel your brain for a strong finish to AIHce EXP 2019. What a perfect grab-and-go for your train, drive, or flight home!

## Afternoon Pop-Ups

Time	Mezzanine Level (M) Lobby
1:00 p.m.–1:25 p.m.	<b>Kick Your Sugar Habit + Increase Energy</b> Lori Kearney
1:30 p.m.–1:55 p.m.	<b>Meditation for Beginners: How to Meditate</b> Lori Kearney
2:00 p.m.–2:25 p.m.	<b>The Power of a Positive Mindset</b> Lori Kearney
2:30 p.m.–2:55 p.m.	<b>Stretch and Restore</b> (weather permitting outside on the Plaza) Lori Kearney

### 1:00 p.m.–2:00 p.m.

#### M1: Aerosols in Various Environments

**M100C**

**Moderator:** Caroline Switzer, EPCOR Drainage Services, Canada.

**1:00 p.m.–1:20 p.m.**

**Indoor and Outdoor Prevalence of Species in the Pen/Asp Spore Trap Category**

Harriet Burge, EMLab P&K.

**1:20 p.m.–1:40 p.m.**

**Diesel Engine Exhaust Exposure in the Mining Industry – Case Study in Two Underground Gold Mines**

Guillaume Lachapelle, Agnico Eagle Mines, Canada.

**1:40 p.m.–2:00 p.m.**

**Assessment of Occupational Exposures to Fine and Ultrafine Particles**

Alan da Silveira Fleck, University of Montreal, Canada.

#### M2: Trace the Flow – Risk and Transmission of Waterborne Pathogens in Health Care Settings

**L100I**

**Moderator:** John Martinelli, Forensic Analytical Consulting Services. **Presenter:** Bryan Christensen, Centers for Disease Control and Prevention.

#### M3: Elevate Your Presence – Strategies for Leveraging Social Media for Health and Safety Professionals

**101J**

**Moderator:** Aileen Yankowski, Safety Management Solutions/The Brand of U. **Presenter:** Abby Ferri, Hays Companies.

#### M4: How Far Is Far? Industrial Hygiene Services at Remote Locations

**L100F**

**Moderator:** Kimberly Carlson, BSI EHS Services and Solutions. **Presenters:** Andrey Korchevskiy, Chemistry & Industrial Hygiene, Inc.; Munirdzhon Shakhov, CCM LLC, Russian Federation.

#### M5: A Practical Chemical Risk Assessment and Management Process – The NIOSH Occupational Exposure Banding Strategy

**M100H**

**Moderator/Presenter:** Thomas Lentz, Centers for Disease Control/ National Institute for Occupational Safety and Health.

**Presenter:** Pranav Rane, National Institute for Occupational Safety and Health.

#### M6: Exposure Assessment of Nonionizing Radiation Sources to Protect Workers With Implanted Medical Devices

**101G**

**Moderator:** Ramon Lopez, Indiana University. **Presenters:** Stephen Hemperly, Western Digital Corporation; Mona Shum, Aura Health and Safety Corporation, Canada.

#### M7: Cosmetic Talc and Asbestos: State of the Science

**101D**

**Moderator:** Jennifer Ellis, Ramboll. **Presenters:** Alan Segrave, Maxxam Analytics; Evan Anderson, Ramboll; Robyn Ray, EMSL Analytical, Inc.

#### M8: The 6th Edition of the Noise Manual – It Really Was Worth Waiting for!

**L100B**

**Moderator:** Rick Neitzel, University of Michigan School of Public Health. **Presenters:** Deanna Meinke, University of Northern Colorado; Elliott Berger, 3M Personal Safety Division (retired).

#### M9: Henry J. Smyth, Jr. Award Lecture – The Future of Work and the Future of Industrial Hygiene – Are They in Harmony?

**101A**

**Presenter:** Chuck Geraci, National Institute for Occupational Safety and Health.

#### M11: AIHA Sampling Strategy and Bayesian Users Group Forum

**200B**

**Presenters:** Andrew Perkins, Alabama Power Company a Southern Company; Perry Logan, 3M; Steven Jahn, Savannah River Nuclear Solutions LLC; John Mulhausen, 3M Corporate Industrial Hygiene (Retired); Paul Hewett, Exposure Assessment Solutions; Samantha Connell, Lonza, Switzerland.

#### M12: The Importance of Conformity Assessment and Opportunities and Challenges for Testing to Help the IH Profession, Part 2: A Look at ISO/IEC 17025:2017 One Year Later

**200E**

**Presenters:** Cheryl Morton, American Industrial Hygiene Association; Robert Lieckfield, Jr., Bureau Veritas.

#### M13: University of Oklahoma Health Sciences Center OEH Student Presentations

**200I**

**Moderator:** Jun Wang, University of Oklahoma Health Sciences Center. **Presenters:** Marcio Bezerra, Kathleen Aithinne, Sara Greenlee, University of Oklahoma Health Sciences Center.

# Education Sessions Wednesday, May 22

2:15 p.m.–3:15 p.m.

## N1: Sampling and Analysis of Air Contaminants – Peracetic Acid Vapor, Tear Gas and Pepper Spray, and Diffusive Samplers for Vapor Intrusion and IAQ

L100I

**Moderator/ Presenter:** Scott Van Etten, EMSL Analytical, Inc. **Presenters:** Stephen Jackson, National Institute for Occupational Safety and Health; Charles Manning, Assay Technology.

## N2: When Highly Infectious Diseases Are Knocking at Your Door

L100B

**Moderator:** Stephen Derman, MediSHARE Environmental Health & Safety Services. **Presenter:** Aurora Le, Indiana University School of Public Health-Bloomington.

## N3: Mysteries of Industrial Hygiene – Solutions to Difficult IH Projects

M100C

**Moderator/ Presenter:** David Regelbrugge, Partner Engineering and Science, Inc.

## N4: Unique Emergency Management Studies

L100E

**Moderator:** Tony Cofresi, United States Coast Guard.

2:15 p.m.–2:35 p.m.

### Comparison of Asbestos Measurement Methods for a Major Steampipe Explosion in Lower Manhattan

Robert DeMalo, EMSL Analytical, Inc.

2:35 p.m.–2:55 p.m.

### Evaluation of NIOSH Approved CBRN Air-Purifying Canisters Against Emerging Chemical and Radiological Threats

Lee Greenawald, Centers for Disease Control/ National Institute for Occupational Safety and Health/ National Personal Protective Technology Laboratory.

2:55 p.m.–3:15 p.m.

### Applying the Four Phases of Emergency Management to Preserve Patient Safety During Construction of an Aerial Pedestrian Walkway

Darlene Powell, Department of Veterans Affairs.

## N5: How Can IH Data Use Be Improved? Standardization of Data Collection Forms, the Current State of Data Storage, and Future Aggregation of Data for More Effective Use

101J

**Moderator:** Cherie Estill, Centers for Disease Control/ National Institute for Occupational Safety and Health. **Presenter:** Taylor Shockey, Centers for Disease Control/ National Institute for Occupational Safety and Health.

## N6: Avoiding the Pitfalls of OSHA Silica Standard Compliance Across Large and Small Construction Organizations

M100H

**Moderator:** Jennifer Ellis, Ramboll. **Presenter:** David Olvera, Zachry Group.

## N7: Assessing Workplace Exposures in a Variety of Industries

101G

**Moderator:** Brandi Kissel, Cornell University.

2:15 p.m.–2:35 p.m.

### Historical Workplace Exposures to Talc During Mining and Milling Operations in Vermont

Alan Rossner, Clarkson University.

2:35 p.m.–2:55 p.m.

### Assessment of Occupational Exposure to Heat Stress and Solar Ultraviolet Radiation among Groundskeepers in an Eastern North Carolina University Setting

Jo Anne Balanay, East Carolina University.

2:55 p.m.–3:15 p.m.

### Characterization of Isocyanate Exposures among Painters During Metal Structure Coating Task

Anila Bello, University of Massachusetts Lowell.

## N8: The Link Between Human and Organizational Performance (HOP) and Fatal and Serious Injury Prevention – Key Concepts and How Companies Are Implementing Them

101A

**Moderator:** Stephen Newell, ORCHSE Strategies LLC. **Presenters:** Rick Hilton, 3M; Michael Damasin, Cargill, Inc.; David Eherts, Allergan, Inc.

## N9: From Dust to IDLH - Respiratory Protection for Confined Spaces

L100F

**Moderator:** Scott Larson, 3M. **Presenter:** Sharath Smith, 3M.

## N11: AIHA Sampling Strategy and Bayesian Users Group Forum, Continued

200B

**Presenters:** Andrew Perkins, Alabama Power Company a Southern Company; Perry Logan, 3M; Steven Jahn, Savannah River Nuclear Solutions LLC; John Mulhausen, 3M Corporate Industrial Hygiene (Retired); Paul Hewett, Exposure Assessment Solutions; Samantha Connell, Lonza, Switzerland.

## N13: UC Berkeley Student Presentations

200I

**Moderator:** S. Katharine Hammond, University of California, Berkeley. **Presenters:** Patton Nguyen, Tessa Landgraf, University of California, Berkeley.

WEDNESDAY

3:30 p.m.–4:30 p.m.

## Closing General Session

### Reinventing Health Care and the Importance of Story

Hall C

**Presenters:** Leslie Saxon MD, USC Center for Body Computing; Edward Saxon, Edward Saxon Productions.



The digital revolution has begun in health care delivery. The use of advanced sensor technology offers the opportunity to write the story of our medical care in a new and empowering way. This time the tale will be written collectively by the patient, provider, and technology. The old healthcare system will give way to Lifecare, which also has the potential to impact the area of Total Worker Health, a continuous narrative with the patient as storyteller. With the advent of this new technology, the big data it may generate, and the effects on Total Worker Health, the role of physicians will be to support this new narrative rather than dictate it.



# Advancing Worker Health & Safety



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**Minneapolis, Minnesota**  
**May 20–22, 2019**

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## EXPO HOURS

Monday, May 20  
9:00 a.m. – 5:30 p.m.

Tuesday, May 21  
9:00 a.m. – 3:00 p.m.

Wednesday, May 22  
8:00 a.m. – 1:00 p.m.

\* To receive the 20% discount, payment is required at the time of purchase. Books must be taken with you — shipping is not available.

\*\* Membership will be verified at the checkout counter. You may sign up for membership on site and receive the Member Cash and Carry discount. Discounts may not be combined with any other offer, and are only available during the Conference.

# Poster Sessions

For a full list of co-authors and detailed abstracts, please see the AIHce EXP 2019 website or mobile app.

## Poster Session 1

Monday, May 20

Author Attend Time

11:15 a.m.–12:15 p.m.

Lower Level (L) Lobby

**Topics:** Construction, Emergency Preparedness & Response, Engineering Controls and Ventilation, Ergonomics, Exposure Assessment Strategies, Exposure Banding/Occupational Exposure Limits, IH Profession, Indoor Environmental Quality/Indoor Air Quality, Nanotechnology, Risk Assessment and Management, Sampling and Analysis

- **119 - An Evaluation of Engineered Nanomaterial Safety Data Sheets Post GHS.** *Presenter:* Laura Hodson, National Institute for Occupational Safety and Health.
- **155 - Airborne Asbestos Concentration During Operation and Simulated Work Activities with Industrial Crane Controls.** *Presenter:* Michael McCoy, Stantec Consulting Services, Inc.
- **198 - Silica Exposures for Drywall Finishers.** *Presenter:* Heather Drzymala, Liberty Mutual Insurance.
- **229 - Characterization of Bacterial Community Using 16s Ribosomal RNA Sequencing in Dust Samples from 50 Public Schools in a Large City.** *Presenter:* Ju-Hyeong Park, National Institute for Occupational Safety and Health.
- **231 - Evaluation of Employee Exposures to Metals During 3D Printing.** *Presenter:* Eric Glassford, National Institute for Occupational Safety and Health.
- **299 - Use of IH Mod 2.0, an Enhanced MS Excel Suite of Exposure Assessment Mathematical Models.** *Presenter:* Thomas Armstrong, TWA8HR Occupational Hygiene Consulting, LLC.
- **320 - Evaluation of General Population Inhalation Exposures to Formaldehyde Present in the Ambient Environment.** *Presenter:* Joshua Maskrey, Cardno ChemRisk.
- **333 - Predicting the Surface Area of Small Liquid Spills for Modeling Worker Vapor Exposures.** *Presenter:* Chris Keil, Wheaton College.
- **344 - Solid-Phase Microextractoin Procedure to Determine Pesticide Residues in Urine.** *Presenter:* Tse Wei Chao, National Taiwan University Taiwan.
- **430 - Grinder Isolation and Reductions in Diacetyl Levels in a Coffee Roasting and Packaging Facility – A Case Study.** *Presenter:* Marcia Stanton, National Institute for Occupational Safety and Health.

- **460 - Asbestos Exposures Related to the Application of Cosmetic Products.** *Presenter:* Michael Holton, Ramboll.
- **493 - Assessment of Diesel Particulates in Fire Departments Using Different Exposure Metrics: Pilot Study.** *Presenter:* Jooyeon Hwang, University of Oklahoma Health Sciences Center.
- **513 - Analysis of Bulk Samples of Joint Compound with Silica Listed as Impurity and Relation to Employees Exposures in the Field.** *Presenter:* Torey McLaren, The Travelers Companies, Inc.
- **514 - Occupational Survey of Airborne Metal Exposures to Welders, Metalworkers, and Bystanders in Small Fabrication Shops.** *Presenter:* Allison Insley, Cardno ChemRisk.
- **534 - Analytical Methods for Determination of Compliance with OEL Values Established in Poland in 2016–2018.** *Presenter:* Slawomir Brzezinski, Nofer Institute of Occupational Medicine, Poland.
- **575 - Case Study Demonstrating the Utility of Occupational Exposure Banding.** *Presenter:* Pranav Rane, National Institute for Occupational Safety and Health.
- **578 - Consulting Activities Associated with Emergency Response Operations for Building Flooding Related to Impact of Tropical Storm Harvey along the Texas Gulf Coast Involving Application and Use of Industrial Hygiene Assessment Techniques for Mitigation.** *Presenter:* Jan Koehn, Jan Koehn, MS, CIH, Inc.
- **596 - Consultation, Sampling Strategy Development and Performance of Industrial Hygiene Airborne Exposure Monitoring for Respirable Crystalline Silica Related to Concrete Cutting Procedures with Demolition Involving Use of Remote Control and Manual Saws.** *Presenter:* Jan Koehn, Jan Koehn, MS, CIH, Inc.
- **646 - Service Learning Case Study: Evaluation of Whole-Body Vibration among Operators of Heavy Material Handling Vehicles Used in the Construction Industry.** *Presenter:* Kevin Slates, Indiana University.

## D13: Student Poster Session

Monday, May 20

Author Attend Time

3:15 p.m.–4:15 p.m.

200 Level Lobby

For authors and full details, check the AIHce EXP website or mobile app.

## Poster Session 2

Tuesday, May 21

Author Attend Time

11:15 a.m. – 12:15 p.m.

Lower Level (L) Lobby

**Topics:** Communication and Training, Engineering Controls and Ventilation, Healthcare, Noise, Occupational and Environmental Epidemiology, Risk Assessment and Management, Safety Management, Sampling and Analysis

- **124 - Occupational Exposure and Airflow Obstruction among U.S. Adults Using a COPD-JEM: NHANES 2007–2008 to 2011–2012.** *Presenter:* Brent Doney, National Institute for Occupational Safety and Health.
- **214 - Occupational Exposure to Noise in Workover and Drilling Services at Oil & Gas Industry in Colombia 2011-2017.** *Presenter:* Guillermo Araque, CRP Ltd., Colombia.
- **215 - Evaluation of Potential Exposure-Response Relationships between Intravaginal Talc Exposure and Ovarian Cancer Risk.** *Presenter:* Abigail McEwen, Cardno Chemrisk.
- **234 - Bringing Safety and Health Expertise into the Classroom. Lessons from the TECHS Study 2015-2018.** *Presenter:* Anca Bejan, HealthPartners Institute.
- **238 - Characterization of Airborne Asbestos Exposures from the use of Dental Products: A Comprehensive Review.** *Presenter:* Anthony Ierardi, Cardno ChemRisk.
- **300 - A Novel Integrated Curriculum Structure for Rapid Qualification of Military Occupational Hygienists.** *Presenter:* John Murphy, Resource EHS.
- **319 - Ultraviolet Germicidal Irradiation (UVGI) for Filtering Facepiece Respirator Disinfection and Reuse during an Airborne Infectious Disease Pandemic.** *Presenter:* Tia McClelland, National Institute for Occupational Safety and Health.
- **362 - Ultraviolet Germicidal Irradiation (UVGI) as a Disinfection Strategy for Candida auris, an Emerging Drug Resistant Pathogen.** *Presenter:* Tia McClelland, National Institute for Occupational Safety and Health.
- **389 - Method for the Evaluation of Noise Induced Hearing Loss Workers Compensation Claims.** *Presenter:* David Duffy, Chubb GRA.

- **397 - Association of Particulate Matter from Cooking Oil Fumes with Heart Rate Variability and Oxidative Stress.** *Presenter:* Chih-Hong Pan, Institute of Labor, Occupational Safety and Health, Ministry of Labor, Taiwan.
- **402 - Evaluating the Impact of the 1999 Department of Energy Beryllium Rule on the Incidence of Beryllium Sensitization and Chronic Beryllium Disease.** *Presenter:* Ashley Golden, Oak Ridge Associated Universities.
- **496 - Esophageal Cancer in Petroleum Refinery Workers – Results of a Preliminary Meta-analysis.** *Presenter:* Christopher Comerford, Cardno ChemRisk.
- **517 - Determinations of Fragrance Allergens in Personal Care Products by Solid-Phase Microextraction.** *Presenter:* Shih-Wei Tsai, National Taiwan University, Taiwan.
- **523 - Estimating the Dermal Exposure to Fragrance Allergens and Preservatives from Personal Care Products by Using Vertical Diffusion Cell.** *Presenter:* Shih-Ning Shao, National Taiwan University, Taiwan.
- **547 - Evaluation of the Association between Intravaginal Talcum Powder Exposure and Ovarian Cancer.** *Presenter:* Alexander Riordan, Cardno ChemRisk.
- **551 - Toxicological Evaluation of Surgical Smoke from Human Tissue: an In Vitro study.** *Presenter:* Jhy-Charm Soo, National Institute for Occupational Safety and Health.
- **581 - Lessons Learned from the NIOSH FACE Reports on the Fatalities of Hispanic/Latino Workers.** *Presenter:* Kwangseog Ahn, University of Wisconsin-Whitewater.
- **607 - Exposure to Asbestos and Risk of Ovarian Cancer: A Systematic Literature Review and Meta-analysis.** *Presenter:* Kevin Towle, Cardno ChemRisk.

## Poster Session 3

Wednesday, May 22

Author Attend Time

10:15 a.m. – 11:15 a.m.

Lower Level (L) Lobby

- Topics:** Protective Clothing and Equipment/ Respiratory Protection, Radiation (Ionizing and Nonionizing), Regulation & Legislation, Risk Assessment and Management, Sampling and Analysis, Sensor Technologies, Technology
- **127 - Chromium and Hexavalent Chromium Air Concentrations during Welding and Arc Cutting of Carbon Steel Alloys.** *Presenter:* James Kenny, Chubb Global Risk Advisory.
  - **172 - A Field Evaluation of a Single Sampler for Respirable and Inhalable Indium and Dust Measurements at an Indium-Tin Oxide Production Facility.** *Presenter:* Brie Blackley, National Institute for Occupational Safety and Health.
  - **211 - Colophony and Resin Acid - Comparison of Sampling Methods and Occupational Exposure Limits.** *Presenter:* James Kenny, Chubb Global Risk Advisory.
  - **233 - Sampling Efficiency Comparison of a High Flow Rate Respirable Size-selective Sampler between Laboratories.** *Presenter:* Taekhee Lee, National Institute for Occupational Safety and Health.
  - **279 - Application of Talcum Powder and Total Dust Analysis.** *Presenter:* Jennifer Ellis, Ramboll.
  - **288 - A New Oxidizer Tube for Sampling Nitric Oxide (NO) and Nitrogen Dioxide (NO<sub>2</sub>) in Air.** *Presenter:* Joseph Elder, SKC, Inc.
  - **302 - Using Advanced Robotics to Estimate Exposures.** *Presenter:* Jennifer Shin, ExxonMobil Biomedical Sciences, Inc.
  - **316 - A Biological Monitoring Study in Taiwan of Workers at the Precision Machinery Manufacturing Plants.** *Presenter:* Cheng-Yao Chen, Institute of Labor Occupational Safety And Health, Taiwan.

- **348 - Comparison of Enhanced Dark-field Microscopy and Hyperspectral Mapping with Electron Microscopy for Analysis of Airborne Nanoparticle Collected on Filter-based Media.** *Presenter:* Adrienne Eastlake, National Institute for Occupational Safety and Health.
- **353 - Validation of LC/MS/MS Methodology to Meet ACGIH TLVs for Phthalic and Maleic Anhydrides.** *Presenter:* Kristine Kurtz, Maxxam Analytics.
- **424 - Personal Sampling Instruments for SVOCs - 2nd Report 'Result of Using in Series of Adsorbents'.** *Presenter:* Yoshihiro Suzuki, SIBATA Scientific Technology Ltd., Japan.
- **434 - Hexavalent Chromium: Exploring and Validating Lower Reporting Limits.** *Presenter:* Lauren Fry, Maxxam Analytics.
- **435 - Headspace Analysis for Screening of Volatile Organic Compound Profiles of Electronic Juice Bulk Material.** *Presenter:* Ryan LeBouf, National Institute for Occupational Safety and Health.
- **466 - Impact of Lowering the Airborne Lead (Pb) Standard: A Real Life Example.** *Presenter:* Rebecca Leaverton, United States Army Public Health Center.
- **525 - Using Silicone Wristbands as a Personal Sampler to Monitor the Exposures of Airborne Terpenes.** *Presenter:* Ching-Wen Yang, National Taiwan University.
- **542 - Compressed Breathing Air Hazards in United States Air Force Operations.** *Presenter:* Marc Sylvander, United States Air Force.
- **626 - Evaluation of Effective Dose and Exposure Level of Radon in Process Handling NORM.** *Presenter:* Eun Kyo Chung, Korea Occupational Safety and Health Agency, Korea.
- **627 - Hazard Characterization of a Food Truck Work Environment.** *Presenter:* Laura Hallett, Cardno ChemRisk.
- **649 - Employee Driven Study to Assess Potential NORM/TENORM Exposures During Maintenance at Oil Production Facilities.** *Presenter:* John Snawder, National Institute for Occupational Safety and Health.



Full session descriptions may be found in the mobile app. Events take place at the Minneapolis Convention Center unless otherwise noted.



# New Product Pavilion

**Hall B at the end of the I200 aisle**

**Dedicated to showcasing exhibitors' newly released products and services, you won't want to miss this on your Expo explorations!**

**Accutec-HIS  
Booth #1420**

## **AccuFIT 9000™**

AccuFIT 9000™ — the new Respirator Fit Tester that performs particle-counting fit tests on all respirator types including N95. It is a 'stand-alone' device, or connect to PC's and tablets using WiFi, Ethernet or USB to run 4 tests simultaneously with individual start/stop functions. Comes with 3-year warranty — standard!

**AccuTec-HIS**  
Analytical Instrumentation



**Casella  
Booth #1508**

## **Vapex**

Growing their air sampling product family, Casella are releasing their brand new product, the Vapex Low Flow Pump. This pocket-sized personal air-sampling pump is extremely robust offering auto-calibration with the Flow Detective. With Bluetooth capabilities, the Airwave App allows for remote monitoring where notes can be taken "on the go," saving time.

**CASELLA**  
CEL



**Draeger Inc.  
Booth #1808**

## **X-am 8000**

The 1 to 7 gas detector detects toxic and flammable gases as well as vapors and oxygen all at once — either in pump or diffusion mode. Choose from over 150 gas types using Dräger's advanced PID, IR or EC sensor technology.

**Dräger**



**SGS Galson Labs  
Booth #1815**

## **SmartSense Remote Monitor**

World's first cloud based I.H. remote monitor with autonomous grab sample capability. SmartSense can monitor PM2.5/PM10, VOC's, CO, CO2, H2S, NO2, SO2, Temperature, Humidity and Pressure. Consider this an additional Industrial Hygienist in the field. For more info go to [www.sgsgalson.com/smart-sense](http://www.sgsgalson.com/smart-sense).

**SGS** GALSON



**TSI Incorporated  
Booth #1615**

## **SidePak AM520i**

The TSI SidePak™ AM520i is the industry's smallest, lightest personal aerosol exposure monitor certified for its intrinsically safe design. With IECEx/ATEX and CSA certifications, the AM520i allows for real-time exposure monitoring of dust particles and aerosols in potentially explosive environments.

**TSI**



**Zefon International  
Booth #1414**

## **FTIR Silica Cassette**

New 4-piece cassette designed to work with a portable FTIR for a field-based monitoring approach of respirable crystalline silica. Air samples taken using a traditional cyclone and new cassette. The cassette is taken apart and placed in a portable FTIR for analysis. Results interpreted through a NIOSH developed software program.

**Zefon**  
INTERNATIONAL



# Expo Highlights

## Expo Hours

**Monday, May 20 – 9:00 a.m.–5:30 p.m.**

### Expo Only Non-Compete Hours:

9:30 a.m.–10:00 a.m., 12:15 p.m.–1:45 p.m., and 4:30 p.m.–5:30 p.m.

**Tuesday, May 21 – 9:00 a.m.–3:30 p.m.**

### Expo Only Non-Compete Hours:

9:00 a.m.–10:00 a.m. and 12:15 p.m. – 1:45 p.m.

**Wednesday, May 22 – 8:00 a.m.–1:00 p.m.**

### Expo Only Non-Compete Hours:

8:30 a.m.–9:00 a.m. and 11:15 a.m.–12:45 p.m.

## Refresh and Recharge Breaks

### Hall B

AIHce EXP is thrilled to continue the tradition with these great networking events on the Expo floor. Mix, mingle, network, and grab some snacks as you meet exhibitors, visit with colleagues, and learn about new products and services from AIHA and AC-GIH. Your conference badge is required to attend these events.

**Monday, 12:00 p.m.–2:00 p.m.**

**The Energizer Break** — Healthy snacks will help boost your energy for more education, networking, and the evening's events!

**Monday, 4:30 p.m.–5:30 p.m.**

**Expo Hall Networking Reception** — This annual networking tradition gets the night started with some tasty nibbles and a free drink (ticket included in badge materials).

**Tuesday, 9:00 a.m.–10:00 a.m.**

**Coffee and Pastries** — Start your morning with some coffee and a bagel or pastry. This is a great time to chat with exhibitors about products and services that can help improve your workplace.

**Barista Bar** presented by Catalyst —

Exclusively in  
AIHA Booth 1735



Grab an espresso to jump start your Tuesday EXPerience, presented by AIHA's Catalyst Community! Visit Booth 1735 to walk through the system, sign up, and start posting.

**Tuesday, 11:00 a.m.–3:00 p.m.**

**AIHA's Head Shot Cafe** — Need a new professional head shot — or want an updated one for social media? AIHA is proud to present the Head Shot Cafe 2019, complete with makeup artists and a professional photographer. Appointments first-come, first-served, and a minimum tax-deductible donation of \$20 to AIHF is required. Visit the AIHA Booth 1735 for your head shot.

**Tuesday, 12:00 p.m.–2:00 p.m.**

**Health Nut Break** — Carrots and celery and granola bars, oh my! Quell that hunger with some goodies that are good for you!

**Wednesday, 11:00 a.m.–1:00 p.m.**

**Build Your Own Trail Mix** — Fuel your brain for a strong finish to AIHce EXP 2019. What a perfect grab-and-go for your train, drive, or flight home!

## AIHA Booth 1735 Happenings

### Keynote Book Signing

**Monday, May 20**

**12:15 p.m.–1:00 p.m.**

Come meet our keynote speaker, Carey Lohrenz, and have your book signed!

### Learn more about The Hamilton Club

Curious about AIHA's Hamilton Club? Stop by to learn about how your organization can benefit from a partner alliance designed to complement your own strategic plan and help you more effectively reach your target audience.



### The Catalyst Community

Stop by the booth for a demonstration or to sign up and begin posting! On Tuesday, May 21 from 9:00 a.m.–10:00 a.m., Catalyst will offer a Barista Bar to help you jump start your morning!

## Pathway Passport – NEW FORMAT!

The Pathway Passport is going digital this year! Download the AIHce EXP mobile app and visit the Pathway Passport participating booths in the Expo. Once you've scanned each passport QR code, you will qualify for the Grand Prize trip to AIHce EXP 2020 in Atlanta, Georgia (or second prize of \$1,000). Winning names will be announced at 12:30 p.m. on Wednesday, May 22.

**PATHWAY**



**PASSPORT**

## New Exhibitor Pavilion

**(1700 and 1800 aisles)**

Visit these first time AIHce EXP exhibitors who have new and exciting products and services to share! The aisles around these booths are carpeted in plum to make them even easier to find!

## Learning Pavilion

**(At the end of the 1700 aisle)**

Want to hear about the latest and greatest innovations to assist you with solving your workplace problems? The Learning Pavilion is the perfect place to stay on top of what is

fresh and innovative in the industry. Check the schedule and stop by for a variety of informative presentations followed by short Q&A sessions.

## New Product Pavilion – NEW!

**(At the end of the 1200 aisle)**

Dedicated to showcasing exhibitors' newly released products and services, you won't want to miss this on your Expo explorations!

## NEW Grain Bin and Trench Rescue Demonstrations

**(At the end of the 1400 and 1500 aisles)**

Live rescue demonstrations multiple times daily by South Central College! Due to capacity limitations during each live demo, videos of the live demos will air during all open Expo hours.

**Monday, May 20**

### Grain Bin demos

10:00 a.m.–10:45 a.m. and 2:30 p.m.–3:15 p.m.

### Trench demos

11:00 a.m.–11:45 a.m. and 3:30 p.m.–4:15 p.m.

**Tuesday, May 21**

### Grain Bin demos

9:30 a.m.–10:15 a.m. and 1:00 p.m.–1:45 p.m.

### Trench demos

10:30 a.m.–11:15 a.m. and 2:00 p.m.–2:45 p.m.

**Wednesday, May 22**

### Grain Bin demo

9:30 a.m.–10:15 a.m.

### Trench demo

10:45 a.m.–11:30 a.m.

## Table Topics

**(In the front of the hall; turn left as you walk in the main entrance)**

Topics that address issues of specific interest to young professionals, those new to the profession, and students.

## Search for prizes with EXP QUEST!

Join the fun inside the conference app through EXP Quest, your passport to digital interactivity and great prizes! Answer trivia questions, take photos, find hidden locations, and more to score points in your quest to be the top IH at AIHce EXP.

Want a chance for an all-expenses paid trip to AIHce EXP 2020 in Atlanta or a \$1,000 gift card? Play the IH Passport minigame inside EXP QUEST! Find and scan all the Passport QR Codes for your chance to win. The full list of Passport exhibitors will be located at the entrance to the Expo Hall and at the AIHA booth. You can also find them on p. 62.

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# Exhibitors by Aisle

As of March 15, 2019

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Johns Hopkins Bloomberg School of Public Health .....	1008
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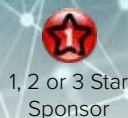
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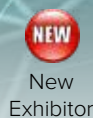


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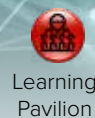
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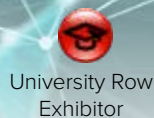
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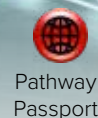
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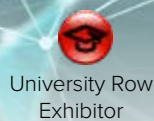
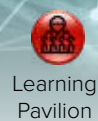
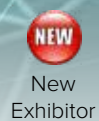
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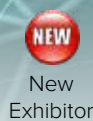


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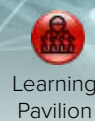
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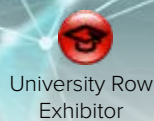
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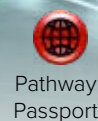
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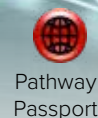
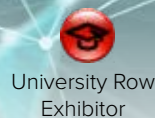
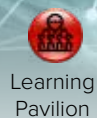
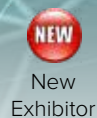
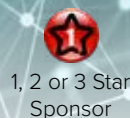
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Millington, TN 38054  
www.navy.com

**VelocityEHS | MSDSonline | Humantech ..... 1540**

222 W Merchandise Mart Plaza  
Chicago, IL 60654  
www.ehs.com  
312-881-2356  
velocity@ehs.com

**Verdant Web Technologies, Inc. .... 1434**

390 NE Emerson Avenue, Suite 120  
Bend, OR 97701  
www.verdantwebtech.com  
360-957-5245

**Verisk 3E..... 1515**

3207 Grey Hawk Court, #200  
Carlsbad, CA 92010  
www.Verisk3E.com  
760-602-8700  
info@verisk3e.com

**VICI Metronics, Inc..... 1917**

26295 Twelve Trees Lane  
Poulsbo, WA 98370  
www.vici.com  
360-697-9199

**VPPPA..... 1541**

7600-E Leesburg Pike, Suite 100  
Falls Church, VA 22043  
www.vpppa.org  
703-761-1146  
administration@vpppa.org

# Exhibitors by Alphabet

For company descriptions visit [www.aihce2019.org/Attend/Expo](http://www.aihce2019.org/Attend/Expo) or download the AIHce EXP 2019 Mobile App.

## Wavecontrol Inc. .... 1216

301 Route 17 North, Suite 402  
Rutherford, NJ 07070  
[www.wavecontrol.com](http://www.wavecontrol.com)  
201-479-9022  
[sales@wavecontrol.com](mailto:sales@wavecontrol.com)

## Westex by Milliken ..... 1749

920 Milliken Road  
Spartanburg, SC 29303  
[www.westex.com](http://www.westex.com)  
800-334-4842

## Wood ..... 1209

4020 Lake Washington Blvd, NE  
Suite 200  
Kirkland, WA 98033  
[www.woodplc.com](http://www.woodplc.com)  
425-368-0969  
[mike.s.smith@woodplc.com](mailto:mike.s.smith@woodplc.com)

## WorkCare, Inc. .... 1611

300 S. Harbor Boulevard, Suite 600  
Anaheim, CA 92805  
[www.workcare.com](http://www.workcare.com)  
800-455-6155

## Working Concepts, Inc. .... 1135

P.O. Box 1345  
Gresham, OR 97030  
[www.softknees.com](http://www.softknees.com)  
503-663-3374

## xRapid Environment ..... 1442

88 King Street, #1205  
San Francisco, CA 94107  
[www.xRapid-group.com](http://www.xRapid-group.com)  
512-748-8606  
[info@xrapid-group.com](mailto:info@xrapid-group.com)

## Zefon International, Inc. .... 1414

5350 SW 1st Lane  
Ocala, FL 34474  
[www.zefon.com](http://www.zefon.com)  
352-854-8080  
[zefoncs@zefon.com](mailto:zefoncs@zefon.com)  
HAM CLUB



## Pathway Passport Sponsors

The Pathway Passport game is part of this year's mobile app game, EXP Quest.

Using the mobile app, scan the QR code at each of the passport sponsor booths below, and you'll be entered for a chance to win one of two fantastic prizes. Winners will be announced at 12:30 p.m. on Wednesday, May 22.

**PATHWAY**



**PASSPORT**

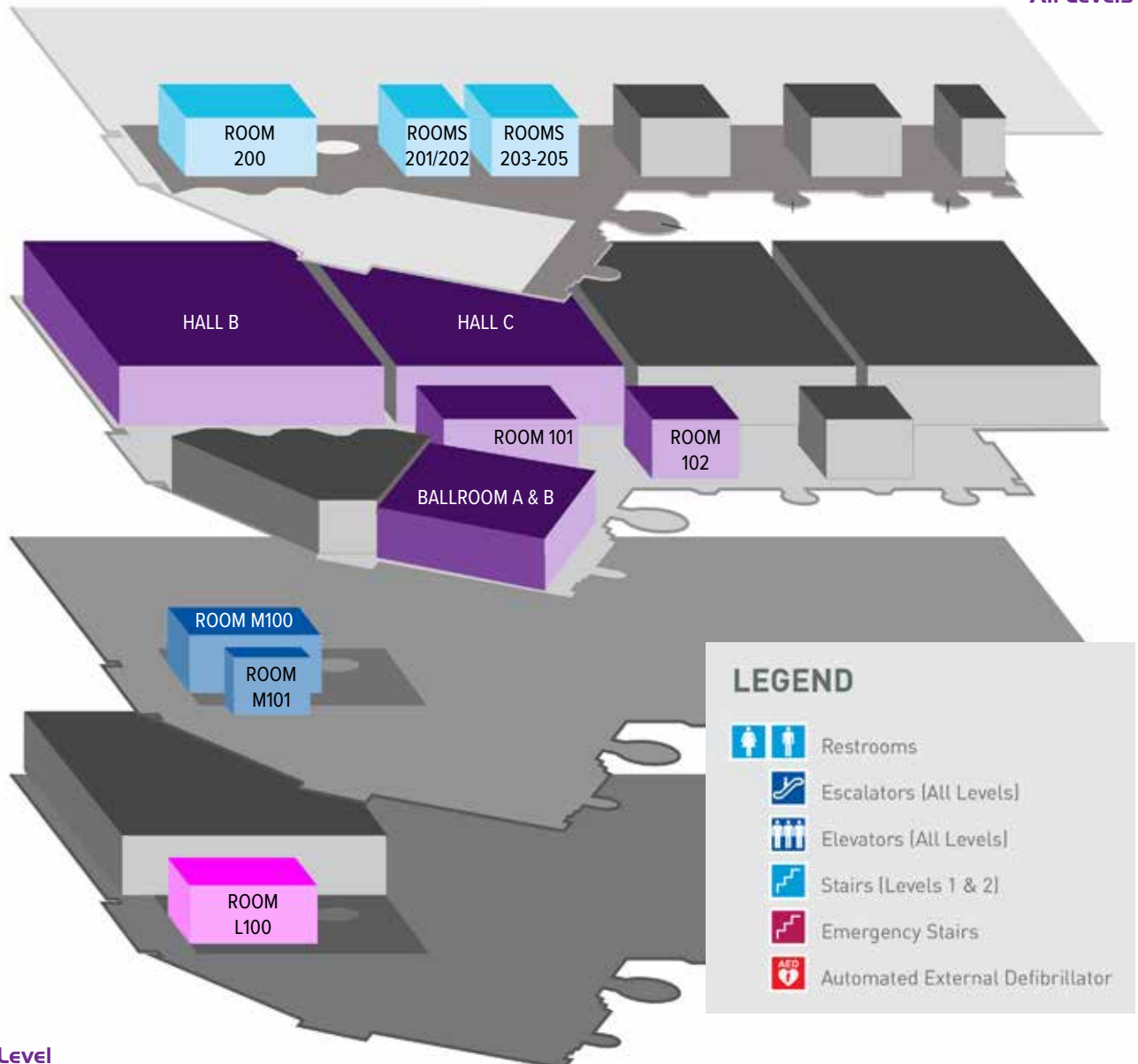
Colden Corporation		Booth 1909
Dakota Software		Booth 1109
EMLab P&K & Eurofins - TestAmerica		Booth 1403
Essilor Prescription Safety Eyewear		Booth 1647
Industrial Scientific Corporation		Booth 1415
Kinetics Noise Control		Booth 1638
Magid		Booth 1436

MilliporeSigma		Booth 1649
RAECO Rents LLC		Booth 1525
S.E. International, Inc.		Booth 1634
Scientific Analytical Institute, Inc.		Booth 1720
SDSpro		Booth 1334
SiteHawk		Booth 1626
Uniphos Envirotronic Inc.		Booth 1919

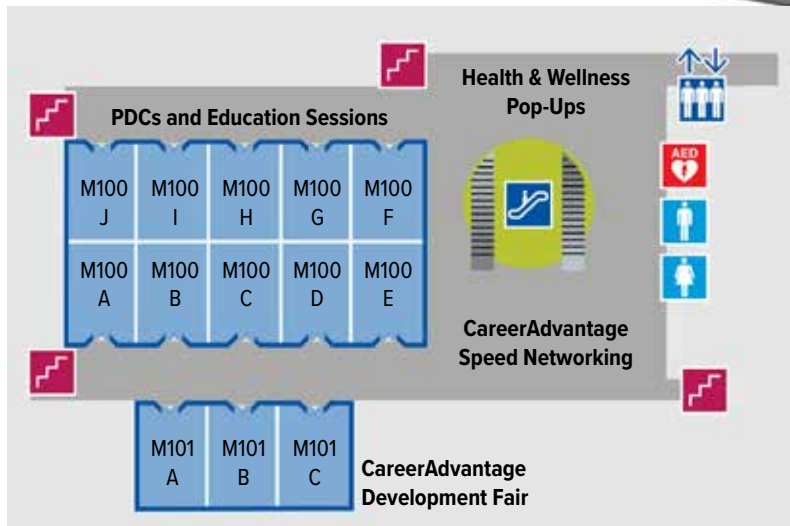


# Minneapolis Convention Center

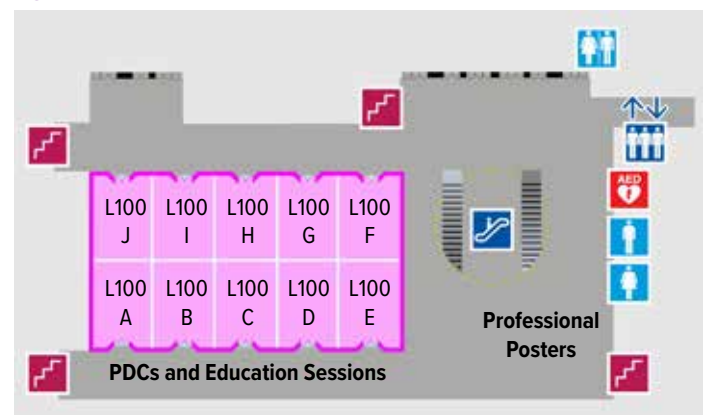
All Levels



## Mezzanine Level

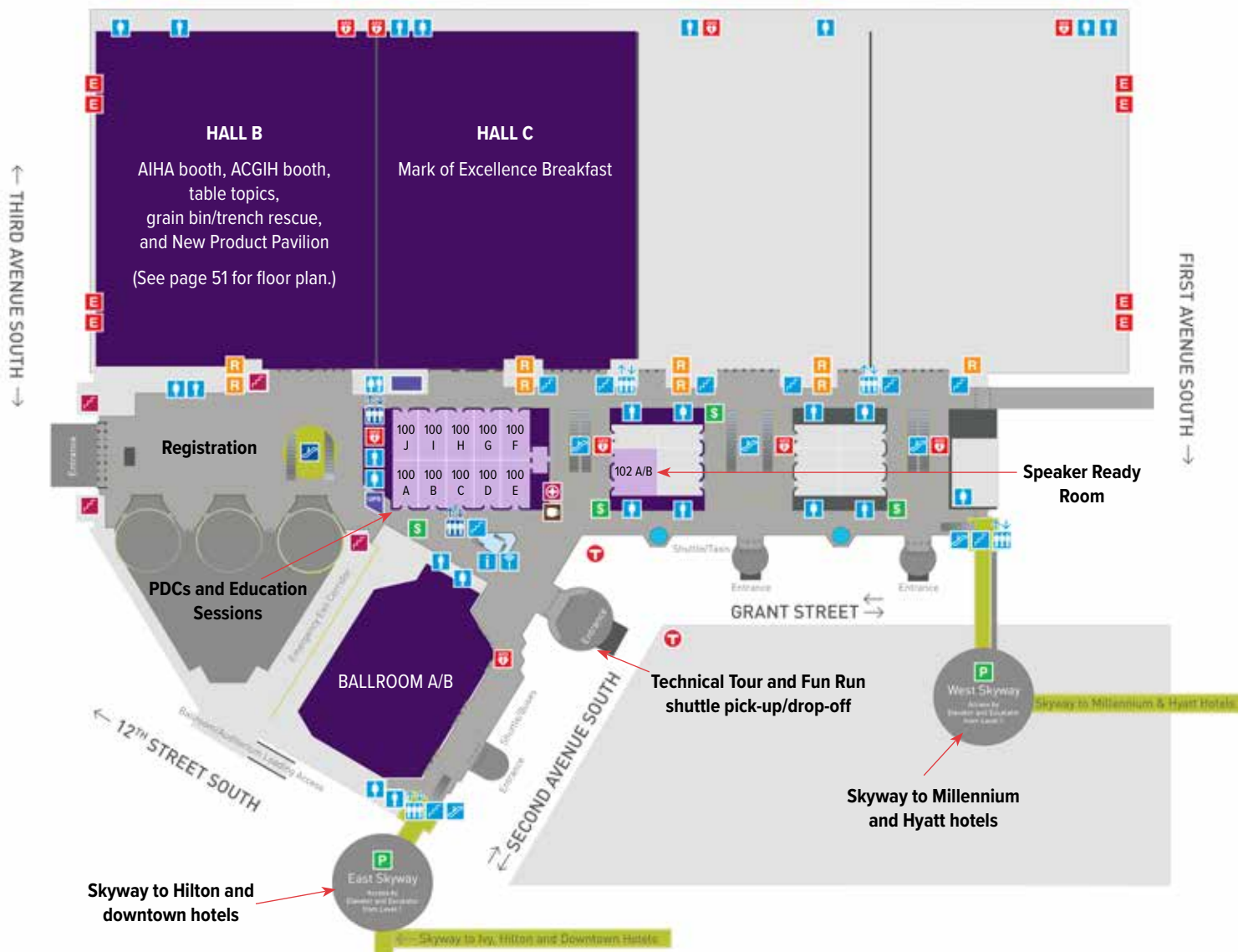


## Lower Level

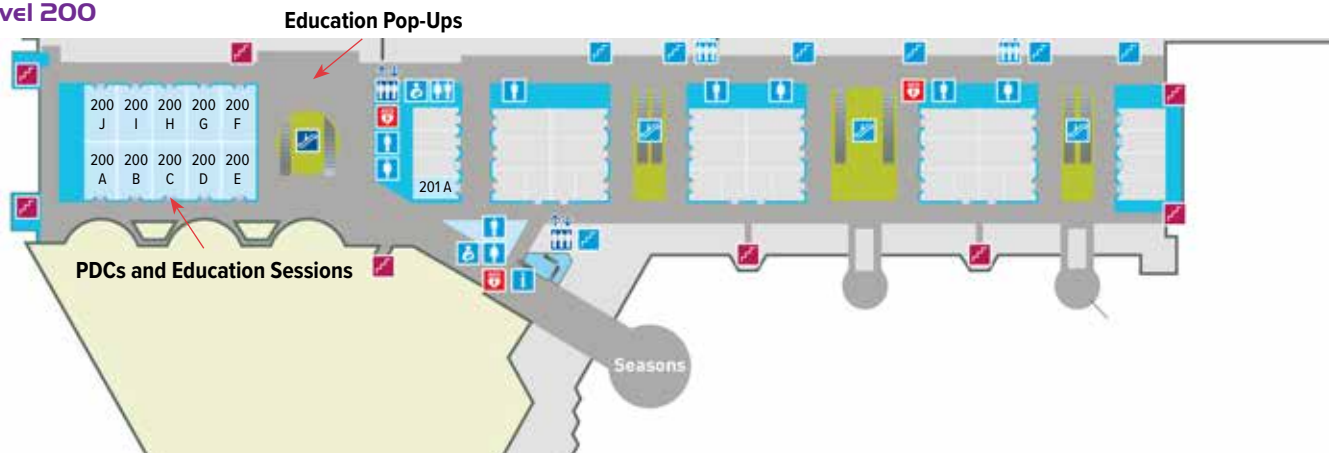


# Minneapolis Convention Center

## Level 100



## Level 200



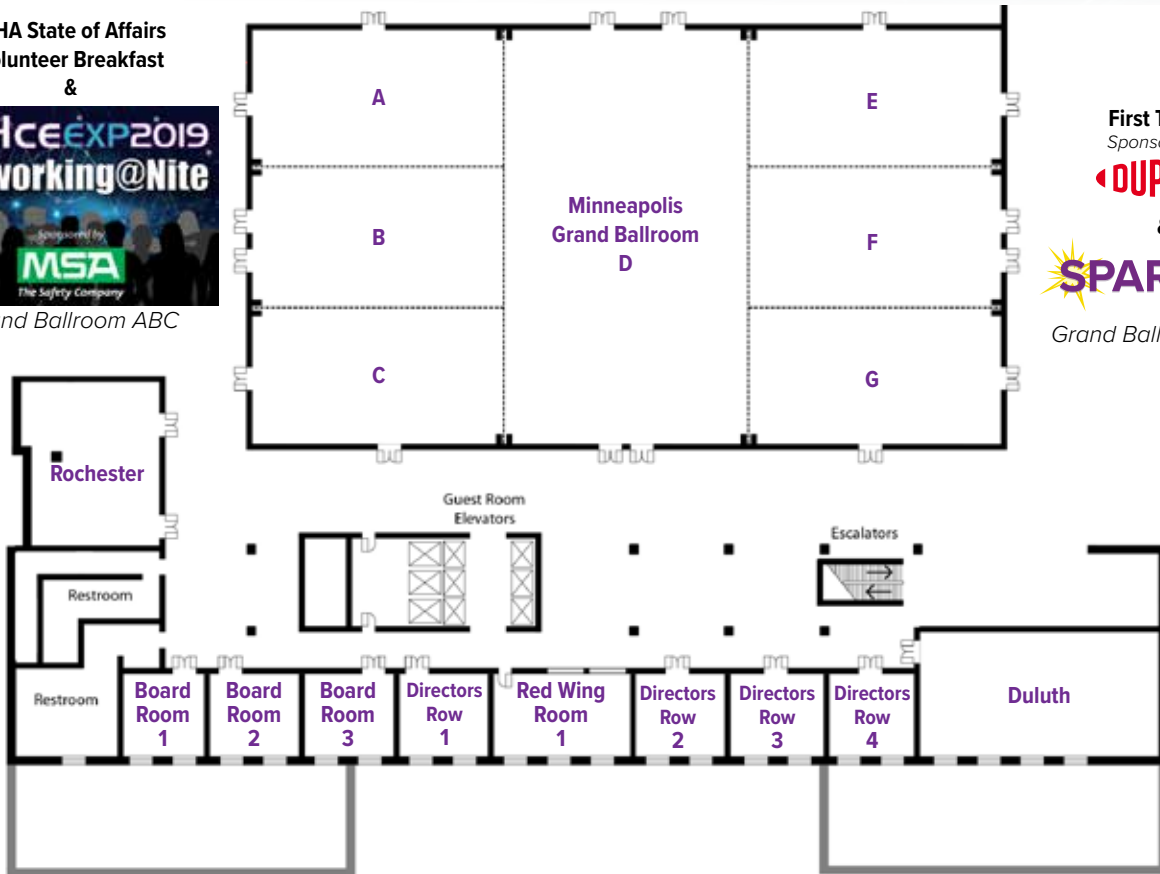
# Hilton Minneapolis

3rd Floor

AIHA State of Affairs  
Volunteer Breakfast  
&



Grand Ballroom ABC



First Timers  
Sponsored by

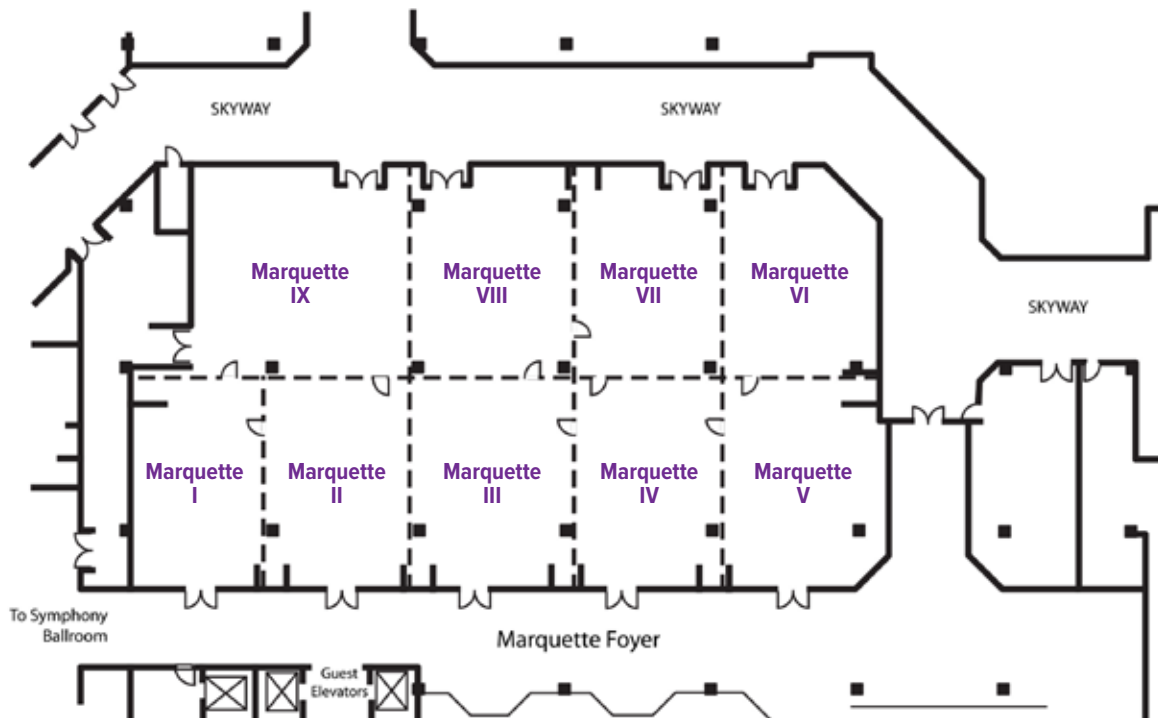


&



Grand Ballroom DEFG

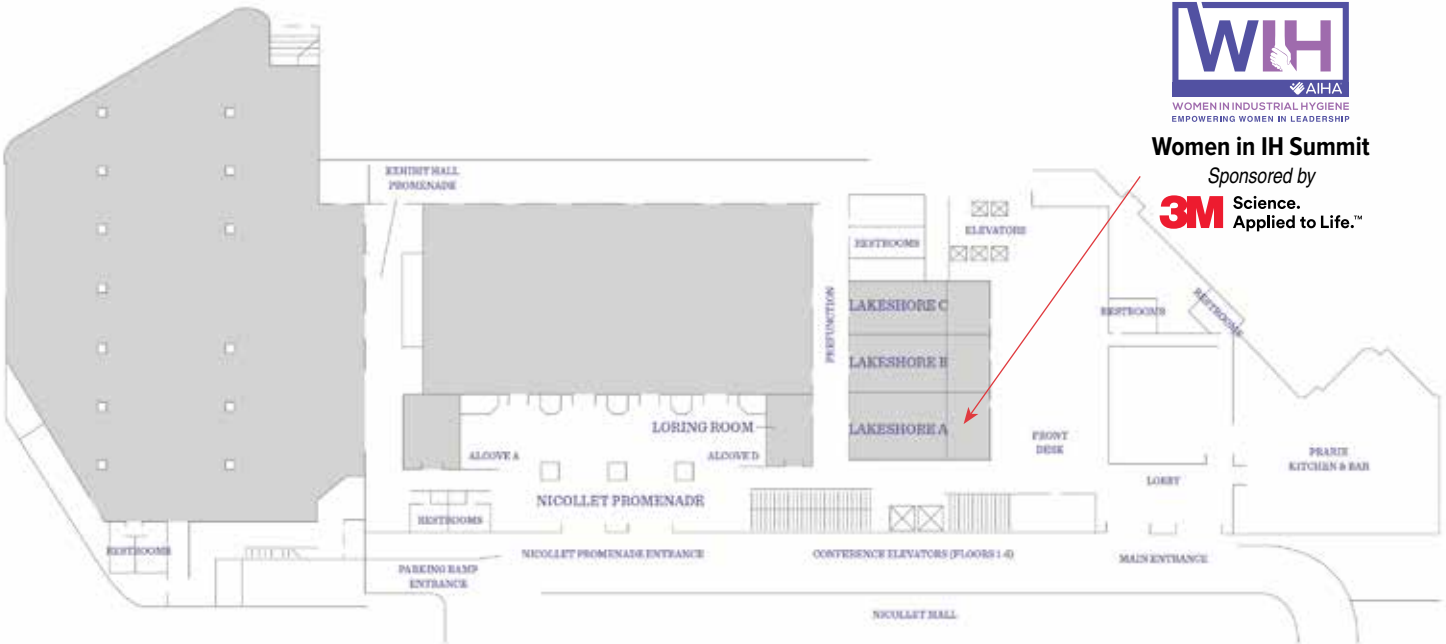
2nd Floor



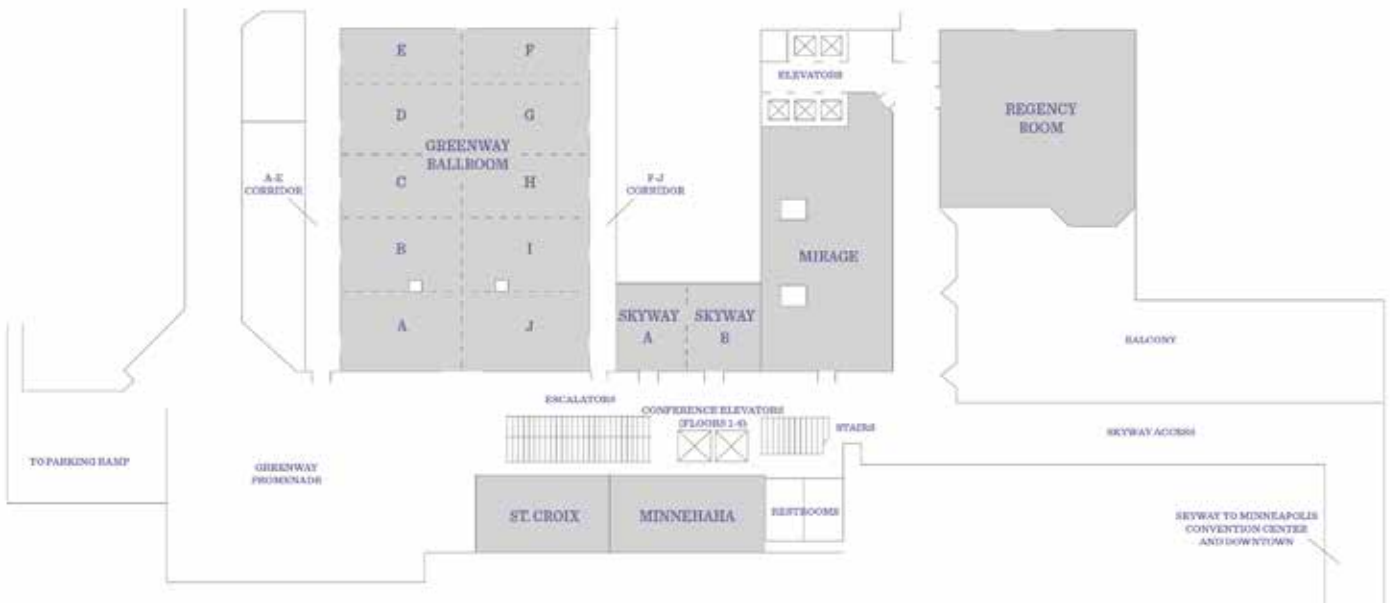


# Hyatt Regency

## Main Level



## Second Level



## Fourth Floor



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to the following volunteers for their time and expertise in assembling the 2019 program.

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