


CONFERENCE PROGRAM

Sustainable Strength through Innovation



2022
IEEE-IAS/PCA CEMENT CONFERENCE

Las Vegas, Nevada  May 1st - 5th

2022 IEEE-IAS/PCA Cement Industry Conference Las Vegas, NV



IEEE

IAS
IEEE INDUSTRY
APPLICATIONS
SOCIETY



PCA[®]

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Cement
Manufacturers[™]



I would like to formally welcome you to the 64th Annual IEEE-IAS/PCA Cement Industry Technical Conference. Among the numerous things that Las Vegas is renowned for, being home to some of the largest conferences pertaining to the mining and construction industries has become one of them, making our

conference location feel like a perfect match. The conference venue this year is the spectacular MGM Grand Hotel on the world-famous Las Vegas Strip.

Since its inception, the goal of the conference has been focused on “Knowledge Transfer.” This event continues to be the premier annual technical conference for the cement industry and includes technical paper presentations, panel discussions, training opportunities and vendor exhibits. From offering the latest in environmental, health and safety compliance, to showcasing the latest development in “best practices” in the operational and maintenance fields, to decarbonization approaches to our processes, you will have access to a variety of delivery formats for technical information exchange.

Training will continue this year with a MSHA refresher training session. There will also be a 12-module process training series geared to various technical challenges including decarbonization within cement manufacturing. In addition, based on the positive feedback we received during last year’s virtual conference, there will be three round table discussions (one each day) that will focus on carbon footprint reduction themes. Again, as in past years, meeting areas will be available by reservation, for cement producer teams to privately discuss their procurement needs with vendors in attendance.

We continue to value the tremendous support of our loyal vendors, so please take the opportunity to visit the 160+ supplier partners in the exhibit hall and learn about their latest offerings. The conference lunch will be served in the exhibit hall on Monday and Tuesday with a social hour each evening offering opportunities for networking.

On Thursday, there will be a tour of the historic Hoover Dam in nearby Boulder City. Not only is the dam an engineering marvel, it is a monument showcasing the strength and durability of cement/concrete.

(continued on page 4)

WELCOME LETTER

(continued from page 3)

I would like to thank the numerous industry volunteers involved with organizing this year's conference. This includes the CIC Working Groups and the PCA staff who organize, develop and vet the technical content of the conference, and the Local Organizing Committee who develop and direct the conference logistics with the support of various event management professionals, audio/visual experts, and exhibition services. It has been my pleasure and honor to work with such a dedicated group of professional volunteers.

Lastly, I'd like to take a moment to acknowledge how difficult and challenging these past two years have been with the COVID-19 pandemic, in all areas of our lives. We have been forever changed with the loss of friends and relatives, resulting in adaptations to daily life, that might never completely return to pre-2020 approaches. This conference is not immune to these changes, and we are truly at a tipping point as we redefine and implement "Knowledge Transfer," the very goal of every conference. I for one have always valued the face-to-face interactions that this conference has provided me to learn and discuss, network among industry colleagues, and build relationships that often last a lifetime, and I look forward to many more. I wish all of you a safe, successful, and enjoyable conference experience. Thank you for joining us.




Brett Lindsay

Local Organizing Committee Chair
2022 IEEE-IAS/PCA Cement Industry Conference

Sustainable Strength through Innovation



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GENERAL CONFERENCE NOTES

Conference Registration

Conference Registration is located on the Third Floor of the MGM Grand Conference Center, Sunday through Wednesday.

Registration will be open:

Sunday, May 1	12:00pm-6:00pm
Monday, May 2.....	7:00am-5:00pm
Tuesday, May 3	7:30am-4:00pm
Wednesday, May 4.....	7:30am-12:00pm

The full conference registration fee includes a copy of the Conference Record, the conference luncheons on Monday, Tuesday and Wednesday, Exhibits and Awards Reception.

The Spouse Tours and MSHA Recertification Course, though included with your registration fee, must be registered for separately.

The Hoover Dam Tour, Round Table Discussions and the Process Training modules must be registered for separately at an additional cost. Attendance is limited. These items are marked with an asterisk (*) in the schedule shown in this guide.

Technical Sessions

All conference technical sessions will be held in the Chairman's Ballroom (353-362) & (363-370). Everyone must have a conference badge for entry.

Awards Reception

The Awards Reception will be held on Wednesday, May 4 in the Chairman's Ballroom (355-362). The reception starts at 6:30pm and continues with the Vegas style entertainment and awards until 9:30pm.

Photos

In connection with the conference, the conference sponsors will be taking candid photographs of conference attendees (for use in connection with the conference's awards reception and future conference marketing materials). Your attendance at, and participation in the conference constitutes your consent to the use of your likeness in such photos without any compensation.

CONFERENCE SCHEDULE OVERVIEW

Notes: Sign-up required for the MSHA Recertification, Process Training, Hoover Dam Tour and Spouse Tours. Please see Registration Desk.

	Sun		Mon		Tue		Wed		Thu	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
MSHA Recertification										
Exhibition										
Roundtable Discussions										
Process Training										
Tech Sessions										
Hoover Dam Tour										

2022 Conference Mobile App!

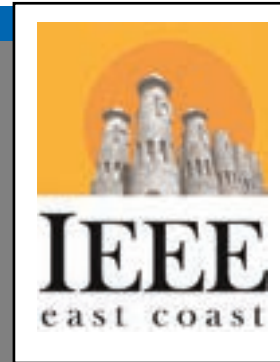
You can download an App for your iPhone, iPad or Android to enhance your conference experience using the QR code or follow the directions further below.

- Schedule changes on a real time basis
- Event locator complete with maps
- Search and locate exhibitors
- Send and receive messages from other attendees
- Complete surveys in real time during the conference
- Maintain a list of favorite contacts or data collected during the conference
- And more!



To download the app, search the Google or Apple App store for **IEEE-IAS/PCA Cement Conference**. Download, install and open. Login with your First Name, Last Name and email address used to register. Enter the verification code that will be texted and emailed to you.

OCTOBER 20-21, 2022



**SAVE
THE DATE!**

IEEE East Coast Cement Industry Conference Birmingham, AL

Technical Program

Thursday, Oct. 20

Thursday's program will focus on training and development activities along with a vendor's workshop.

Thursday evening will include a vendor sponsored cocktail hour and dinner.

Friday, Oct. 21

Friday morning will be focused on the most relevant technical presentations selected by the manufacturers on our local committee.

Friday afternoon will include a plant tour.

www.ieeeeastcoast.com

CONFERENCE SPONSORS

PLATINUM



CONFERENCE SPONSORS

GOLD



SILVER



BRONZE



PROCESS TRAINING*

*Tutorial and Process Training must be registered for separately and requires a small fee.

Monday, May 2, 2022		Tutorial	Room
8:00am-5:00pm	MSHA Part 46 Refresher Trainer: Tom Burgess - Industrial Kiln		306
Monday, May 2, 2022			Room
7:30am-8:15am	Round Table Discussion: Challenges in Specifying Cement and Concrete Additives for CO₂ Reduction – Round Table Discussion includes continental breakfast. David Fortsch - Bridge Gap Engineering		352-354
8:30am-10:15am	Introduction to Carbon Neutrality – This training module will set the stage for the remainder of Monday’s Process Training sessions. This session will enable participants to gain an understanding of the traditional levers for CO ₂ emissions reductions, such as: energy efficiency, lower carbon fuels, lower amounts of clinker in cements, and the use of supplemental cementitious materials. In addition to cement producers, the implications for equipment suppliers also will be explored. John Kline - Kline Consulting		301-302
10:30am-12:15pm	Carbon Reduction Technologies – This training module will review all of the current technologies for carbon reduction, carbon capture, and carbon utilization that have been developed globally to date. This session will compare and contrast the various technologies and demonstrate the locations that these technologies can be applied in the cement industry. Again, the implications for vendors and equipment suppliers will be explored in addition to cement producers. John Kline - Kline Consulting		301-302
12:15pm-1:15pm	Lunch		Exhibit Hall

PROCESS TRAINING*

Monday, May 2, 2022, cont’d.		Room
1:15pm-3:00pm	Carbon Reduction Projects – This training module will review already commissioned and/or ongoing Carbon Reduction Projects in the cement industry worldwide. The basic principles of each project will be discussed as well as the pros and cons of each technology with the objective of allowing the attendees to see for themselves which projects could benefit which plants. Again, opportunities for cement producers and equipment suppliers will be explored. John Kline - Kline Consulting	301-302
3:15pm-5:00pm	A Stepwise Approach to CO₂ Emissions Reductions – This training module will identify specific steps that individual cement plants can take to reduce their CO ₂ emissions. This session will help to empower cement plant personnel to develop their own carbon neutral plans. This session will create opportunities for vendors, consultancy engineers, and technology providers to assist in the development of plans to lower plant CO ₂ -intensity for individual cement producers. John Kline - Kline Consulting	301-302
Tuesday, May 3, 2022		Room
7:30am-8:15am	Round Table Discussion: Challenges in Reducing Clinker Factor for CO₂ Reduction – Round Table Discussion includes continental breakfast. John Kline - Kline Consulting	352-354
8:30am-10:15am	Introduction to Digitalization of the Cement Industry – This training module will set the stage for the remainder of Tuesday’s Process Training sessions. This session will highlight the importance of new and emerging instrumentation and control technologies in the cement industry. Christoph Muschaweck - DALOG	301-302

PROCESS TRAINING*

*Process Training must be registered for separately and requires a small fee.

Tuesday, May 3, 2022, cont'd.		Room
10:30am-12:15pm	Successful Thermal Imaging – This training module will explore the latest advances in thermal imaging in cement plants. The implications for the various features and benefits of these technological advances will be described. Max Salisbury - Thermoteknix	301-302
12:15pm-1:15pm	Lunch	Exhibit Hall
1:15pm-3:00pm	Successful Raw Mix Control, Blending, and Kiln Feed – This training module will highlight the implications for modern analytical tools through the merger of NIR/XRD/CAN/XRF technologies. Again, the implications (e.g. return on investment) will be explored. Jeffrey Kemmerer - Malvern PANalytical	301-302
3:15pm-5:00pm	Successful Ball Mill Operation via Advanced Controls – This training module will explore the various technologies available for improved ball mill performance. The implications for artificial intelligence will be explored. Andy Smith - Sympatec	301-302
Wednesday, May 4, 2022		Room
7:30am-8:15am	Round Table Discussion: Challenges in Reducing CO₂ through Alternative Fuels Usage – Round Table Discussion includes continental breakfast. Peter Paone - Bridge Gap Engineering	352-354
8:30am-10:15am	Process Analysis – This training module will consist of basic methodologies that plant personnel should be using to diagnose their plant's performance. This training module will set the stage for the remainder of Wednesday's Process Training sessions, culminating in the opportunities for lowered specific fuel consumption. David Fortsch - Bridge Gap Engineering	301-302

PROCESS TRAINING*

Wednesday, May 4, 2022, cont'd.		Room
10:30am-12:15pm	Process Equipment and Measurements – A review of commonly used equipment for the purposes of process analysis with an emphasis on how to use such equipment. Classic equipment such as pitot tubes, thermocouples, anemometers will be reviewed, but also newer technologies such as ultraviolet and infrared imaging, etc. David Fortsch - Bridge Gap Engineering	301-302
11:30am-1:30pm	Lunch	Premier Ballroom
1:15pm-3:00pm	Safety Considerations for Kiln & Calciner Start-Up and Operation Using Natural Gas – This training module will present the latest recommendations for ignition systems, flame detection, and purging cycles. The primary emphasis of this session will be safety. Tahir Abbas - Cinar Ltd. Troy Pelfrey - H2E	301-302
3:15pm-5:00pm	Heat Consumption – This training module will identify the various sources of heat losses in the clinkering process, including: the theoretical heat of reaction. This session will focus on opportunities to mitigate excessive heat consumption and the importance of control mechanisms for improved energy consumption. Kimberly Gordon - Bridge Gap Engineering	301-302

SPOUSE / COMPANION PROGRAM*

Sunday, May 1, 2022

12:00pm-5:00pm	Registration open. All tours will originate in Room 304-305 with the group being escorted to the bus pick up location.
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Monday, May 2, 2022

8:00am-9:30am	Spouse & Sponsor Welcome Breakfast - Room 304-305
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10:00am-3:30pm	Sights & Bites Foodie Tour – Kick off the tour day with a bang with a stop at the iconic Welcome to Las Vegas sign. Continue your journey along the Vegas Strip, seeing sites and sharing fun facts and tidbits of the history of Las Vegas. End with an amazing walking foodie tour that will not disappoint your taste buds! You will try popular signature dishes from the hottest restaurants in the revitalized Down Las Vegas as well as an insider's view of Downtown Las Vegas' historic past. (transportation provided)
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Tuesday, May 3, 2022

8:00am-9:00am	Spouse Continental Breakfast - Room 304
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9:30am-4:15pm	Viva Las Vegas – The day starts at the famous Bellagio Conservatory and Botanical Garden for a self-guided experience of the wonderful fragrances and magnificent artwork created for their seasonal Spring showcase followed by retail therapy at the designer brand stores at the Bellagio signature shops. Lunch will be at the Chayo Kitchen located on the LINQ Promenade, where you will enjoy authentic and upscale Mexican cuisine. To finish the day, you will hop aboard the High Roller to experience some breathtaking views of Las Vegas from 550 feet up in the air. The High Roller ride lasts approximately 30 minutes while you enjoy an open bar. (transportation provided)
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Wednesday, May 4, 2022

8:00am-9:30am	Spouse Continental Breakfast - Room 304
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***Spouse / Companion registration is required to attend the spouse activities, the awards banquet and for access to the exhibit hall and special tours described above. Participants must register in order to attend.**

PCA COMMITTEE SCHEDULE

Monday, May 2, 2022

		Room
8:00am-11:00am	Joint E&E/MTC Committee Meeting	350-351
1:00pm-4:00pm	MTC Meeting	352
11:00am-4:00pm	E&E Meeting	350-351

Portland Cement Association

Manufacturing Technical Committee

Co-chair: Kenny Miller, Monarch Cement Company
Co-chair: Andy Edwards, Ash Grove Cement Company

Environmental and Energy Committee

Chair: Adam Swercheck, Lehigh Hanson Inc
Vice-chair: Gina Lotito, GCC of America

Occupational Health and Safety Committee

Co-Chair: Robin Markussen, Lehigh Hanson Inc
Co-chair: Gary Shaffer, Continental Cement Company

SCHEDULE

Sunday, May 1, 2022		Room
12:00pm-6:00pm	Conference Registration	3rd Floor Lobby
12:00pm-5:00pm	Speaker Ready Room open	303
7:00am-8:00am	IEEE-IAS CIC Joint Executive Committee and Working Group Chairs and Vice Chairs Breakfast (closed)	350
8:00am-9:00am	IEEE-IAS CIC Nominations Committee Meeting (closed)	301
8:00am-9:00am	IEEE-IAS CIC Conference Liaison Working Group / Site Selection Committee Meeting (closed)	302
8:00am-9:00am	Young Professionals Steering Committee (closed)	304
8:00am-9:00am	Bylaws & Historian Working Group (closed)	305
8:00am-9:00am	Technical Content Steering Group (Closed Session)	353
9:00am-12:00pm	IEEE-IAS CIC Executive Committee Meeting (closed)	306
12:00pm-1:15pm	IEEE-IAS CIC Full Committee Meeting (closed) (working lunch)	351-352
1:30pm-3:00pm	Breakout – Automation Working Group	353
1:30pm-3:00pm	Breakout – Drives Working Group	354
1:30pm-3:00pm	Breakout – Environmental, Energy and Sustainability	301
1:30pm-3:00pm	Breakout – General Practices Working Group	302
1:30pm-3:00pm	Breakout – Power Generation	304
1:30pm-3:00pm	Breakout – Maintenance and Safety	305
3:00pm-4:00pm	IEEE-IAS CIC Full Committee Meeting (closed)	351-352
5:00pm-7:00pm	Exhibit Reception	Premier Ballroom

SCHEDULE

Monday, May 2, 2022		Room
7:00am-5:00pm	Conference Registration	3rd Floor Lobby
7:30am-5:00pm	Process Training - see pages 8-9	
8:00am-5:00pm	Speaker Ready Room open	303
8:00am-5:00pm	TUTORIAL: MSHA Part 46 Refresher - Tom Burgess, Industrial Kiln & Dryer Group	306
11:30am-1:30pm	Lunch in Exhibit Hall	Premier Ballroom
11:30am-6:00pm	Exhibit Hall Open	Premier Ballroom
12:00pm-1:00pm	Lunch for Speakers/Authors (closed)	304-305
1:00pm-5:00pm	Speaker/Author Practice Session (closed)	355-362
3:00pm-4:00pm	Media Reception	307
4:00pm-6:00pm	Exhibit Reception	Premier Ballroom

SCHEDULE

Tuesday, May 3, 2022		
7:30am-4:00pm	Conference Registration	3rd Floor Lobby
11:30am-1:30pm	Exhibit Hall open	Premier Ballroom
Chairman's Ballroom (355-362)		
8:30am-8:35am	Conference Opening by IEEE-IAS CIC Chair, Doug Phares	
8:35am-8:40am	Welcome Address by 2022 Local Chair, Brett Lindsay	
8:40am-8:45am	Opening by IEEE-IAS CIC Vice-Chair, Brian Keefe	
8:45am-9:47am	Keynote Speaker: Jamie Notter, author and culture designer at Human Workplaces	
9:47am-10:05am	Break	
10:05am-11:07am	Keynote Speaker: Chad Hymas, speaker, author, influencer	
11:07am-11:44am	Keynote Speaker: 'How the global cement industry is secretly changing in front of our eyes' - Dr. Rob McCaffrey	
11:44am-11:46am	Closing Remarks	
11:30am-1:30pm	Lunch in Exhibit Hall - Premier Ballroom	

SCHEDULE

Tuesday, May 3, 2022 - General Sessions	
Chairman's Ballroom (355-362)	
1:34pm-2:26pm	Environmental, Energy & Sustainability Session
1:34pm-1:50pm	<i>Activating Clay to Help Achieve CO₂ Emissions Goals by 2050</i> - Adriano Greco - FCT Combustion - Pedro Ladeira - FCT Combustion
1:52pm-2:08pm	<i>Reducing Compressed Air Consumption for Filter Bag Cleaning with Advanced Cleaning Controls and Cleaning System Design</i> - Daniel Locke - Scheuch North America
2:10pm-2:26pm	<i>High-Temperature Pleated Filters for Cement Kiln Baghouses and Other Elevated Temperature Applications</i> - Dale Kadavy - Parker Hannifin - Yit-Hong Tee - Parker Hannifin
2:26pm-2:38pm	Questions and Answers
2:38pm-2:40pm	Closing Remarks
2:40pm-3:00pm	Break
3:00pm-4:32pm	Panel Discussion – Evolving Environmental & Sustainability Topics Moderator: Scott Zolotsky, IAC Panelists: Brian Burdorf - Trinity Consultants, Inc. Wendy Merz - Trinity Consultants, Inc. Adam DeVoe - Adam DeVoe Law Firm Kevin Lauzze - Sargent & Lundy
4:32pm-4:34pm	Closing Remarks
5:00pm-7:00pm	Exhibit Reception - Premier Ballroom

SCHEDULE

Tuesday, May 3, 2022 - General Sessions	
Room 363-370	
1:34pm-2:26pm	Power Generation, Distribution & Related Products Session
1:34pm-1:50pm	<i>The (In)direct Electrification of the Cement Industry: The Contribution of Waste Heat Recovery Projects</i> - Xavier d'Hubert - XDH-energy - Lorenzo Minetti - CTP Team SRL - Joao Meyer - SECIL
1:52pm-2:08pm	<i>Use of Battery Energy Storage Systems for Cement Production Facilities</i> - Tim Corrigan - Convergent Energy + Power - Steve McKenry - Convergent Energy + Power - GianPaula Hulten - Convergent Energy + Power - Christian Gould - Convergent Energy + Power
2:10pm-2:26pm	<i>The Advancement of Industrial LED Lighting, Its Current Pros, Cons and Future Applications</i> - Marc Elliott - Eaton Corp. - Asiri Jayawardena - Eaton Corp. - Adam Nugent - Eaton Corp.
2:26pm-2:38pm	Questions and Answers
2:38pm-2:40pm	Closing Remarks
2:40pm-3:00pm	Break
3:04pm-3:56pm	Drives & Related Products Session
3:04pm-3:20pm	<i>Reaching Environmental, Social & Governance (ESG) Goals with Medium Voltage (MV) Variable Frequency Drives (VFDs)</i> - Manish Verma - TMEIC - Doug Phares - TMEIC
3:22pm-3:38pm	<i>Configuring the Parameters of a RVSS to Start a High Torque Induction Motor Load with a Soft Pull-In</i> - Stan R. Simms - Eaton - Gabriel Braga - PWP Lab - Geraldo Nojima - Eaton - Thomas A. Farr - Eaton
3:40pm-3:56pm	<i>VFDs on Process Fans – When Are They a Good or Bad Idea</i> - Bryan Cook - Ash Grove Cement Company - Kevin Grotheer - Ash Grove Cement Company
3:56pm-4:08pm	Questions and Answers
4:08pm-4:10pm	Closing Remarks
5:00pm-7:00pm	Exhibit Reception - Premier Ballroom

SCHEDULE

Wednesday, May 4, 2022		
7:30am-12:00pm	Conference Registration	3rd Floor Lobby
Chairman's Ballroom (355-362)		
8:30am-8:32am	PCA Session Opening	
8:32am-8:45am	State of the Cement Industry – Michael Ireland, PCA	
8:45am-9:30am	Economic Outlook – Ed Sullivan, PCA	
9:30am-9:45am	Roadmap to Carbon Neutrality Update – Rick Bohan, PCA	
9:45am-10:00am	Break	
10:00am-10:30am	ASTM's Xcellerate Program – Cesar Constantino, CemAI Inc.	
10:30am-11:00am	Flexible Solutions for Solid Alternative Fuel Handling – Brian Giese, Beumer	
11:00am-12:00pm	Hydrogen: Possibilities and Potential in the Cement Industry – Rick Beuttel, Bloom Energy – Matt McMonagle, NovoHydrogen – Jim Petrecky, Ohmium	
11:30am-1:30pm	Lunch in Premier Ballroom	

SCHEDULE

Wednesday, May 4, 2022 - General Sessions	
Chairman's Ballroom (355-362)	
1:34pm-3:24pm	General Practices Session
1:34pm-1:50pm	<i>Trouble Shooting During Commissioning Phase - A Case Study</i> - Syed Suhail Akhtar - Holcim (US) Inc. - Tahir Abbas - Cinar Ltd. - Shan Raza - Cinar Ltd. - Naminda Kandamby - Cinar Ltd.
1:50pm-2:08pm	<i>Small Volume Concrete Walled Silo Solutions</i> - Gerry Lynskey - SSI Consulting - Josh Foote - Borton LC
2:08pm-2:26pm	<i>Flexibility with A Modular Grinding Plant - Case Study</i> - Caroline Woywadt - Gebr. Pfeiffer SE - Jannik Schmalenberger - Gebr. Pfeiffer SE
2:26pm-2:44pm	<i>Decarbonization through Oxy-combustion and H₂ as a Fuel</i> - Syed Suhail Akhtar - Holcim (US) Inc. - Tahir Abbas - Cinar Ltd. - Michalis Akritopoulos - Cinar Ltd.
2:44pm-3:02pm	<i>The Evolution of the Modern Coal Grinding System</i> - Richard Schmidt - R&T Technical Services
3:02pm-3:22pm	Questions and Answers
3:22pm-3:24pm	Closing Remarks
6:30pm-9:30pm	Awards Reception – Chairman's Ballroom (355-362)

SCHEDULE

Wednesday, May 4, 2022 - General Sessions	
Room 363-370	
1:34pm-2:26pm	Automation Session
1:34pm-1:50pm	<i>Virtual Reliability Manager – How to become the SMART Cement Plant of Tomorrow Today</i> - Joe Haney - IAC
1:50pm-2:08pm	<i>A New Era, the Advent of the PGNAA Air Slide Analyzer</i> - Dr. Thomas Atwell - XRSciences - Colin Charette - XRSciences - Kyle Foletta - XRSciences - Luigi Buzzi - Buzzi Unicem USA - Saeed Shojaei - Buzzi Unicem USA - Craig Conklin - Buzzi Unicem USA - Michele Maranzana - Buzzi Unicem USA - Alissa Collins - LafargeHolcim - Rick Darnell - LafargeHolcim
2:08pm-2:26pm	<i>New Kiln Inlet Gas Analysis Technology</i> - Karsten Brink Floor - FLO ₂ R - Ben Goossens - ABB
2:26pm-3:02pm	Maintenance & Safety Session
2:26pm-2:44pm	<i>Safety and Maintenance Design Considerations at Terminals</i> - Adam Aagard - Engineering System Solutions (ES2)
2:44pm-3:00pm	Questions and Answers
3:00pm-3:02pm	Closing Remarks
6:30pm-9:30pm	Awards Reception – Chairman's Ballroom (355-362)

HOOVER DAM TOUR INFORMATION

Thursday, May 5, 2022

Tour participants meet in the MGM 1st floor Conference Center center lobby near the Starbucks. Please arrive prior to your tour departure time so that all tours will leave on time.

*Number of tours subject to change based on participation.

TOUR #1 – Departs MGM Grand at 8:00am*

TOUR #2 – Departs MGM Grand at 8:30am*

TOUR #3 – Departs MGM Grand at 9:00am*

TOUR #4 – Departs MGM Grand at 9:30am*

Once you arrive at Hoover Dam, your Tour will begin with a 10-minute movie about the history of the Hoover Dam. Then proceed to the elevators that go down 550 feet to the 50 ft. construction tunnels that house the Penstock Pipes. While standing on a platform, the guides will make 15-minute presentation about the 30 ft. pipes below your feet that carry the water which drives the turbines. The next stop takes you to a viewing platform in the Nevada wing to see the 8 turbines with your guides will highlight the turbines, house generators and various specifications. Then an elevator ride back up to the Visitor Center with two levels of exhibits, an observation deck above and access to the 1940's style old exhibit hall.

Self Guided Visitor Center Tour – Immerse yourself in the history of Hoover Dam as you walk through our narrated exhibits. Enjoy a 360 degree view of the Dam, Colorado River, Lake Mead and Hoover Bypass Bridge from the Observation Deck. Visit the Original Exhibit Building with narrated 3D model of the region's dams and power systems.

Please note:

- Person with pacemakers or other implanted devices – Be advised that generators produce an electromagnetic field which may interfere with the operation of certain devices.
- Persons with Claustrophobia – Be advised the Powerplant Tour includes an elevator ride and walking through a tunnel.
- We suggest dressing comfortably and wear comfortable walking shoes. Shirt and shoes are always required and clothing should be appropriate for a family friendly facility and your safety.
- Tours into the Dam involve short trips in tight quarters where physical contact with others is likely.
- Items not allowed on tour or in any building at Hoover Dam – Weapons or knives of any size (including pocket knives). Food, canned drinks or drinks in cups are NOT ALLOWED in any Hoover Dam building. Water bottles are permitted.

PCA EDUCATION FOUNDATION

Since 2002, the Portland Cement Association Education Foundation has funded a wide variety of educational activities that:

Advance general scientific understanding of cement and concrete by providing scholarships, fellowships, grants, and other support for the study of engineering and the physical sciences relating to the production and use of cement and concrete.

A partial list of the 79 research fellowship award winners is noted below. For more information regarding the PCA Education Foundation and the J. P. Gleason Research Fellowship Program, go to www.cement.org/educationfoundation.

2010

Bryan Wilson
Brigham Young University
Eric Giannini
University of Texas at Austin
Robby Borden
Washington State University
Joel Sikkema
Iowa State University

2011

Tengfei Fu
Oregon State University
Ashlee Hossack
University of New Brunswick

2012

Jake Tolbert
Brigham Young University
Ashrafal Alam
Washington State University

2013

Mahmoodreza Soltani
Clemson University
Federico Aguayo
University of Texas at Austin
Kamran Armeni
Iowa State University

2014

Jessica Kettelkamp
Northern Arizona University
Yaghoob Farnam
Purdue University
Stephen Stacey
University of Texas at Austin
Kaveh Afshinnia
Clemson University

2015

Konstantin Sobolev
University of Wisconsin-Milwaukee
Kamran Amin
Iowa State University
Kevin Foliard
University of Texas at Austin

2016

Yanqi Luo
University of California, San Diego
Tyler Deboodt
Oregon State University

Taylor Sorensen
Utah State University

Kamran Amini
Iowa State University

2017

Kamran Amini
Iowa State University

Taylor Sorensen
Utah State University

Robert Stevens & Tenli Waters
Brigham Young University

2018

Jinho Kim
Texas A&M

Othman Alshareedah
Washington State University

Sivakumar Ramanathan
University of Miami

2021

Abdul Basit Peerzada
Clemson University

Mounir Kassem
University of Illinois at Chicago

Qian Bi
University of Toronto

CONFERENCE HISTORY

Year	Location	National Chair	Committee Chair	Reg.
1959	Allentown, PA	W.A. Allan	A.H. Huelsman	298
1960	Milwaukee, WI	W.A. Allan	V.B. Murdock	316
1961	Detroit, MI	J.F. Hower	I.E. Swanson	307
1962	St. Louis, MO	J.F. Hower	J.B. Woodward	437
1963	Cleveland, OH	R.J. Jager	G.E. MacDonald	304
1964	Pasadena, CA	R.J. Jager	D.B. Carson	433
1965	Allentown, PA	H.P. Cassel	C.A. Zimmerman	601
1966	Denver, CO	H.P. Cassel	W.A. Walking	436
1967	Albany, NY	I.E. Swanson	J.R. Kelly, Jr.	479
1968	St. Louis, MO	I.E. Swanson	A.C. Lordi	515
1969	Toronto, ON	A.C. Lordi	J.A. Allan	501
1970	Indianapolis, IN	A.C. Lordi	G.F. Messinger	453
1971	Seattle, WA	J.A. Allan	F.J. Bauer	370
1972	Detroit, MI	J.A. Allan	I.E. Swanson	464
1973	Miami, FL	R.P. Kistler	I.W. Copple	503
1974	Mexico City, Mexico	R.P. Kistler	R.J. Plass	676
1975	Montreal, PQ	F.J. Bauer	M.S. Jackson	583
1976	Tucson, AZ	F.J. Bauer	J.A. Vidergar	587
1977	Omaha, NE	R.C. White	F.E. Staples & R.F. Palmer	570
1978	Roanoke, VA	R.C. White	K.C. Wiles	677
1979	Tarpon Springs, FL	J. Warshawsky	F.W. Cohrs	829
1980	Toronto, ON	J. Warshawsky	M.E. Wrinkle	839
1981	Lancaster, PA	L.L. Warner	N.W. Biege	841
1982	Vancouver, BC	L.L. Warner	B.T. Price	595
1983	San Antonio, TX	N. Roistacher	U.K. Alsguth	622
1984	Anaheim, CA	N. Roistacher	J.A. Vidergar	563
1985	New Orleans, LA	R.J. Krekel	L.C. Cockrell	595
1986	Salt Lake City, UT	R.J. Krekel	R.W. Riegel	490
1987	San Francisco, CA	R.F. Palmer	C.D. Maars	557
1988	Quebec City, PQ	R.F. Palmer	A. Morneau	560
1989	Denver, CO	Ib Bentzen-Bilkvist	E.D. Parker	546
1990	Tarpon Springs, FL	Ib Bentzen-Bilkvist	E.A. Buehler	629

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Year	Location	National Chair	Committee Chair	Reg.
1991	Mexico City, Mexico	N.W. Biege	J.R. Trevino	430
1992	Dallas, TX	N.W. Biege	P.H. Caldwell	528
1993	Toronto, ON	R.J. Meta	J.R. Gonzolez	536
1994	Seattle, WA	R.J. Meta	S.E. Sheridan	505
1995	San Juan, PR	P.J. Riley	R. Di Cristina	546
1996	Los Angeles, CA	P.J. Riley	J.G. Brown	623
1997	Hershey, PA	M.W. Jasberg	R.J. Pospisil	632
1998	Rapid City, SD	M.W. Jasberg	D.L. Rydquist	604
1999	Roanoke, VA	J.R. Gonzolez	A. Papadopoulos	682
2000	Salt Lake City, UT	J.R. Gonzolez	J.R. Sommers	783
2001	Vancouver, BC	E.F. Bouse, Jr.	A.S. Moore	836
2002	Jacksonville, FL	E.F. Bouse, Jr.	C.O. Cohrs	875
2003	Dallas, TX	R.H. Simmons	D.R. Jones	844
2004	Chattanooga, TN	R.H. Simmons	G. Garcia	858
2005	Kansas City, MO	E.A. Buehler	A. Winston	931
2006	Phoenix, AZ	E.A. Buehler	R. Smith	1,058
2007	Charleston, SC	G. Fergades	C. Bech	1,181
2008	Miami, FL	G. Fergades	D. Crowley	1,186
2009	Palm Springs, CA	C. Macey	P. Gaynor	678
2010	Colorado Springs, CO	C. Macey	S. Zellmer	795
2011	St. Louis, MO	S. Coppinger	J. Ouhl	1,022
2012	San Antonio, TX	S. Coppinger	C. Fields	940
2013	Orlando, FL	T. Richardson	M. Mueller	914
2014	Washington, DC	T. Richardson	D. Nicholls	987
2015	Toronto, ON	J. Nagel	M. Vroegh	900
2016	Dallas, TX	J. Nagel	K. Blankenship & S. Nielson	971
2017	Calgary, AB	C. Fields	H. Knopfel	825
2018	Nashville, TN	T. Richardson	R.H. Simmons	1,049
2019	St Louis, MO	C. Macey	C. Fields	1,002
2020	Las Vegas, NV	C. Macey	B. Lindsay	not held
2021	Virtual	C. Macey	M. Mueller	301
2022	Las Vegas, NV	D. Phares	B. Lindsay	

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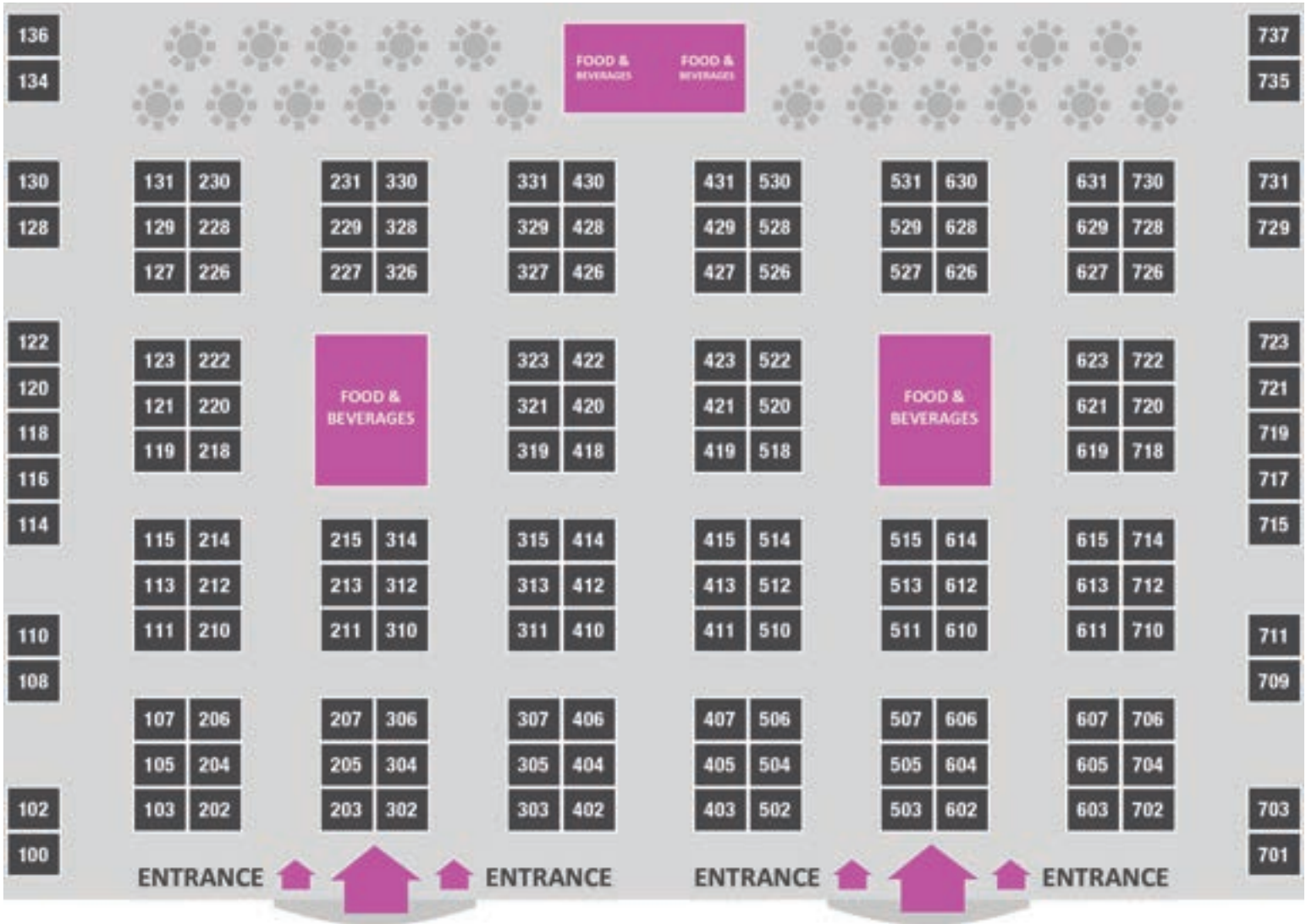


Exhibit Hall

All exhibits are located in Premier Ballroom - 3rd Floor.
A conference badge is necessary for entry into the exhibit hall.

Hours of Exhibition:

Sunday, May 1, 2022

Exhibit hours..... 5:00pm to 7:00pm
Reception / snacks in exhibit hall..... 5:00pm to 7:00pm

EXHIBIT HALL

Monday, May 2, 2022

Exhibit hours..... 11:30am to 6:00pm
Lunch in exhibit hall..... 11:30am to 1:30pm
Reception / snacks in exhibit hall..... 4:00pm to 6:00pm

Tuesday, May 3, 2022

Exhibit hours..... 11:30am to 1:30pm, and 5:00pm to 7:00pm
Lunch in exhibit hall..... 11:30am to 1:30pm
Reception / snacks in exhibit hall..... 5:00pm to 7:00pm

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Papers are requested on topics related to the practical application of electrical technology, standards, equipment, safety, and systems of interest in cement industry within the scope of the Cement Industry Committee Working Groups.

All papers presented are subject to peer review and are published in the conference record. Papers are also evaluated for publication in either the *IEEE Transactions on Industry Applications Magazine* or the *Industry Applications Magazine*.

If you are interested in presenting a paper please submit an abstract of 200 words or less to one of the following Vice Chair or Working Groups Chairs for consideration:

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