

Registration Now Open for ACI Concrete Convention – Fall 2024

Known as the world's gathering place for advancing concrete, the ACI Concrete Convention – Fall 2024 will take place November 3-6, 2024, at the Philadelphia Marriot Downtown, Philadelphia, PA, USA. The event will bring together engineers, contractors, educators, manufacturers, and material representatives to discuss and collaborate on concrete codes, specifications, and practices. Attendees will benefit from technical and educational sessions that feature the latest research, case studies, and best practices, along with opportunities to earn professional development hours (PDHs). Additionally, select sessions will be available on-demand for those attending virtually.

The in-person convention will highlight companies, projects, research, and more and will include numerous networking events where attendees can connect with leading professionals in the concrete industry. Participants can also explore the exhibit hall to discover a wide array of products and services offered by exhibitors.

The convention features a comprehensive schedule with over 300 committee meetings, more than 60 technical sessions, an industry trade exhibition, networking events, and much more. All committee meetings are open to attendees.

ACI Concrete Convention highlights include:

- **Opening Session and Keynote:** The Opening Session is the official start to the ACI Concrete Convention and will begin with a welcome address by ACI President Michael J. Paul. The Opening Session will conclude with a keynote presentation.
- **ACI Excellence in Concrete Construction Awards Gala:** The ACI Excellence in Concrete Construction Awards will showcase and honor some of the most creative concrete

projects from around the world. Project nominations were judged by industry professionals with technical expertise in each of the eight award categories.

- **Innovation Day: AI Odyssey:** Two sessions will explore state-of-the-art machine learning applications in modeling cement and concrete properties. Industry professionals and researchers will demonstrate the game-changing role of artificial intelligence (AI) in concrete science, and attendees will gain insight into AI applications in three-dimensional (3-D) concrete printing, concrete mixture optimization, crack detection, and understanding composition-property linkages. Register for Innovation Day's Lunch to sit in on a special presentation by speaker Robert Otani, Chief Technology Officer and Director of Core Studio at Thornton Tomasetti.
- **Pervious Concrete Cylinder Student Competition:** Undergraduate teams are challenged to apply sustainability concepts and to use their knowledge of concrete mixture design by producing pervious concrete that balances permeability and splitting tensile strength. Results will be announced at the Student Awards Program. For more information on the competition and how to register, visit www.concrete.org/students/studentcompetitions.
- **Concrete Mixer:** Join ACI attendees and guests for an evening of networking and entertainment during the Concrete Mixer, held at the convention venue. An assortment of food and beverages will be available.
- **President's Reception:** ACI President Michael J. Paul invites all convention attendees to the President's Reception, where you'll have the opportunity to network with committee chairs, chapter presidents, and international attendees. An assortment of food and a hosted bar will be available.

Technical and educational sessions will be presented live, with on-demand viewing available afterward through the convention platform for both in-person and virtual attendees.

Registration is now open online, with discounted rates available until November 1, 2024. For more information about the ACI Concrete Convention and to register, visit www.aciconvention.org.

Materials Workshop Keeps Technical Staff Skills Sharp

Members of the U.S. Army Corps of Engineers (USACE) Alaska District's Construction Division, Civil and Sanitary Section, and Geotechnical and Materials Section participated in a field concrete and materials workshop at Joint Base Elmendorf-Richardson (JBER). The event included classroom instruction, applied training, and a written exam for attendees to obtain ACI's Concrete Field Testing Technician–Grade I

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Certification, which acts as the industry standard for engineers and construction workers around the world.

As part of their certification, participants completed both the written and practical assessments under the observation and guidance of Mike Wielputz, Civil Engineer at the Savannah District and certified instructor for the exam. The multifaceted test serves as a helpful introduction to ACI's breadth of knowledge and regulation and provides a valuable entrance into the field's certification standards.

In the hands-on segment of the workshop, participants assessed the quality of a simulated concrete mixture by conducting slump and air content tests and consolidating samples in cylinder molds. With an expansive work portfolio of construction projects across Alaska's unique and varying landscapes, this training is indispensable for the district's personnel.

"These credentials will have a valuable impact for our people and projects in the upcoming field season," said Amy Steiner, Chief of the Geotechnical and Materials Section. "The



ACI Certification concrete and materials workshop at Joint Base Elmendorf-Richardson (photo courtesy of Cameron McLeod, USACE – Alaska District)

training provides our quality assurance representatives and engineers with further validation and enhanced knowledge to make informed decisions in the field and ensure quality in all areas of our work."

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The importance of the ACI training to the district's quality assurance team is especially clear at the runway extension project at JBER. This vital construction operation will extend the installation's existing north-south runway by 2500 ft (760 m), bringing the total length to 10,000 ft (3050 m). As one of the largest military construction projects in the history of the district, creating effective and long-lasting infrastructure at this site is imperative to serving the operational missions of the U.S. Air Force for many years to come.

Fine details are always important in USACE construction projects, but the tight specifications of constructing a runway that can accommodate the Air Force's latest aircraft models create an extra emphasis on high-quality concrete and pavement work. Unlike rigid construction materials such as steel, soils can vary greatly within the bounds of a single project.

"Airfield pavements can be a challenging area to get right," said Justin Miller, geotechnical engineer and materials subject matter expert at the district. "Arming our construction representatives with that extra level of certification is just another step that we can take to optimize our product."

New Standard Covers Performance Floor Patching and Skim Coating Compounds

ASTM Committee C09, Concrete and Concrete Aggregates, approved a new standard that will be used to evaluate the performance of floor patching and skim coating compounds containing hydraulic cement. These compounds are used to improve the levelness, smoothness, and flatness of existing floors. The new standard will soon be published as C1933/C1933M.

"The purpose of this method is to define what the industry believes are the best test methods to evaluate the performance of these materials," said ASTM member Charles Alt, S&T team leader at Imerys Norfolk. "Performing the test methods described in this standard would give the end user a good understanding of the technical properties of floor patching and skim coating compounds and could also make comparison testing with other materials produced by different suppliers." This effort directly relates to the United Nations Sustainable Development Goal #12 on responsible consumption and production. "Being able to select better performing materials leads to less waste on the jobsite and a better long-term durability for the end user, thus creating a longer life cycle," said Alt.

Alt notes that once the standard is published, the committee will run an interlaboratory study to evaluate the repeatability and reproducibility of the methods using this material. Interested laboratories are invited to participate in this study.

For more information, visit www.astm.org.

GCCA 2024 CEO Gathering and Leaders Conference

An international conference in Bangkok, Thailand, attended by nearly 200 chief executive officers (CEOs) and leaders from the global cement and concrete industry, concluded with a call for new policy commitments to support the industry's drive to net zero. Taking part in the Global Cement and Association (GCCA) 2024 CEO Gathering and Leaders Conference, the industry leaders were joined by ministers from the governments of Canada, the UAE, and Thailand, as well as economists and a variety of experts.

During the conference, the UN's Industrial Development Organization (UNIDO), together with the Canadian government, unveiled a new package of investment, technical, and other support to help Thailand decarbonize its cement industry. Working with the Thai Cement Manufacturers Association (TCMA), Thailand has developed a credible national roadmap for delivering on the industry's net-zero commitments.

Unveiling the package, which will also help support decarbonization monitoring and provide guidance on developing green procurement targets and standards for low-carbon cement and concrete, UNIDO Director General, Gerd Müller, said: "We need to make sure that these technologies are shared and made accessible to all, because they are absolutely critical to building environmentally and economically sustainable industries—the time to act is now."

The Canadian and UAE governments are co-chairing the Cement and Concrete Breakthrough agenda, which was launched last year at COP28. The breakthrough agenda is focused on international collaboration to help key sectors decarbonize and accelerate international action on climate change.

Speaking through video link, François-Philippe Champagne, Canada's Minister of Innovation, Science and Industry, told the conference that they were announcing an inaugural set of priority actions for the Cement and Concrete Breakthrough. "These actions seek to accelerate work in critical areas from developing standards and regulations to scaling up existing technologies," he said. "They will help ensure the world is heading toward making near zero emissions cement the preferred choice in global markets by making its production established and growing in every region of the world by 2030."

Globally, the cement and concrete industry is cutting emissions through the development of new lower-carbon materials, manufacturing processes involving the use of alternative fuels, and innovative technologies including carbon capture, in line with the GCCA Net Zero Roadmap. The roadmap also advocates better design and more efficient

use of concrete in the built environment, with progress on all these topics discussed during the conference.

For more information, visit <https://gccassociation.org>.

SMiRT28

The 28th International Conference on Structural Mechanics in Reactor Technology (SMiRT28) will be held August 10-15, 2025, in Toronto, ON, Canada. The conference theme is “Harnessing Nuclear Technologies & Innovation as a Path to Net Zero by 2050.”

The SMiRT conference is a platform to discuss structural mechanics in reactor technology and innovation. Attendees will provide valuable contributions on the analysis, design, and construction of nuclear containment concrete structures. Expertise in this field, particularly with the growing focus on small modular reactor design and development, is highly relevant and will greatly enrich the discussions. Participation will not only contribute to the conference’s success but also provide attendees with an exciting opportunity to network

with other experts, gain insights into the latest developments in the field, and enhance the attendee’s professional reputation.

Abstracts are invited to share research and experiences in harnessing nuclear technologies and innovation as a path to net zero by 2050. The conference technical topical areas for abstract submissions include mechanics of materials; fracture mechanics and component structural integrity; computation, simulation, and visualization of components and structures; hazards and load characterization—internal and external; response characterization using testing and analysis techniques; design codes, standards, and issues; reliability, risk, and safety margins; ageing and plant life management, monitoring, inspection, and maintenance; fuel cycles, facilities, and waste management and decommissioning; constructability and construction management; and new technologies (additive manufacturing, artificial intelligence [AI], and digital twin).

For more information, visit www.smirt28.com.



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