

Technology Forum 48—A Virtual Success

In August, the ACI Foundation's Strategic Development Council (SDC) embraced the opportunity to provide a series of free webinars for the first virtual Technology Forum.

The SDC Technology Forums have long provided unique opportunities for concrete industry professionals to gather and discuss strategic issues and support industry-wide initiatives. Forum attendees can hear technical presentations (new technologies and methods, research updates, and market surveys), interact in panel discussions, contribute to technology breakout sessions, and enjoy various networking opportunities.

One major benefit of the virtual format in August 2020 was that each session was attended by over 120 people. Typically, in-person forums capture 60 to 80 attendees, so this was an exciting increase, and about 60% of attendees were new to the SDC and its mission.

The first session of Forum 48 highlighted key presentations and technologies from recent SDC Forums. Topics included artificial intelligence for civil engineering practices, seismic performance with hybrid sliding-rocking columns, adoption of novel framing systems, and the use of CO₂ to produce limestone aggregate. The second session focused on current SDC initiatives, such as the creation of a constructability index and strategic work to harmonize ACI codes and standards. The webinar concluded with a Technology Showcase presentation on the benefits and challenges of using graphene in concrete. At the end of each presentation, the floor was opened for questions from attendees, which was engaging and fun for all participants.

Both webinar series were recorded and will be added to ACI's library of on-demand seminars that is available to the public. If you are interested in attending a future SDC Technology Forum or wish to discuss membership, please contact Tricia G. Ladely, ACI Foundation's Assistant Director, at Tricia.Ladely@acifoundation.org or +1.724.601.3075.

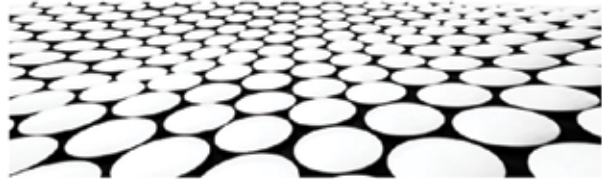
Impact by Industry Research

The ACI Foundation funds or co-funds needed concrete research to inform ACI committee work and documents, provide data to close the gap for the use of a new technology, lay the groundwork for potential code change proposals, and help develop young researchers as they produce knowledge for our industry. The following research reports have been issued so far in 2020:

- "Recommendations for Unified Durability Guidance in ACI Documents," Jason Ideker, Principal Investigator, Oregon State University;
- "Development and Splice Lengths for High-Strength Reinforcement, Volume I: General Bar Development," Robert J. Frosch, Eric T. Fleet, and Rebecca Glucksman,

HARMONIZING ACI CODES AND STANDARDS: RESTRUCTURING THE NETWORK OF CONCRETE RESOURCES

SDC WEBINAR SERIES - AUGUST 27, 2020



CONCLUSIONS

ADOPTION OF NOVEL STRUCTURAL SYSTEMS

- Need the right project
- Code / jurisdictional approval
- Requires team effort
- Owner / stakeholder buy-in
- Careful planning to scale up
- Needs to be considered as early as possible
- QA/QC

Why Use Graphene in Cement and Concrete?

Graphene has shown to deliver significant uplifts in a range of performance characteristics

- Cure rate
- Increased load strength
- Reduced water permeation
- Reduced microcracking and fractures
- Used in repair compounds
- Using less cement and concrete to achieve the same engineering performance will result in a reduction of CO₂ emissions

Examples of the webinars at the first virtual SDC Technology Forum

- Purdue University;
 - "Development and Splice Lengths for High-Strength Reinforcement, Volume II: Drift Capacity of Structural Walls with Lap Splices," William Pollalis, Purdue University, and Santiago Pujol, University of Canterbury;
 - "Literature Review of Concrete Durability & Service Life Requirements in Global Codes and Standards," Keith Kesner and Tracy Marcotte of CVM and Joseph Klein and Randall Poston of PIVOT; and
 - "Reinforced Concrete Coupling Beams with High-Strength Steel Bars," Alexander S. Weber-Kamin, Shahedreen Ameen, Rémy D. Lequesne, and Andrés LePage, University of Kansas.
- Public reports are available for download at www.acifoundation.org/research/researchprojects.aspx.