Knowledge to Practice:

ACI Foundation Announces Its 2019 Awardees

We are pleased to honor three ACI members this year for their exceptional contributions in research and innovation.

Lawrence L. Sutter, FACI, Michigan Technological University, will receive the Jean-Claude Roumain Innovation in Concrete Award, presented by the Strategic Development Council (SDC) for innovation in the field of concrete. Sutter is recognized for his leadership in concrete materials education and research, which has advanced the knowledge of deicer interaction, use of fly ash and alternative cements, and the nature of the air-void system to overall improve the sustainability and durability of concrete.

ACI Honorary Member David Darwin, University of Kansas, is the recipient of the Robert E. Philleo Award, presented by the Concrete Research Council (CRC) for outstanding achievements in the field of concrete materials. He is recognized for his lifelong efforts in concrete material research and bridge construction practices implemented in the United States and around the world.

Long T. Phan, FACI, National Institute of Standards and Technology, will be given the Arthur J. Boase Award, also presented by the CRC, for outstanding achievements in the field of structural concrete, in recognition of his research on the response of high-strength/high-performance concrete structures to extreme loads, the effect of alkali-silica reaction (ASR) on reinforced concrete material properties and structural capacities, and committee work to transfer the research results into design practice.

CRC and SC Welcome New Chairs

It is with great pleasure that we announce new Chairs for the Foundation’s Concrete Research Council and the Scholarship Council (SC). Aleksandra Radlińska, FACI, The Pennsylvania State University, will take over as Chair of the CRC after serving on the Council for several years as a member and then the Vice Chair. We look forward to her leadership as our program continues to develop.

We want to extend a heartfelt “thank you” to outgoing CRC Chair Joseph M. Bracci, FACI, Texas A&M University, who has provided great direction in adjusting the program to better serve the ACI community and concrete industry through funding research. Bracci will continue to serve as a member of the CRC.

Scott M. Anderson, Pankow, will accede to the Chair role of the SC from his Vice Chair position. Anderson has contributed his expertise to the SC for many years and we look forward to his guidance of the Council’s continued work.

We are indebted to Debrethann R. Orsak, FACI, Cagley Associates, Inc., for her long-time leadership as the SC Chair. One of the most well-known pillars of the ACI Foundation, the Scholarship and Fellowship Program has directed many commendable students to the field of concrete and to ACI. Orsak will continue to serve as a member of the SC.

New Research Underway

Last year, SDC approved funding for Phase 1 of the research project “Interface Bond: Development of Appropriate Horizontal Shear Provisions for Concrete Repair” by Principal Investigators Carl J. Larosche and Jeffrey S. West, both with Wiss, Janney, Elstner Associates, Inc. The work is well underway and interim results should be presented this spring. The primary objective of the research is to establish an experimental basis for the nominal interface shear stress limit above which interface reinforcement is required in partial-depth repairs. The research will involve a parametric laboratory assessment of interface shear stress using the guillotine shear test, direct tension pulloff tests, and beam/slab tests. A range of surface preparation conditions will be considered. Statistical and reliability analyses of the collected data will provide the basis for an alternate code provision based on guillotine shear testing appropriate for conditions where design professionals anticipate high interface shear stresses in repair design.

The research has applications in the requirements for interface reinforcement for partial-depth repairs and overlays and is of primary interest and application to the work of ACI Committee 562, Evaluation, Repair, and Rehabilitation of Concrete Buildings; Phase 1 findings will provide data and analyses that may support an ACI 562 code change.

The nature of horizontal shear at the interface between concrete placed at different times also occurs in new construction, such as topping slabs placed on precast hollow-core slabs or double-T beams. Phase 2 of the project will be funded in part by the Precast/Prestressed Concrete Institute.