

## Concrete Research Council Announces Annual Request for Proposals

The ACI Foundation's Concrete Research Council (CRC) seeks to advance the concrete industry through the funding of concrete research projects that further the knowledge and sustainability of concrete materials, construction, and structures. CRC is currently requesting proposals for grant funding:

- Topics are encouraged from all areas of concrete research;
- CRC will fund up to two research projects for the 2017 cycle;
- Maximum CRC funding is \$50,000 per project;
- A letter of support of the research concept by an ACI Technical Committee is required;
- An individual researcher can serve as the principal investigator on only one proposal submitted;
- Industry partnering and project cost sharing are encouraged;
- CRC issues gift grants and stipulates that funds are not subject to overhead charges (indirect costs). Noncompliant proposals in this regard will be returned without review;
- Principal investigators shall follow the published CRC Grant Proposal Guide;
- The proposal submission due date is December 1, 2016. Proposals submitted after the due date will be returned without review; and
- Selection of awarded projects and notification to principal investigators will be made shortly after The ACI Concrete Convention and Exposition – Spring 2017.

Research proposals should be submitted to Ann Daugherty, Director, ACI Foundation, at [ann.daugherty@acifoundation.org](mailto:ann.daugherty@acifoundation.org). Submit the entire package in a single PDF. Separate letters of support or other supporting information will not be accepted. Current information and more detailed proposal requirements are available at [www.concreteresearchcouncil.org](http://www.concreteresearchcouncil.org).

## Latest Research Product from CRC-Sponsored Projects

CRC 85, Interface Shear Transfer of Lightweight Aggregate Concretes with Different Lightweight Aggregates, is now available. For links to all research products from CRC co-funded projects, visit [www.concreteresearchcouncil.org/home/projects](http://www.concreteresearchcouncil.org/home/projects).

## Research Project Looks to Improve Upon Steady Foundation

Earlier this year, the CRC approved the funding of four deserving research projects. This edition of *Knowledge to Practice* features the second of the four projects: Update to Performance-Based Seismic Design Guidelines for Tall Buildings. The subsequent two editions will focus on the remaining research concepts.

The original Tall Buildings Initiative (TBI) *Guidelines for Performance-Based Seismic Design of Tall Buildings* was published in 2010 under the guidance of the Pacific Earthquake Engineering Research Center (PEER). *TBI Guidelines* have been applied all over the world and serve as the leading recommendation for performance-based seismic design of tall buildings. Despite being state-of-the-art when published, some of the elements found in the *TBI Guidelines* are now out of date. This research project seeks to update the original *TBI Guidelines* enabling the performance-based design, review, acceptance, and construction of buildings using materials, structural systems, and devices that may or may not be covered by today's building codes.

The project's principal investigators, Jack Moehle, University of California, Berkeley, and Ron Hamburger, Simpson Gumpertz & Heger, will develop an updated edition of *TBI Guidelines*. The new edition will address the latest knowledge and thinking related to performance objectives, conceptual design, modeling, analysis, acceptance criteria, and project review, and it will introduce provisions addressing buildings of different risk categories. "The first edition of the *Tall Buildings Initiative Guidelines* has served the industry as the leading guideline for performance-based seismic design of tall buildings, with applications widely in the United States and worldwide," stated Moehle. "This project to develop, write, and publish a new edition of the *TBI Guidelines* will bring the latest findings from research and professional practice, benefiting designers, the construction industry, and the general public."

The updated *TBI Guidelines* is slated to be completed and published in 2016. This research project could potentially impact the ACI 318 Code, specifically Code sections drafted by ACI Subcommittee 318-H, which focuses on seismic provisions. The CRC is a co-funder of this research project alongside the Charles Pankow Foundation.

## Apply for ACI Foundation Fellowships and Scholarships

Applications are now being accepted for ACI Foundation Fellowships and Scholarships. The application submission deadline for both fellowships and scholarships is October 16, 2016, at 11:59 p.m. EST.

ACI Foundation Fellowships are offered for both undergraduate and graduate students studying at accredited American and Canadian universities. Students must be nominated by an ACI member faculty. Fellowships provide the following benefits:

- An educational stipend between \$7000 to \$15,000;
- Airfare, hotel, travel stipend, and registration for three ACI conventions;

- An industry mentor;
- An internship, if required or desired; and
- Recognition at ACI's convention, in *Concrete International*, and on the ACI Foundation's website.

ACI Foundation Scholarships are offered for both undergraduate and graduate students; graduate scholarships require an ACI faculty member's endorsement. Graduate scholarship recipients must be enrolled at an accredited American or Canadian university. Potential undergraduate scholarship recipients must study at an ABET-accredited university and are not limited to the United States or Canada. All ACI Foundation scholarship recipients receive:


- An educational stipend between \$3000 to \$5000; and
- Recognition in *Concrete International* and on the ACI Foundation's website.

## SDC Set to Initiate First BIM Exchange Model Implementation Research

The Strategic Development Council (SDC), in its continued commitment toward the work of ACI Committee 131, Building Information Modeling (BIM) of Concrete Structures, will fund research that will comprise a critical step toward implementation of a digital exchange model, Reinforcement Placement Sequence.

The Reinforcement Placement Sequence Exchange Model research is the first project in a series that will be funded by a comprehensive donation-matching campaign to support the latest phase of research to develop industry standards for interoperability. These standards will allow for efficient exchange of digital information for cast-in-place (CIP) concrete across different software platforms and programs. Last year, SDC committed up to \$100,000 for the research series by matching dollar-for-dollar commitments. For this first project in this series, SDC matched funding generously provided by the Charles Pankow Foundation and the Concrete Reinforcing Steel Institute.



A rendering produced using BIM technology 

Charles Eastman of Georgia Institute of Technology provided the technical assistance necessary for ACI Committee 131 to complete earlier phases of the BIM interoperability project. The products from that work are ACI 131.1R-14, Information Delivery Manual for Cast-in-Place Concrete, and a pending report on Model View Definitions (MVDs). MVDs are specifications for data exchanges between software programs.

Donghoon Yang, principal investigator, who is also with Georgia Tech, and Eastman will collaborate with ACI Committee 131 on this new project, which will define exchange format concepts plus business and logic rules for the Reinforcement Placement Sequence Exchange Model and develop a new ACI 131 guide. The next two projects in the series will focus on two other beneficial exchange models: Structural Design and Construction Reference Schedule.

For additional information on SDC, visit [www.concretesdc.org](http://www.concretesdc.org), or contact Doug Sordyl, SDC Managing Director, at [douglas.sordyl@concretesdc.org](mailto:douglas.sordyl@concretesdc.org), or Ann Daugherty, ACI Foundation Director, at [ann.daugherty@acifoundation.org](mailto:ann.daugherty@acifoundation.org).

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