



CHARLES PANKOW
FOUNDATION

2013 ANNUAL REPORT

**PROVIDING THE AEC INDUSTRY WITH
A BETTER WAY TO DESIGN AND BUILD**



Richard M. Kunnath, PE, DBIA,
President
CHARLES PANKOW FOUNDATION

PRESIDENT'S MESSAGE

Since 2006, the Charles Pankow Foundation has awarded 44 unique grants and \$8 million in funding to support our mission to be a catalyst to advance innovation in the design and construction of buildings. When matching grants and in-kind gifts are included, the value of our funding equals \$11 million. Grantees include 19 different universities and 13 industry groups.

Our strong support of the industry continued in 2013. We awarded six new grants totaling \$570,000. Seven grants were completed and 26 research projects are on-going. We reached \$2 million in research investments to advance BIM (Building Information Modeling).

The influence of our funded research projects on the advancement of the profession is our primary accomplishment. Additionally, in 2013, the Foundation took a step back and evaluated what we have achieved relative to the goals of the Foundation. After much creative deliberation, we revised our mission statement: *"to be a catalyst to advance innovation in the design and construction of buildings,"* and vision statement: *"to provide the AEC industry with a better way to design and build."*

We also revised our approach to allocating the Foundation's resources. Over the next several years, the Charles Pankow Foundation will be focusing on several major research priorities, which will streamline our award process and strengthen our contributions to the industry.

Regardless of these changes, innovation still lies at the core of the Foundation's essence. We're honored to work with so many researchers and professionals that are driving innovation in the architecture, engineering, and construction industry.

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President
Charles Pankow Foundation

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CHARLES PANKOW AWARD FOR INNOVATION

*Honoring Innovation
and Collaboration
in the Design and
Construction
Industry*

The Charles Pankow Award for Innovation was established in honor of Charles J. Pankow (1924-2004) to celebrate collaboration in innovative design, materials, or construction-related research and development transferred into practice in a sustainable manner. The award was announced at the 2013 ASCE OPAL Awards ceremony in Arlington, Virginia.

The 2013 award winner was the **Hybrid Composite Beam (HCB)**. The HCB is lightweight, strong, corrosion resistant, simple to fabricate, and inexpensive to transport and erect. HCB was invented by **John Hillman, PE, SE**, of the HC Bridge Company, LLC, in collaboration with a team of researchers at the University of Delaware Center for Composite Materials.



RESEARCH GRANTS AWARDED IN 2013

GRANTEE	AMOUNT	RESEARCH TOPIC
University of Washington	\$50,000	The Impact of High-Strength Reinforcing Steel on Current Design Practices
Georgia Tech	\$98,867	Cast-in-Place Concrete National BIM Standard Phase Two; Model View Definition
Georgia Tech	\$151,000	Building Information Modeling for Masonry Phase II Project; Masonry Unit Model Definition
Wiss, Janney, Elstner Associates	\$67,500	Assessment of Yield Stress Measurement Methods for Reinforcing Bars
Applied Technology Council	\$191,530	Development of a Roadmap on the use of High-Strength Reinforcement in Reinforced Concrete Design
PCI Foundation	\$10,000	Opportunities for Investigating Precast Concrete System via NEESR Shake Table Tests

RESEARCH GRANTS COMPLETED IN 2013

GRANTEE	PRINCIPAL INVESTIGATOR	RESEARCH TOPIC
Applied Technology Council	Chris Rojan, Ed Dean	Development of Industry Foundation Classes (IFC) for Structural Components
UC Berkeley	Jack Moehle	Beam Hoop Reinforcing for Large Beams in Special Moment Resisting Frames
University of Michigan	James Wight, Gustavo Parra-Montesinos	Effect of Shear Stud Layout on the Seismic Behavior of Slab-Column Connections
Penn State	John Messner	Owner's Guide to Building Information Modeling (BIM)
Georgia Tech	Chuck Eastman	Cast-in-Place Concrete National BIM Standards Phase One: Information Delivery Manual
University of Washington	Laura Lowes	Impact of High-Strength Reinforcing Steel on Current Design Practices
Wiss, Janney, Elstner Associates	Conrad Paulson	Assessment of Yield Stress Measurement Methods for Reinforcing Bars

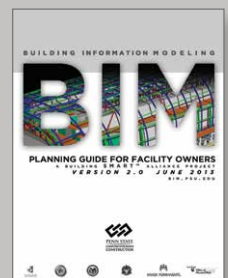


CHARLES PANKOW LEGACY PROJECT COMPLETED

The Charles Pankow Legacy Project memorializes Charles Pankow's achievements as a builder. **Advancing the Construction Industry through Innovation** is a digital collection housed within the Purdue University Libraries. The collection includes a video, *Beyond Building*; a book, *A Better Way to Build: A History of the Pankow Companies*; and a digital archive of oral histories with Charlie's associates. Visit www.earchives.lib.purdue.edu/collections/pankow to learn more about this builder, leader, and visionary.

BIM: Planning Guide for Facility Owners, Version 2.0

is a guide that provides building owners with a structured approach to effectively plan the integration of Building Information Modeling (BIM) within their organizations. The guide, funded by the Charles Pankow Foundation, was completed in 2013 by researchers at Penn State. Download the guide from the Charles Pankow Foundation website.





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The CPF Advisory Council helps determine the CPF research agenda and recommends projects for funding and process improvements. This year saw Glenn Bell and Mark Saunders complete their terms.

www.pankowfoundation.org
PO Box 820631
Vancouver, WA 98682
360-326-3767
info@pankowfoundation.org

ASCE CHARLES PANKOW FOUNDATION ANNUAL ARCHITECTURAL ENGINEERING STUDENT COMPETITION

Supporting Tomorrow's Architectural Engineers

Since 2009, through the generous support of the Charles Pankow Foundation, the Architectural Engineering Institute (AEI) of the American Society of Civil Engineers (ASCE) has held its Annual Architectural Engineering Student Competition. In 4 years, 164 projects have been submitted by both graduate and undergraduate students from 17 universities:

[Kansas State University](#)

[University of Kansas](#)

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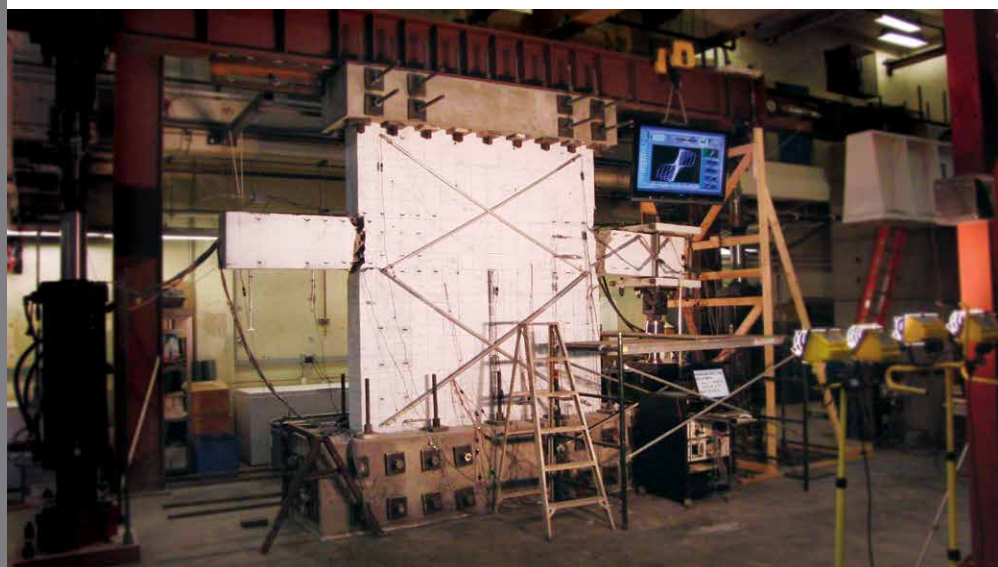
[Pennsylvania State University](#)

[University of Wyoming](#)

[North Carolina A&T State University](#)

In 2013, students were challenged to establish a budget and identify design and construction issues for a LEED-certified elementary school in an urban setting in Reading, Pennsylvania. Congratulations to Penn State students for their 1st place finish in the categories of Building Integration, Structural, Mechanical, and Construction. Congratulations to Kansas State University students for their 1st place finish in the Electrical category.

With a focus on engineered systems and construction management, students nationwide have further developed their skills in team work, creativity, and innovative thinking.



Researchers at the University of California, Los Angeles, are performing (nearly) full-scale testing of reinforced concrete coupling beams with embedded structural steel sections to assess the behavior, modeling, and detailing required for structural steel reinforced coupling beams subjected to reversed cyclic loading.