

## FROM PCI HEADQUARTERS



The signing took place at the British Precast Council dinner in Leicester, UK, which was held during the Sustainable Concrete Forum at Loughborough University. Jim Toscas (left), PCI president, shakes hands with Martin Clarke, chief executive of the British Precast Concrete Federation, at a British Precast Council dinner in Leicester, U.K., which was held during the Sustainable Concrete Forum at Loughborough University. The organizations have signed a memorandum of understanding. Courtesy of Krystina Toscas.

### British Precast Concrete Federation signs agreement with PCI

PCI President Jim Toscas signed a memorandum of understanding between PCI and the British Precast Concrete Federation on May 21, 2012. This marks a milestone for PCI as it pursues international partnerships. The agreement provides for reciprocal member discounts, mutual promotion of products and services, and technical information sharing. Agreements like this are expected to result in collaborative technical activities that will ultimately enrich the PCI body of knowledge. They will also provide opportunities to broaden the reach of PCI publications, events, and programs.

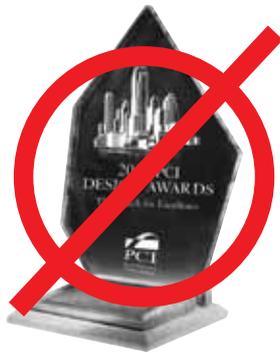
### PCI holds contest for new Design Awards trophy

In honor of the Design Awards' 50th anniversary, PCI is asking producer members, suppliers, artists, architects, students, and others to submit ideas for a new trophy design. The winning entry's designer will be awarded \$1000.

To enter, submit a drawing and design statement of your vision for the new Design Awards trophy by August 1, 2012. Finalists will be chosen by our selection committee and will be provided \$300 to create a prototype of their designs. These prototypes will be on display at the 2012 PCI Convention and National Bridge Conference in Nashville, Tenn., this fall, and convention attendees will vote for a winner.

The new trophy will make its debut at the 2013 PCI Design Awards.

Visit <http://www.pcidesignawards.org/2012intro/pages/competition.html> for full entry details and submission information.



### ENGINEERING STUDENT DESIGN COMPETITION: BIG BEAM CONTEST CALL FOR ENTRIES

The PCI Student Education Committee invites entries from engineering students to participate in PCI's 2012–2013 Engineering Design Competition. With the help of local PCI Producer Members, students will construct and test precast, prestressed concrete beams. The awards program, sponsored by Sika Corp., will include cash prizes that take into account efficient design, load capacity, and other factors defined by the program. Additional prizes may be awarded for best report and best video. Applications are due by March 15, 2013, and results are due by June 15, 2013. PCI Producer Members are urged to encourage their local engineering schools to participate in this program. For information, visit [www.pci.org/bigbeam](http://www.pci.org/bigbeam).



Dan Shiosaka



Wendy Warlick

## PCI Journal announces reader survey winners

PCI Journal recently conducted a reader survey to provide us with information to better serve our readers. Several prizes were offered to survey participants. Winners for the top two prizes were selected at random.

The winner of our first prize, a new Apple iPad, was Dan Shiosaka, principal structural engineer for Stanley Consultants in Phoenix, Ariz. Shiosaka says, "There are four Kindle Fires in the household; none mine. I could use a Kindle Fire or iPad."

The winner of our second prize, the Kindle Fire, is Wendy Warlick, human resources assistant at The Shockley Precast Group in Fredericksburg, Va.

The first 10 survey respondents, each of whom received a \$25 Visa gift card, are Jose Plieo, Mark A. TenHarmsel, Richard Penschorn, James Egger, Ruben Valadez, Domingo Carreira, Steve Hunsberger, Keith Wallis Jr., Helmuth Wilden, and Adam Mainka.



The Perot Museum of Nature and Science in Dallas, Tex., was one of the first two recipients of the Sidney Freedman Craftsmanship Award. Gate Precast Co. produced the cladding panels. Courtesy of Gate Precast Co..

## PCI enters partnership with DBIA

PCI recently signed a partnership agreement with the Design-Build Institute of America (DBIA). This will help PCI and its members reach more design-build professionals and raise awareness of the benefits of precast concrete. The partnership will initially focus on promotion and benefits related to each organization's annual conventions.

PCI is developing a strategic show plan that can help unite PCI members who are exhibiting at the November 7-9, 2012, DBIA conference in New Orleans, La. In addition, the summer issue of *Ascent* magazine will be included in the DBIA show attendee registration bags. If you are planning on exhibiting at the DBIA show in November, or are considering it, please contact Brian Miller at [bmiller@pci.org](mailto:bmiller@pci.org).



PRETECSA produced the cladding panels for the Latter Day Saints Quetzaltenango Temple in Quetzaltenango, Guatemala. The company was one of the first two winners of the Sidney Freedman Craftsmanship Award.

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## Winners announced for the first annual Sidney Freedman Craftsmanship Award

Gate Precast Co. and PRETECSA are the winners of the first annual Sidney Freedman Craftsmanship Award, which recognizes PCI-certified plants for excellence in manufacturing and craftsmanship of architectural precast and glass-fiber-reinforced concrete (GFRC) structures and individual components. Judging is based on success in overcoming obstacles to production, creating solutions to formwork or finishing challenges, and the quality of individual architectural precast/prestressed concrete or GFRC units.

Gate Precast was recognized for producing the custom textured cladding panels on the Perot Museum of Nature and Science in Dallas, Tex. PRETECSA was recognized for producing the cladding panels for the Latter Day Saints Quetzaltenango Temple in Quetzaltenango, Guatemala.

Gate Precast also received an honorable mention for its work creating the classic architectural details for the St. Regis Hotel in Atlanta, Ga.

## New student subscription rate offered for *PCI Journal*

PCI is now offering a student subscription to the *PCI Journal*. Get the whole picture of what is happening in the industry, and see how what you learn in the classroom and the lab applies in the real world. When you join PCI as a student member (student membership is free), you have the option of subscribing to the *PCI Journal* for \$20 for the year (four issues) in the United States or \$25 in Canada and Mexico.

## Architecture and design students exhibit at Earth Day Education Fair



**Rana Karca, a student with the New Jersey Institute of Technology's Precast Studio, shows her exhibit at the 2012 Earth Day Education Fair in April in New York, N.Y. Courtesy of Matt Burgermaster, NJIT.**

Ten students from the New Jersey Institute of Technology's (NJIT) Precast Studio participated in the 2012 Earth Day Education Fair on April 20 at 7 World Trade Center in New York, N.Y. Sponsored by Tishman Construction, an AECOM company, in conjunction with Silverstein Properties, the second annual event featured environmental sustainability experts, students, and manufacturers who provided information on sustainable design to the public.

NJIT, the only university with students exhibiting, had six students from the School of Architecture and four from the School of Art and Design alongside local representatives from a diverse group of exhibitors that included Whole Foods Market, Port Authority of New York and New Jersey, Mercedes Benz/Smart, Sprint, and Steelcase.

Coordinated by Matt Burgermaster, assistant professor of architecture, and accompanied by Glenn Goldman, the director of the School of Art and Design, the students displayed work that included a hydroponic urban agriculture building featuring high-performance precast concrete, playground equipment designed with recycled and repurposed materials, and product design that included solar power-collecting umbrellas and toys.

The participating students from architecture were Dan Allocca, Rana Karca, Pablo Lopez, Michael Middleton, Kyle Stevens, and Jared Vaughn Timothy. Students from industrial design were Alexander Nizzardo and Sara Jane Rin, and from interior design, Mary Elizabeth O'Haire and Nicole Zampolin.

The NJIT Precast Studio is sponsored by the PCI Foundation, the Mid-Atlantic Precast Association, and PCI Northeast as part of the foundation's academic program, which develops and maintains a functional partnership with the academic community for the development, dissemination, and application of knowledge regarding precast concrete systems. For more information about this and other PCI Foundation programs, visit [pci-foundation.org](http://pci-foundation.org).

# 2012–13 Jenny Fellowships announced

Harry Gleich, chair of the PCI Research and Development Council, is pleased to report that the Daniel P. Jenny Research Fellowship program is flourishing. Through the dedicated volunteer efforts of the members of the council, 27 fellowship proposals were evaluated. Special thanks are due the PCI Producer Members who worked with many universities in support of their proposals. Five \$20,000 fellowships were awarded for the 2012–13 academic year. The recipients are as follows:

## **UHPC prestressed bridge girders: Design and experimental analysis**

**Andrew J. Giesler, New Mexico State University**



Andrew J. Giesler  
Courtesy of NMSU.

Giesler will start his graduate studies in the fall of 2012. He was exposed to bridge construction through bridge inspections in a co-op program with the New Mexico Department of Transportation and says in his proposal, “It is my hope that through this research, UHPC will become a widely accepted material for use in prestressed concrete bridge design.”

This project has objectives of developing mixing and curing specifications for plants casting with ultra-high-performance concrete and developing recommended guidelines for the design of UHPC prestressed girders. The work will include the design, fabrication, and testing of three girders.

The faculty advisor for the project is Brad Weldon. Coreslab Structures, Albuquerque, Inc. was supportive of this proposal and committed to providing three test beams for the project.

## **Camber prediction in long-span, prestressed concrete bridges**

**Amber Lebsock, University of Washington**



Amber Lebsock

Lebsock is working toward a master of science degree and will complete her work by focusing on camber and deflections of prestressed concrete bridge girders. She says, “There is no reason to be satisfied with the current limited accuracy of camber prediction.”

The primary objective of the project is to create a program that will use a time stepping numerical approach to camber prediction. Existing bridge girder data will be used to calibrate the program.

The faculty advisor is John Stanton. Concrete Technology Corp. provided a letter of support for this project and offered to make its database of camber and material property measurements available.

## **Precast, prestressed concrete truss-girders for roof applications**

**Musa R. Alawneh, University of Nebraska–Lincoln**



Musa R. Alawneh

Alawneh was awarded a master’s degree in structural engineering from the Jordan University of Science and Technology and now continues his studies at the University of Nebraska. He gained experience in precast concrete design while working for e.Construct in Dubai, UAE.

The objective of this project is to develop a precast concrete long-span truss using prestressed top and bottom chords in combination with steel web members. A reduced-scale truss will be tested as part of the project.

The faculty advisor is George Morcouc. Concrete Industries Inc. provided a letter of support for this project and offered technical expertise and support as needed.

## **An approach for performance-based fire design of precast, prestressed concrete hollow-core slabs**

**Anuj Man Shakya, Michigan State University**



Anuj Man Shakya

Shakya received a master of science degree from Southern Illinois University–Carbondale and has been admitted to the graduate program at Michigan State University to work toward a PhD. His plans include consulting after graduation to help promote prestressed concrete construction.

This project will be an early step in moving prestressed concrete fire design from prescriptive- to performance-based design. The plan is to develop a design methodology for performance-based fire design of hollow-core slabs. The work plan includes two fire tests and finite element analysis to arrive at a design methodology.

The faculty advisor is Venkatesh Kodur. Kerkstra Precast Inc. is participating in the project with an offer to provide hollow-core slab test specimens.



Joseph Nickerson

## Finite element simulation of insulated precast, prestressed concrete sandwich panels optimized for construction of government facilities

### Joseph Nickerson, Auburn University

Nickerson is currently a master of science student in the structural engineering program at Auburn University. He has expressed an interest in finite element modeling of precast concrete sandwich panels subjected to blast loads.

The primary objective of this project is to analytically assess the anticipated performance of load-bearing precast concrete panels under blast load. Additional work will focus on the effects of panel openings and an assessment of current connection methods.

The faculty advisor is James Davidson. Gate Precast Co. has offered support in the form of design and detailing to help define practical practices.

## Diagnostic surveys now available

The QA 2020 Vision Committee is releasing a series of voluntary diagnostic surveys to help PCI Producer Members self-assess current capabilities in a range of key functions, including field erection, safety, productivity, and personnel training, with more modules to be added in the future.

The surveys are the result of hours of effort to identify key performance factors and rating criteria. Completing the self-assessment survey will allow producers to evaluate current capabilities against a range of key performance indicators, pinpoint gaps between current capabilities and top-level industry performance targets, and identify and implement corrective actions to transition to higher performance levels in each key functional area. ¶

## PCI Calendar

### Events

For the most current information on PCI events, visit [www.pci.org/events](http://www.pci.org/events). For industry events, visit [www.pci.org/news/events](http://www.pci.org/news/events).

<b>PCI-IW Meeting and Golf Outing</b>	<b>July 24–25, 2012</b>
Lake Geneva, Wis.	
<b>PCI Regional Directors Workshop</b>	<b>August 7–8, 2012</b>
PCI headquarters, Chicago, Ill.	
<b>PCI Central Region Membership Meeting and Fall Event</b>	<b>September 11–12, 2012</b>
Louisville, Ky.	
<b>PCI Northeast Annual Meeting</b>	<b>September 13–14, 2012</b>
Heritage Hotel and Resort, Southbury, Conn.	
<b>PCI Convention and National Bridge Conference</b>	<b>September 29–October 2, 2012</b>
Gaylord Opryland Resort and Convention Center, Nashville, Tenn.	
<b>2012 PCI Productivity Tour Orlando</b>	<b>November 6–9, 2012</b>
Orlando, Fla.	
<b>PCI-IW Member Meeting and Social</b>	<b>December 5, 2012</b>
Location TBD	
<b>PCI Convention and National Bridge Conference</b>	<b>September 21–25, 2013</b>
Gaylord Texan Resort and Convention Center, Grapevine, Tex.	
<b>PCI Convention and National Bridge Conference</b>	<b>September 6–10, 2014</b>
Gaylord National Resort and Convention Center, National Harbor, Md.	
<b>PCI Convention and National Bridge Conference</b>	<b>September 19–23, 2015</b>
Gaylord Opryland Resort and Convention Center, Nashville, Tenn.	

## PCI Personnel Training and Certification Schools

If you have any questions about the Quality Control School schedule or need help completing a registration form, please contact PCI's educational activities director, Alex Morales, at [amorales@pci.org](mailto:amorales@pci.org) or (312) 360-3219. Registration forms are available at [www.pci.org/schools](http://www.pci.org/schools).

<b>Level I/II</b>	
August 29–31, 2012	Chicago, Ill.
December 10–12, 2012	Nashville, Tenn.
<b>Level III</b>	
December 12–15, 2012	Nashville, Tenn.
<b>CFA/IES</b>	
December 10–12, 2012	Nashville, Tenn.
<b>CCA</b>	
May 2012 (date TBD)	Nashville, Tenn.

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