From PCI Headquarters

Volunteers sought for consensus Standards Committee

PCI is seeking to broaden the membership base of its American National Standards consensus body and is interested in new members in all membership categories to participate in new standards in quality control, fire resistance design, tolerances, glass-fiber-reinforced concrete, and other important topics. Of particular interest is membership in the producer, user, and general interest categories.

Each individual seeking membership on the Standards Committee shall submit a written request to PCI indicating his or her interest in the work of the Standards Committee and his or her qualifications, willingness to participate, and affiliations that might affect his or her classification. Each applicant shall identify his or her interest category. Membership on the PCI Standards Committee is open to all directly and indirectly affected parties subject to the selection procedure set forth in PCI's operating procedures. More information is available at www.pci.org or by email to standards@pci.org.

PCI, an American National Standards Institute–accredited Standards Developing Organization, is the primary organization for the creation and maintenance of standards for the precast concrete industry. The scope of PCI's standards activity is to develop and maintain standards for the design, detailing, fabrication, transportation, and erection of precast and precast, prestressed concrete products.

PCI and FHWA sponsor 2014 TechnoQuest

Join PCI and industry professionals for TechnoQuest 2014, cosponsored by PCI and the Federal Highway Administration (FHWA). This two-day event will take place September 18 and 19 in Orlando, Fla. The program will include a jobsite visit, a precasting and machinery plant visit, and classroom presentations. Attendees will see 266 kip (1180 kN) sections being fabricated, handled, and hauled by specialized equipment and will return home with a flash drive full of information.

Event registration is $165, and space is limited. To register, contact Nancy Turner, PCI's Transportation Systems program manager at nturner@pci.org or (312) 873-3590. Once space is confirmed, she will provide you with an event code for the hotel to reserve your room at the reduced rate and the link for registering for TechnoQuest Orlando 2014.

Clemson takes on sustainable infrastructure with PCI Foundation grant

The School of Architecture at Clemson University in Clemson, S.C., will create a design studio and other courses that focus on a southeastern high-speed rail line. Led by Assistant Professor Carlos Barrios, the school will address design scenarios associated with a project of this magnitude. This should allow design and research teams comprising both faculty and students to investigate design and material innovations that are associated with infrastructure and transportation options at various scales, including:

- high-speed transit stations
- multimodal transportation hubs
- parking structures
- bridges and structures for accessibility
- trail heads, public facilities, and public park and play structures
- sustainable housing
- bike storage, security, and repair facilities
- co-op and community structures/facilities
- public space fixtures
- kiosk/way-finding devices
- surface treatments for pedestrians, bikes, and autos
- barriers and railings
- sound walls
- retaining walls

Starting in the fall of 2014, Clemson will create a series of design studios and seminars that will maintain a unique profile and maximize college, school, and department collaboration. The school will be working with local partners to gain industry insight for this project. Peter Finsen of the Georgia/Carolinas PCI will coordinate from the industry side.

PCI Foundation introduces Professors Seminar

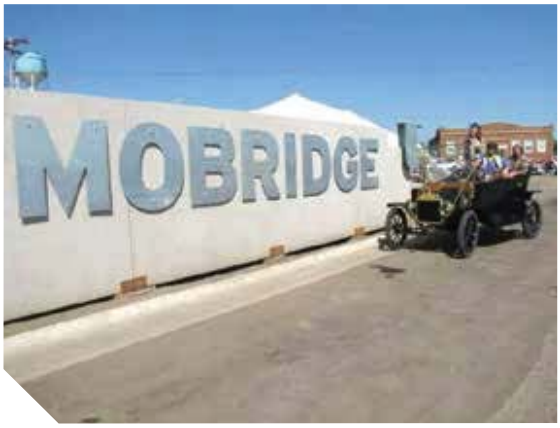
The PCI Foundation is introducing a new program for architecture professors who wish to learn more about precast concrete design and how it can be taught in the university classroom or studio. The program will be a three-day intensive workshop that will include instruction from college professors already teaching precast concrete as part of grants received from the PCI Foundation, industry experts, and architects with precast concrete experience.

The program will take place January 4–6, 2015, in Charlotte, N.C., with portions of the program taking place at the University of North Carolina at Charlotte (UNCC). Professors will learn the basics of precast concrete design for buildings and will be given tools that will assist them in teaching precast concrete concepts to students. At the end of the program, professors will receive Precast in a Box, a resource designed to offer professors a cafeteria of teaching tools from which they can select for use in the classroom. Professors will have the opportunity to tour the UNCC Solar Decathlon project, which is being reassembled on campus. Attendees will also tour a precasting plant and precast concrete project.

Content provided to professors interested in teaching precast concrete design will include videos, books, case studies, precast concrete details, and other materials useful in the classroom. Many of the PCI Foundation–sponsored programs have offered integrated courses with either engineering or construction management departments. If professors from either of those departments wish to attend with an architecture professor, that can be arranged.

The program is free to qualified attendees. Those interested in participating in the program can arrange registration through PCI Foundation or through their local PCI region or PCI member companies. Contact Marty McIntyre at martymci@pci-foundation.org or (708) 386-3715 for more information.

Professors interested in learning more about civil engineering and bridge topics might be interested in a workshop put on by the Portland Cement Association. For more information on that program, visit the PCA website at www.cement.org.



SDSU architecture students work with Gage Brothers as part of its Precast Studio. Courtesy of Gage Brothers.

SDSU students go from concept to completion

The PCI Foundation–sponsored architectural studio and construction management class at South Dakota State University in Brookings, S.Dak., just finished its first year and has something really big to show for it. The students partnered with the rural town of Mobridge, S.Dak., to create a gathering place in a square used for many local celebrations. Working with Gage Brothers in Sioux Falls, S.Dak., the students not only designed the project but had a hand in fabricating and erecting it.

"We've built a very nice town square with precast concrete," says Professor Brian Rex, who led the team.

All the erection work was done by a Hutterite crane operator and welder, who had never worked with precast concrete, and a seven-student team.

"The students are changed people," Rex says. "I've completely rethought so much about what and why we teach what we teach through this project."

"It was a fun project that turned out great!" says Tom Kelley, president of Gage Brothers. "It is so much easier and fun to teach the 20-something young architects than it is to convert the 50-year-old ones. What a great investment in these young minds."

A new project is already being planned for the architectural and construction management schools in South Dakota. "We are finalizing our agreement with Huron, S.Dak., to erect a facade on their main street in a lot where there is a pass-through park to a parking lot behind the main street," Rex says.

You can stay up to date with what is happening at the SDSU School of Architecture by following its Facebook page at https://www.facebook.com/SDSUDoArch.

Kwilinski quality management systems coordinator

Kenn Kwilinski was recently promoted to PCI quality management systems coordinator, reporting to Dean Frank. Kwilinski has shown outstanding skills at process organization and will be joining the Quality Programs team to support the ongoing International Accreditation Service accreditation process and other department activities.

PCI Journal now available online

For nearly 60 years, *PCI Journal* has been a staple in academic discussion regarding the precast/prestressed concrete industry. Now you can access past issues of *PCI Journal* online. Issues are listed by year. Visit www.pci.org/journal and start reading today.

From left are James Wilde of the Minnesota State University (MSU) School of Civil Engineering, Mike Johnsrud of PCI Midwest, Farhad Reza of the MSU School of Civil Engineering, Gregg Jacobson of Wells Concrete Inc., and Mohamed Diab of the MSU School of Construction Management. Courtesy of James Wilde,

Minnesota State University adds precast concrete educational projects

Minnesota State University at Mankato is the tenth school to receive a grant to start a new precast concrete education program that will be housed in the Schools of Engineering and Construction Management. This project will focus on teaching precast and prestressed concrete concepts to civil engineering and construction management undergraduate students.

"We are excited to see how our programming is expanding from just single schools of architecture to construction management and engineering programs working in collaboration," says Douglas Sutton, Academic Council chair for the PCI Foundation. "The program outlined at Mankato reflects a growing trend in the U.S. for construction disciplines to work cooperatively in the field."

Professor James Wilde will lead a team of professors who will work with students to advance their knowledge of materials, methods, and design principles of prestressed concrete. They will also work together in building information modeling to recognize its benefits. In addition to reaching undergraduate students, the new program will serve as a resource for the continuing education of professionals in both basic and advanced topics of precast/prestressed concrete.

The local partner working with MSU Mankato is Wells Concrete in Albany, Minn.

"Wells Concrete will provide access to a real-life project for students to utilize as a case study. Students will follow the project's progression from preconstruction planning, engineering design, and 3-D modeling; production of the components; and finally field installation, says Dan Juntunen, Wells's CEO.

For more information about these and other programs done in conjunction with the PCI Foundation, visit the website at pci-foundation.org.

PCI proctored exam prices change as of August

Beginning with exam dates on or after August 1, 2014, the following prices for proctored exams will take effect:

Members: $175

Nonmembers: $350

Government agencies: $250

The cost of proctored exams has been constant for more than a decade, during which time PCI converted to an electronic grading system. The fax grading system allows a near-instant return of exam scores with a breakdown of areas of strengths and weaknesses. The increase takes effect as PCI responds to examinee demands for additional test-taking options, requests for faster certificate turnaround time, and additional feedback for innovating the proctored exam process.

You may download the updated Proctored Exam Info Packet at http://www.pci.org/proctor. Please contact Ken Kwilinksi at kkwilinski@pci.org or (312) 583-6775 with any questions about the PCI Proctored Exam Program.

Hagen Harker of Mid-States Concrete Industries and president of PCI-IW presents a check for $5000 to Jim Voss of JVI. The association is honoring Voss's long-standing commitment to the industry with a donation to the PCI Foundation. Courtesy of Marty McIntyre.

PCI-IW makes PCI Foundation donation to honor Voss

During the PCI of Illinois & Wisconsin (PCI-IW) meeting on July 30, Jim Voss, president of JVI and founder of the PCI Foundation, gave an impassioned talk about the importance of reaching out early to influence those who choose building systems. He reminded the members to make donations to the PCI Foundation to help us reach the architects, engineers, and construction managers who will be making big decisions in a few years. He stressed that getting into firms to talk about precast concrete is too late and said that we need to reach the influencers while they are first being educated.

Voss, who has been active in PCI-IW for many years and who has hosted an annual party for the group for more than 20 years, got a surprise at the end of his plea. PCI-IW president Hagen Harker of Mid-States Concrete Industries presented Voss with a check for $5000 made out to the PCI Foundation. Members of PCI-IW wanted to thank Voss for his dedication to the group and his excellent skill as a host for many years as well as show their commitment to the PCI Foundation.

The first PCI Foundation studio took place at the Illinois Institute of Technology starting in 2007. Members of PCI-IW were instrumental in making the program a success by offering support to the students and interacting regularly with them through critiques, plant tours, lectures, and architectural tours of Chicago, Ill.

From left are the members of the 2013 Leadership PCI Class, Brandi Combs, Catrina Walter, John Heimann, Greg Fleck, Jeff Stenzel, Mark McKeny, Paul Arthur, Nathan Niebauer, and Brian Cousino. Courtesy of Paul Grigonis.

LPCI attains 10 years of building next generation of leaders

During PCI's 50th anniversary in 2004, we honored 50 industry Titans: http://www.pci.org/About_PCI/Awards/PCI_Titans/. These leaders were instrumental in establishing precast/prestressed concrete as a viable building material through education, research, design, and marketing. As we looked back on our first 50 years, we also wanted to ensure that the next 50 years were just as successful. The Leadership PCI (LPCI) program was established that same year to identify the industry's future leaders and train them to use their talents to improve the reputation and increase the use of precast/prestressed concrete well into the next generation.

This is PCI's 60th anniversary. In 10 years, LPCI has graduated 128 leaders, 94% of whom remain in our industry. This is an astounding figure in light of recent economic conditions, including high unemployment rates and fears of a double-dip recession. (When we account for individuals who voluntarily left the work force or left the industry to work in the not-for-profit sector, the retention rate rises to more than 96%.) It is a testament to a selection committee that consistently identifies top talent and to the profound effect LPCI has on its participants. The curriculum offers a fresh look at leadership, networking events allow each cohort to bond, and the one-year experience helps form lifelong friendships. Alumni have reported improved relationships with their coworkers and families and better work/life balance. Some have even improved their health and become athletes in their spare time.

Among the LPCI alumni are plant managers, college deans, vice presidents, directors, CEOs, and project engineers. LPCI alumni are realizing their leadership potential. Many serve on PCI committees, and some even serve on the PCI Board of Directors. The benefits of joining an LPCI cohort cannot be overstated. The companies that sponsor their employees watch them grow and take on more responsibilities. PCI and the industry as a whole benefit from their expertise and leadership on committees. Most important, individual LPCI participants develop close relationships with their industry peers, connect with PCI as a whole, and excel in leadership positions. It's no wonder LPCI alumni stay within the precast/prestressed concrete industry: LPCI not only builds leadership excellence but connects young leaders with one another and with the industry as a whole.

Do you have an exceptional young employee with leadership potential? PCI begins accepting nominations to the LPCI program in early October. Look for the application online in the members-only section of www.pci.org, or for more information contact PCI's director of educational activities, Alex Morales, at amorales@pci.org or (312) 360-3219.

See You in September: PCI Foundation takes the personal approach to raising funds

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Marty McIntyre
PCI Foundation
Executive Director

When sponsoring a Precast Studio or education program at a university, the PCI Foundation typically makes a significant contribution that extends over four or five years. This allows us to plan for the future, but it also allows the students and professors at the school to get to know the local industry and understand how the school and its industry partner might work together. That local relationship has been key in making our programs successful. In some cases, it has been a regional organization and members from several producers, and in other cases, a single producer will take on the role of local partner.

The local industry partner is a key component to the success of PCI Foundation programs over the years, not only in terms of funds donated to make the studio possible but also in the willingness to take time and money to give the students a unique industry experience.

Things you might consider as a region or company include the following:

Donating to the PCI Foundation and designating funds to the local region (up to 50% of the donation may be earmarked for a specific program).

Spending some time and money up front getting a professor on board as a studio professor. This might include traveling to the university, sponsoring a professor to attend the PCI Convention, sponsoring a professor to attend the PCI Professors workshop, or buying books and literature to complete a professor's PCI library.

Once a studio is started, you might expect to travel to the university for guest lectures and reviews, fund books and literature for all students, help students travel to a PCI Convention, supplement professor travel to a PCI Convention, or cover other student expenses (such as a pizza party or bus trips).

Aside from the expenses that are part of being a local partner, the biggest benefit for the student is the availability of industry partners, especially in the engineering department. Having a go-to person with real world experience that the students can rely on can make the studio a much richer experience for them.

Other interaction with the students will include organizing a plant tour, introducing students to architects with experience designing precast concrete structures, sitting in for desk reviews and offering students feedback on their designs, providing tours of finished or in-progress precast concrete buildings, taking part in midterm and final reviews, and listening to students present their work.

If you have questions about how to launch a program at your favorite school, contact Marty McIntyre at martymci@pci-foundation.org, (708) 386-3715, or (708) 997-7465.

PCI Certified Erector program replaces Qualified Erector program

In September 2013, the PCI Erectors Certification Committee and the PCI Board of Directors voted to phase out the Erector Certification Program in 2014 and require participants to become Certified Erectors in 2015. Qualified Erectors have until the end of 2014 to submit their application to become Certified Erectors. As of July 1, 2014, new applications must be for Certified Erector; the Qualified Erector designation will no longer be offered after that date.

The Certified Erector Program builds on the Qualified Erector Program it replaces. The table compares the requirements for the two programs. Companies that are not members of PCI may become PCI Certified Erectors. The requirement for auditing primary crews is relaxed somewhat in that only 10%, as opposed to half, of the field audits must be conducted by an auditor not employed by the company (referred to as an External Auditor) being certified. The main difference between the programs is the addition of a Company Audit.

In anticipation of the Company Audit, the auditor requests a list of all projects requiring more than two days of crane time that were completed since the last company audit or, if this is the company's first audit, within the previous six months. For each project, the company must provide information such as the name and location of the project, a brief description, the dates of erection, and the name of the primary erection crew foreman. The auditor reviews this information, along with the field quality audit reports and erector post-audit declarations for all of the primary crews. The auditor also conducts telephone interviews with certified field auditors who have performed field audits of the crews and with the precasters and contractors identified on the project information list.

Once at the company's offices, the company auditor verifies favorable information gained from the reports and interviews, resolves any conflicts between internal and external audit reports, and investigates any unresolved nonconformance items or negative trends. The auditor investigates any negative comments from the telephone interviews and reviews them with the erector, allowing the erector to explain, dispute, or acknowledge them. The auditor then reviews the documentation of selected projects. This documentation may include daily construction reports, correspondence, noncompliance logs, OSHA 300 logs (with the names of individuals redacted), records of OSHA citations, minutes of meetings, company training records, and safety meeting records. The auditor confirms that the required quality and safety programs are in place. Interviews with the erector's staff are intended to show how well they understand the industry erection standards and the erector's programs that ensure these standards are being followed. At the end of the visit, the auditor conducts an exit interview with the erector.

After the on-site audit, the auditor completes the erector company audit checklist, grading process, and audit report forms. The erector responds to all nonconformance items in a letter to PCI. The auditor reviews the response for completeness and accuracy. Once the auditor determines that the erector's response is adequate, PCI certifies the erector.

If there is enough interest, a certified company auditor training school may be scheduled in December. Although the school is intended to train prospective company auditors, it is also an excellent opportunity for erectors to learn what is required to obtain certification. PCI encourages erectors to send their representatives to the school so that they can be better prepared for the audit. Details and registration information are available on the PCI website at www.pci.org/schools.

Requirements for PCI Qualified Erectors and PCI Certified Erectors

	PCI Qualified Erector	PCI Certified Erector
Eligible organizations	• PCI Producer Member • PCI Associate Erector Member • Non-Member Producer • Non-Member Erector	• PCI Producer Member • PCI Associate Erector Member • Non-Member Producer • Non-Member Erector
Field audit of primary crews	• Certified Field Auditor (CFA) audits each primary crew twice a year. • At least one of these field audits must be performed by an External Auditor. • Field audits are arranged by the erector. Lists of available CFAs may be obtained from PCI.	• Certified Field Auditor (CFA) audits each primary crew twice a year. • At least 10% (rounded up to the next whole number) of these field audits must be performed by an External Auditor • Field audits are arranged by the erector. Lists of available CFAs may be obtained from PCI.
Company audit	n/a	• Independent Certified Company Auditor (CCA) performs annual company audit. • Company audits are arranged by PCI.

Notes: The Qualified Erector Program is being phased out in 2014. This table is for comparison purposes.
n/a = not applicable.

PCI international TechnoQuest returns with trip to UAE

After a seven-year hiatus, PCI resumes its annual international TechnoQuest executive tour in January 2015. TechnoQuest is designed to provide industry executives with a first-hand view of fabrication technology, plant operational practices, and precast concrete structures in different parts of the world. Tours of plants and projects are interspersed with cultural activities to provide a context of the regional market.

TechnoQuest 2015 will visit the United Arab Emirates. The executive itinerary will include plants and projects in Dubai, Abu Dhabi, and Sharjia. A full companion program will be offered in parallel with the executive itinerary.

This promises to be an unforgettable experience, particularly for those who have not traveled to this part of the world. Participants will arrange their own transportation to and from Dubai, UAE. All other transportation, lodging, and meals (except for a few open evenings) will be provided by PCI.

The last day of TechnoQuest 2015 is also the first day of the Second PCI International Symposium, which will be held at the Dubai World Trade Center. Participants are encouraged to stay to experience this event as well.

Amir Arab

Sameh S. Badie

Majid T. Manzari

Bijan Khaleghi

Stephen J. Seguirant

David Chapman

Kiyoji Takeda

Kyoya Tanaka

Toshiyaki Someya

Asao Sakuda

Yoshiteru Ohno

Bulent Mercan

Arturo E. Schultz

Henryk K. Stolarski

Rafael A. Magaña

Ryan M. Mones

2014 *PCI Journal* awards announced

Each year PCI bestows four awards on authors of outstanding papers published in *PCI Journal* during the previous 12 months. The award-winning papers are selected by the Journal Awards Committee, which is chaired by Paul C. Breeze.

The awards will be presented on September 7 at the 60th Anniversary PCI Convention and National Bridge Conference in National Harbor, Md.

The Martin P. Korn Award, named in honor of PCI's first executive director, recognizes the paper that offers the greatest contribution to the advancement of precast and prestressed concrete in the area of design and research. "Analytical Investigation and Monitoring of End-Zone Reinforcement of the Alaskan Way Viaduct Super Girders" by Amir Arab, Sameh S. Badie, Majid T. Manzari, Bijan Khaleghi, Stephen J. Seguirant, and David Chapman received this award. The paper appeared in the Spring 2014 issue.

The Robert J. Lyman Award, named in honor of PCI's third president, recognizes the paper that offers the greatest contribution in the area of plant production, site erection, or general construction using precast and prestressed concrete. "Seismic Retrofit of Reinforced Concrete Buildings in Japan Using External Precast, Prestressed Concrete Frames" by Kiyoji Takeda, Kyoya Tanaka, Toshiyaki Someya, Asao Sakuda, and Yoshiteru Ohno received this award. This paper appeared in the Summer 2013 issue.

Established in 1981 as the State-of-the-Art Award, the Charles C. Zollman Award was renamed in honor of PCI's first Technical Activities Committee chair. It recognizes

meritorious papers that advance the general understanding and knowledge of precast, prestressed concrete by bringing together all available knowledge of a specific topic into a single report. "Long-Term Lateral Deflection of Precast, Prestressed Concrete Spandrel Beams" by Bulent Mercan, Arturo E. Schultz, Henryk K. Stolarski, and Rafael A. Magaña received this award. This paper appeared in the Fall 2013 issue.

The George D. Nasser award, named for a former editor-in-chief of *PCI Journal*, recognizes a paper published in *PCI Journal* that is "most worthy of special commendation for its merit on the design, research, production, or construction of precast/prestressed concrete structures" by authors who are 40 years of age or younger. Ryan M. Mones receives the George D. Nasser Award for his paper, "Hollow-Core Slabs with Cast-in-Place Concrete Toppings: A Study of Interfacial Shear Strength," which appeared in the Summer 2013 issue of *PCI Journal*. Sergio Breña was the coauthor of this paper.

All of the papers are available at http://www.pci.org/publications/journal/.

Business Performance Council news

The Business Performance Council has been working to create an executive track for the 60th Anniversary PCI Convention and National Bridge Conference in September in National Harbor, Md. Four sessions will be presented on Sunday and Monday of the convention. Plan your trip to take advantage of these sessions geared toward senior executives with the purpose of improving business.

The Productivity Committee has organized a session to explain how two technologies can improve business operations. Building information modeling has been viewed as three-dimensional drawings, but it really is a system of data management that can be used to transform business processes. Wayne Kassian will present examples and opportunities where use of the data in intelligent drawings can change operations for reduced costs, reduced errors, and improved response. Wayne Mauiri will present on how the use of laser projection can improve production efficiency with a corresponding reduction in errors.

The Financial Performance/Risk Management Committee is planning a session on indemnification and additional insured contract provisions. Such provisions seem harmless until something goes wrong. Legal costs, settlement costs, and resource costs can be significantly affected by the contract language and cause a business to suffer as a result. This session will explore alternate wording that could be used to satisfy the intent of the provisions while being potentially less burdensome.

The Erectors Committee is planning a session on erector certification. Two presentations are planned to identify the importance of judging erector qualifications and then demonstrate how the certified erectors program will satisfy many of the important aspects of qualifying an erector for maximizing confidence in performance. With the transition away from Qualified Erectors to Certified Erectors in 2014, this session will provide timely information for making informed decisions.

Last, a session is being planned to consider recovery management. The market improvement from the recent downturn is variable within states and regions of the country. Significant adjustments to business models were required as the downturn worsened and endured. Such adjustments are not always easily reversible, yet demand for precast concrete continues to improve and response times are key to successful recovery. The session will include a brief market overview, a financial benchmarking review, presentations by several executives, and a panel discussion to allow audience questions and concerns to be heard.

Be sure to plan time for these sessions in your itinerary.

The Business Performance Council would like to hear about your needs where an industry initiative could provide solutions. Send your thoughts to Dave Dieter, Business Performance Council chair, at ddieter@midstateprecast.com or to staff liaison Roger Becker at rbecker@pci.org. We need your ideas to do our best job and accomplish our mission.

Theresa Aragon

Jaiden Olsen

Corey Fallon

Robert Schweiger

Srimaruthi Jonnalagadda

PCI announces 2014/2015 Jenny Fellowship recipients

Richard Miller, chair of the PCI Research and Development Council, is pleased to report that five $35,000 Daniel P. Jenny Research Fellowships have been awarded for the 2014/2015 academic year. The dedicated volunteer members of the council evaluated 25 fellowship applications. Special thanks are due to the PCI Producer Members who worked with many universities in support of their proposals. The recipients are as follows:

Grouted Seismic Rebar Splice Connections for Precast Concrete Building and Bridge Structures: Theresa Aragon

University: Notre Dame University
Faculty advisor: Yahya (Gino) Kurama
Producer support: Kerkstra Precast in Grandville, Mich., and Prestress Services Industries LLC in Lexington, Ky.

In her fellowship application, Aragon says, "I believe that this project, as described in the research proposal, has the potential to provide a practical advancement for precast construction along with having broad applicability in seismic regions."

Developing a General Methodology for Evaluating Composite Action in Insulated Wall Panels: Jaiden Olsen

University: Utah State University
Faculty advisor: Marc Maguire
Producer support: Hanson Structural Precast in Salt Lake City, Utah, and Concrete Industries Inc. in Lincoln, Neb.

To quote Olsen, "The possibilities that exist in industry improvement using precast insulated wall panels are vast, and to be a part of this would put me in an excellent position for a career in precast concrete design."

Progressive Collapse Resistance for Precast Concrete Frames: Design Criteria and Connection Detailing: Corey Fallon

University: Lehigh University
Faculty advisor: Spencer Quiel
Producer Support: Metromont in Greenville, S.C., EnCon in Denver, Colo., and Slaw Precast in Lehighton, Pa.

Fallon stated in his fellowship application, "Aside from the overarching goal of helping to ensure the safety of the public, the level of problem solving required and the complexity of the potential solution have driven my interest in this project."

Investigating Practical Solutions to Mitigate Longitudinal Splitting Cracking in Pretensioned Concrete Members with Low Concrete Cover: Robert Schweiger

University: Kansas State University
Faculty advisor: Robert Peterman
Producer support: Knife River in Harrisburg, Ore., and AltusGroup in Lancaster, Pa.

Schweiger stated, "Finding a way to minimize the loss of strength due to cracking in members with low cover would be very beneficial in the prestressed concrete industry."

Economically and Environmentally Efficient Foam-Void Double Tees: Srimaruthi Jonnalagadda

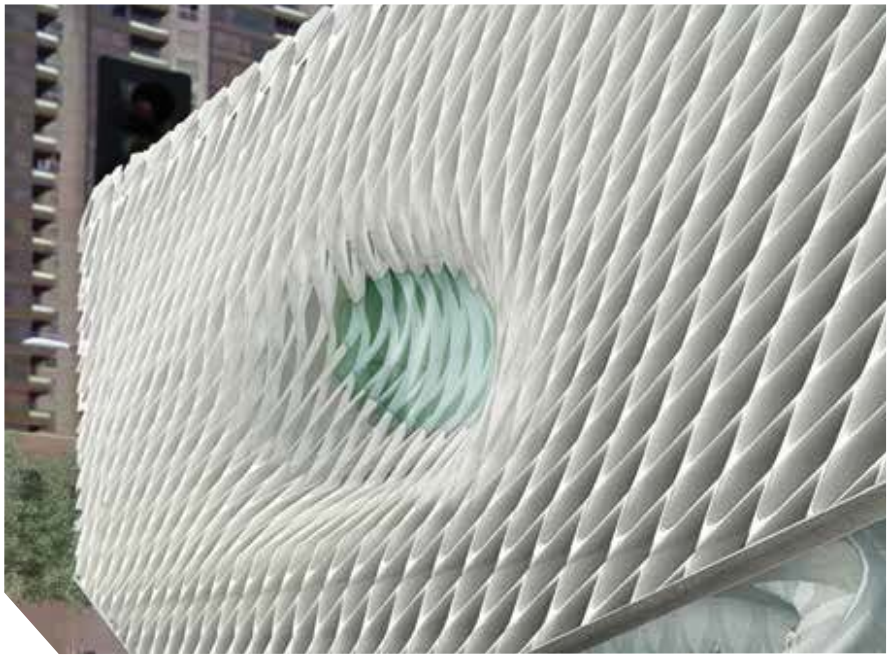
University: Clemson University
Faculty advisor: Brandon Ross
Producer support: Tindall Corp. in Conley, Ga.

Jonnalagadda stated in his fellowship application, "The objective of this study is to reduce the dead load of these members and thereby boost the engineering and construction efficiency of the precast companies by letting them build and transport longer spans and bigger sections more economically."

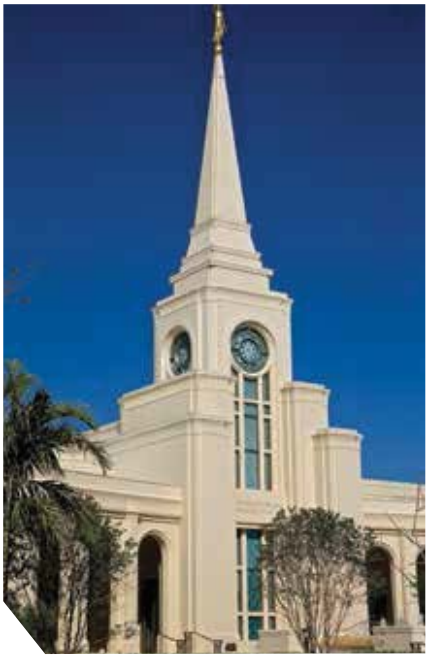
The Research and Development Council has assigned an industry advisory committee to work with each of these fellowship recipients. Contact Roger Becker at rbecker@pci.org if you have an interest in participating in or contributing to any of this work.

Next Productivity Tour set for Harrisburg

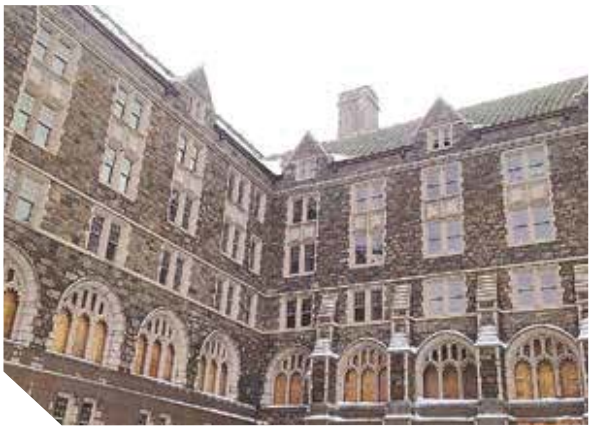
The next PCI Productivity Tour will be October 7–10, 2014, in Harrisburg, Pa. Five precasting plants and two suppliers will be visited, including Northeast Prestressed Products, Universal Concrete Products, The Shockey Precast Group, Nitterhouse Concrete, High Concrete, Insteel Wire Products, and Architectural Polymers. Visit www.pci.org for information and registration.



The Broad Museum in Los Angeles, Calif., received the Sidney Freedman Craftsmanship Award. Willis Construction Co. Inc. in San Juan Bautista, Calif., produced the exterior panels. Courtesy of Willis Construction.



Gate Precast Co. in Kissimmee, Fla., received an honorable mention for the LDS temple in Davie, Fla. Courtesy of Gate Precast Co.



Bétons Préfabriqués du Lac received an honorable mention for the renovation of the 100-year-old St. Mary's Hall. Courtest of Bétons Préfabriqués du Lac.

Sidney Freedman Craftsmanship Awards announced

Willis Construction Co. Inc. is the winner of the third annual Sidney Freedman Craftsmanship Award, which recognizes PCI-certified plants for excellence in manufacturing and craftsmanship of architectural precast concrete 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.

Willis Construction received the award for the Broad Museum in Los Angeles, Calif. The three-dimensional sculptural effect of the GFRC panels was obtained using 300 individual forms, each fabricated using detailed software.

Gate Precast's Kissimmee, Fla., plant received an honorable mention for the LDS temple in Davie, Fla. The steeple had to be fabricated, transported, and erected as a single piece. An interior steel framework provided the necessary support without excess weight.

Bétons Préfabriqués du Lac, Alma, Québec, Canada, received an honorable mention for the renovation of St. Mary's Hall at Boston College in Boston, Mass. Highly complex and detailed molds for the replicates of the ornamental elements being replaced necessitated tight tolerances for fabrication and erection.

PCI Announces winners of 2014 Big Beam Contest

The Student Education Judging Committee recently selected the winners of the Engineering Student Design Award, also known as the Big Beam Contest. First-place winners from each of the six PCI zones, along with the international entries, considered as zone 7, competed for the overall championship.

PCI's Student Education Committee (Sergio Breña, chair) organizes the Big Beam Contest, sponsored by Sika Corp., and assigned the judging committee (Richard Miller, chair). The objective is for teams of students to fabricate and test a precast/prestressed concrete beam with the help of local precast concrete PCI Producer Members. Prizes are awarded to the top performers in each zone in consideration of efficient design, highest load capacity, and other categories.

The first-place winner in each zone enters the national competition. The overall winners and zonal results are listed below.

National Competition

First place	Oregon State University, Corvallis, Ore. (Zone 1)
Faculty advisor	Keith Kaufmann
PCI producer	Knife River Corp. Northwest, Harrisburg, Ore. (Keith Kaufmann)
Student team	Luke Cressman, Drew Nielson, Sandy Spencer, and Jarrett Yanagida
Award	$2000

Second place	University of Toledo, Toledo, Ohio (Zone 4)*
Faculty advisor	Douglas Nims
PCI producer	Stress-Con Industries, Kalamazoo, Mich. (Brian Curtis)
Student team	John Morganstern, Kyle Corbin, Richard Crace, Khalid Al-Fahim, and Owjan Hashtroodi
Award	$1750

Third place	University of South Florida (Team 2), Tampa, Fla. (Zone 6)
Faculty advisor	Rajan Sen
PCI producer	Standard Concrete Products, Tampa, Fla. (John Robertson)
Student team	Daniel Buidens, Thomas Meagher, Ryan Fiegek, Cory Hill, Brittany Dugan, and Zuly Garcia
Award	$1500

Fourth place	Lehigh University (Team 1), Lehigh, Pa. (Zone 5)
Faculty advisor	Clay Naito
PCI producer	Northeast Prestressed Products LLC, Cressona, Pa. (Troy Jenkins)
Student team	Tugce Akbas, Soham Mukherjee, and Xudong Zhao
Award	$1250

Fifth place	University of Missouri and Kansas City S&T/Civil Engineering, Kansas City, Mo. (Zone 3)
Faculty advisors	Ganesh Thiagarajan (UMKC), John Myers
PCI producer	Coreslab Structures (KANSAS) Inc., Kansas City, Kans. (Mark Simpson)
Student team	Timothy Hines (UMKC), Kristen Reynolds (UMKC), Mayuri Patil (UMKC), Eli Hernandez (S&T), Alex Griffin (S&T), Hayder Alghazali (S&T), and Kaylea Smith (S&T)
Award	$1000

Sixth place	Western University, London, ON, Canada (Zone 7)
Faculty advisor	Maged A. Youssef
PCI producer	Prestressed Systems Inc., Windsor, ON, Canada (Nebojsa Mladenovic, LEL)
Student team	Ahmed Elshaer, Ahmed Mansour Ibrahim, Aiham Adawi, Amal Elawady, Connell Miller, Mohamed Hamada, Moustafa Aboutabikh, and Yamen Ibrahim Elbahy
Award	$1000

Zone 1

First place	Oregon State University, Corvallis, Ore.
Faculty advisor	Keith Kaufmann
PCI producer	Knife River Corp. Northwest, Harrisburg, Ore. (Keith Kaufmann)

Student team	Luke Cressman, Drew Nielson, Sandy Spencer, and Jarrett Yanagida
Award	See national competition.

Second place	California State University, Sacramento, Sacramento, Calif.
Faculty advisor	Eric Matsumoto
PCI producer	Clark Pacific, West Sacramento, Calif. (Chad Saunders)
Student team	Blake Dolve, Laurence Sanati, and Gaurav Rali
Award	$750

Third place	Northern Arizona University, Flagstaff, Ariz.
Faculty advisor	Robin Tuchscherer
PCI producer	Tpac, Phoenix, Ariz. (Abdullah Kassab)
Student team	Wael Alqattan, Chad Dietrich, and Mengxi Du
Award	$500

Fourth place	University of California, San Diego, San Diego, Calif.*
Faculty advisor	José Restrepo
PCI producer	Clark Pacific, Irwindale, Calif. (Greg Surmi)
Student team	Ricardo Romero, Ramón Aguilar, Daniel Recio, Andres Cuevas-Macias, Dustin Wu, Salman Sami, and Kashi Khorasani
Award	$250

Fifth place	University of Washington, Seattle, Wash.
Faculty advisor	John Stanton
PCI producer	Concrete Technology Corp., Tacoma, Wash. (David Chapman)
Student team	Matt Sisley, Nick Jacoby, Lucas Whitesell, and Bryce Lumpkin

Zone 2

No entries

Zone 3

First place	University of Missouri and Kansas City S&T/Civil Engineering, Kansas City, Mo.
Faculty advisors	Ganesh Thiagarajan (UMKC) and John Myers (MS&T)
PCI producer	Coreslab Structures (KANSAS) Inc., Kansas City, Kans. (Mark Simpson)
Student team	Timothy Hines (UMKC), Kristen Reynolds (UMKC), Mayuri Patil (UMKC), Eli Hernandez (S&T), Alex Griffin (MS&T), Hayder Alghazali (MS&T), and Kaylea Smith (MS&T)
Award	See national competition.

Second place	Minnesota State University, Mankato, Mankato, Minn.
Faculty advisor	James Wilde
PCI producer	Wells Concrete, Wells, Minn. (Gregg Jackobson)
Student team	Chase Radue and Jerry Schimmel
Award	$750

Zone 4

First place	University of Toledo, Toledo, Ohio*
Faculty advisor	Douglas Nims
PCI producer	Stress-Con Industries, Kalamazoo, Mich. (Brian Curtis)
Student team	John Morganstern, Kyle Corbin, Richard Crace, Khalid Al-Fahim, and Owjan Hashtroodi
Award	See national competition.

Second place	University of Wisconsin–Milwaukee, Milwaukee, Wis.
Faculty advisor	Jian Zhao
PCI producer	Spancrete, Valders, Wis. (Randy Neumeyer)
Student team	M. Reza Moini, Justin Flickinger, Brandon Bosch, Brent Kriha, and Seth Walsdorf
Award	$750

Third place	University of Notre Dame, Notre Dame, Ind. (Zone 4)
Faculty advisor	Yahya Kurama
PCI producer	StresCore Inc., South Bend, Ind. (Jason Reihl)
Student team	Tyler Kiefer, Martin Le, Paul Rodriguez, Roberto Sosa, Robert Devine, David Terry, and Steve Sanjay
Award	$500

Zone 5

First place	Lehigh University (Team 1), Lehigh, Pa. (Zone 5)
Faculty advisor	Clay Naito
PCI producer	Northeast Prestressed Products LLC, Cressona, Pa. (Troy Jenkins)
Student team	Tugce Akbas, Soham Mukherjee, and Xudong Zhao
Award	See national competition.

Second place	Lehigh University (Team 1), Lehigh, Pa. (Zone 5)
Faculty advisor	Clay Naito
PCI producer	Northeast Prestressed Products LLC, Cressona, Pa. (Troy Jenkins)
Student team	Alexander Niewiarowski, Evan Mullen, and Conor Thompson
Award	$750

Zone 6

First place	University of South Florida (Team 2), Tampa, Fla.
Faculty advisor	Rajan Sen
PCI producer	Standard Concrete Products, Tampa, Fla. (John Robertson)
Student team	Daniel Buidens, Thomas Meagher, Ryan Feigel, Cory Hill, Brittany Dugan, and Zuly Garcia
Award	See national competition.

Second place	University of South Florida (Team 1), Tampa, Fla.
Faculty advisor	Rajan Sen
PCI producer	Standard Concrete Products, Tampa, Fla. (John Robertson)
Student team	Ivan Dimitrov, Jack Waldron, Robert Zengal, Alexandra Reid, Yufei Chai, and Bartholomew Smith
Award	$750

Third place	North Carolina State University (Team 1), Raleigh, N.C.
Faculty advisor	Rudi Seracino
PCI producer	Tindall Corp. Virginia Division, Petersburg, Va. (Jeffrey Lepard)
Student team	Anjali Guli, Lucas Guaderrama, Pavan Chigullapally, Griffith Shapack, Zachary Van Brunt, and Baishali Das
Award	$500

Fourth place	North Carolina State University (Team 2), Raleigh, N.C.
Faculty advisor	Rudi Seracino
PCI producer	Metromont Corp., Richmond, Va.
Student team	Bryant Miller, Amir Botras, Harmid Kazem, Armita Mohammad, Omar Khalaf Alla, and Paul Rosenbeck
Award	$250

Fifth place	University of North Florida/ Civil Engineering, Jacksonville, Fla.
Faculty advisor	Adel ElSafty
PCI producer	Gate Precast Co., Jacksonville, Fla. (Tom Newton)
Student team	Ashdon Mills, Krickstein Torres, Chad Baumann, Lejla Muminovic, Maria Ruiz Quesada, Charles Sornberger, and Alex Goetz

Zone 7

First place	Western University, London, ON, Canada
Faculty advisor	Maged Youssef
PCI producer	Prestressed Systems Inc., Winsor, ON (Nebojsa Mladenovic)
Student team	Ahmed Elshaer, Ahmed Monsour, Aiham Adawi, Amal Elawady, Connell Miller, Yamen Ibrahim Elbahy, Mohamed Hamada, and Moustafa Aboutabik
Award	See national competition.

Second place	University of Manitoba, Winnipeg, MB, Canada
Faculty advisor	Dagmar Svecova
PCI producer	Armtec, Winnipeg, MB, Canada (Walter Meadus)
Student team	David Amorim and Matthew Lynch
Award	$750

Third place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 7), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines and Technology

Student team	Tumen-Ulzii.T, Altanshagai.B, Todrol.A, and Munkhmandakh.M
Award	$500

Fourth place	University of Toronto, Toronto, ON, Canada
Faculty advisor	Paul Gauvreau
PCI producer	Coreslab Structures, Dundas, ON, Canada (Sonia Saan)
Student team	Rami Mansour, Amos Chen, Karl Shao, Xi Li
Award	$250

Fifth place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 4), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines & Technology
Student team	Urnaa, Ariuka, Baysaa, and Oyunbat

Sixth place	Fanshawe College, London, ON, Canada
Faculty advisors	Soloman Asantey and Amneh Kalloush
PCI producer	The Prestressed Group (PSI), Windsor, ON, Canada (Nebojsa Mladenovic)
Student team	Ryan Quan, Shawn Sikorski, David Strydonck, and Alex Williams

Seventh place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 5), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines and Technology
Student team	Khuvilai Erdene, Delgerbaatar Myagmarsuren, Bulgan Daalkhai, and Erdenebaatar Luvsansharav

Eighth place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 8), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines and Technology
Student team	Uchral, Erdenebaatar, Oyuntuya, Oyun-Erdene, Gantulga, and Bayarbat

Ninth place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 6), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines and Technology
Student team	Khongor.B, Khoszul.T, Zolzaya.B, Munkhtsetseg.M, Ayush.B, Riimed.O, and Temujin.J

Tenth place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 2), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines and Technology
Student team	Erdenee, Tuul, Sainaa, Naska, and Amgaa

Eleventh place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 1), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines and Technology
Student team	Zooloo, Zulaa, and Uka

Twelfth place	Darkhan School of Technology, Mongolian University of Science and Technology (Team 3), Ulaanbaatar, Mongolia**
Faculty advisor	M. R. Hansen, South Dakota School of Mines and Technology
Student team	Baagii, Bayaraa, Moogii, and Tseegii

*New school to competition
**Exception granted to PCI Producer Member requirement due to location. Concrete supplied under supervision of M. R. Hansen.