

FROM PCI HEADQUARTERS

PCI offers new courses on precast, prestressed concrete bridge beam design, fabrication

The PCI eLearning Center is offering a new set of courses to help an experienced bridge designer become more proficient with advanced design methods for precast, prestressed concrete flexural members.

The courses—Preliminary Precast, Prestressed Concrete Design (T110), Materials and Manufacturing of Precast, Prestressed Concrete (T115), and Design Loads and Load Distribution (T120)—are based on the content of the *PCI Bridge Design Manual*, which is available for free after registering with a valid email. All courses in the PCI eLearning Center are also free.

The courses are designed for engineers with five or more years of experience, but the course also includes content helpful for understanding concepts and methodologies that engineers with less experience may find useful. Where applicable, real-world design of a complete superstructure is used as an example so students can see how actual calculations are completed according to the American Association of State

Highway and Transportation Officials' *AASHTO LRFD Bridge Design Specifications*.

This web-based training course was developed by PCI for the Federal Highway Administration through a contract with AASHTO.

Hurst named membership coordinator at PCI

Chris Hurst joined the PCI membership and sales team April 22, 2018, as membership coordinator. In this position, Hurst will coordinate and administer member service functions, including maintaining membership records, handling member questions and requests for information, coordinating membership renewal, coordinating member surveys, and providing onsite registration support and booth support at PCI events, among other duties.



Chris Hurst

He comes to PCI with more than five years of association experience and a background in electronic communications, education, meeting, membership, and database management. Hurst has a BA in political science from the University of Illinois at Chicago.

PCI DESIGN AWARDS CALL FOR ENTRIES

The PCI Design Awards program recognizes design excellence and construction quality using precast concrete. Be a part of the search for excellence and submit your project today.

Visit http://www.pci.org/About_PCI/Awards/PCI_Design_Awards/ for complete information on the 2019 Design Awards, including this year's categories and submission guidelines, or to make a submission.

Entries are accepted in two primary categories: buildings and transportation structures. In addition to buildings and transportation, there are special award categories: the Harry H. Edwards Industry Advancement Award, the All-Precast Concrete Solution Award, the Sustainable Design

Award, and the Building Information Modeling (BIM) Award.

August 17, 2018, is the submission deadline, and winners will be notified in late October.

All winning projects will be showcased in February at the 2019 PCI Convention in partnership with The Precast Show in Louisville, Ky., and will be included in a supplement to *PCI Journal* and *Aspire* and an article in *Ascent*.

For more information, contact Becky King, PCI's marketing manager, at (312) 360-3201, bking@pci.org, or PCIDesignAwards@pci.org or Amy Stanton, PCI's managing director of market development, at (312) 360-3216 or PCIDesignAwards@pci.org.



Emily Lorenz, center, receives an award of appreciation for her work organizing an ASTM International symposium on sustainability. Walt Rossiter, left, cochaired the symposium, and Travis Murdock, right, is the staff liaison for the ASTM E60 committee. Courtesy of Martha VanGeem.

ASTM presents Lorenz with Award of Appreciation

During the ASTM International 2018 Committee Week in San Diego, Calif., Emily Lorenz, PCI sustainability and publications director, received the ASTM International Committee E60 on Sustainability Award of Appreciation.

She received the award in recognition of her responsibilities organizing the October 2017 ASTM International Symposium on Balancing Resiliency, Safety, and Sustainability in New Orleans, La. Lorenz also made the opening remarks and chaired the Examining Resiliency, Safety, and Sustainability session and was part of a session that included Disaster Resilience Implementation Strategies throughout the United States.

Lorenz cochaired the symposium with Walter J. Rossiter Jr. of W. J. Rossiter and Associates.

Clemson precast studio gets go-ahead for three more years

The PCI Foundation Board of Trustees recently voted to continue its support for Clemson University's precast studio in Clemson, S.C., for three more years.

Over the past five years, the Clemson/PCI Foundation architecture studio has completed five architecture studios, with a total enrollment of 51 students, both graduate students and undergraduate seniors (a vertical studio, which is a sequential studio that students have to take in order to finish their degrees), and more than 360 students involved in architectural structures courses. Its main studio program has developed a unique approach based on hands-on experiential learning and the direct involvement of industry partners and professionals. A typical studio consists of three distinct projects, each representing a key step in the learning process about the material possibilities and the industry at large. The three projects are identified with unique characteristics and learning objectives as follows:

- **Introduction to precast concrete:** The reconstruction of an existing cast-in-place building where students must transform the original design into a total-precast concrete solution is conducted after an introductory lecture on precast concrete design and fabrication. In the lecture, students learn about design logistics, production sequence, panelization and component fabrication, transportation, final delivery, and site erection.
- **Hands-on exercises:** This includes workshops on fabrication, plant visits, panel fabrication with diverse architectural finishes, mold making with elastomeric rubber formliners, and a special project on tessellations, a multicasting of repetitive products for design of patterns.
- **Main architectural design project:** The studio continues with a long-term project of demanding program and complexity. Projects have included a mixed-use high-rise building in New York, N.Y.; an extension to the Greenville-Spartanburg airport main terminal, and the design of diplomatic buildings, one for the Embassy of Australia in Washington, D.C., and one for the U.S. Consulate in Rio de Janeiro, Brazil, each incorporating precast/prestressed concrete in their design solutions.

In addition to the main studio, special lectures and modules are now part of the regular architectural structures course curriculum, which includes site and plant visits and lectures by Peter Finsen, executive director of Georgia/Carolinas PCI. Furthermore, a creative inquiry, which is a special topics elective, has served to bring together students from architecture and civil engineering to work on special topics related to precast concrete.

Students from Clemson University present architectural design projects at the school during their precast studio final review in spring 2018. Courtesy of Carlos Barrios.



After Dark casino night seeks table sponsors for 2019 PCI convention

The PCI Foundation is still seeking table sponsors for the next After Dark fundraiser, a casino night during the 2019 PCI Convention in partnership with The Precast Show in Louisville, Ky.

Sponsors can show support for the PCI Foundation and the precast/prestressed concrete industry while adding to their company visibility by placing staff members at tables to interact with attendees during the evening of games and prizes.

For information on sponsoring a table, email or call Marty McIntyre, PCI Foundation executive director, at martymci@pci-foundation.org or (708) 386-3715.

The fundraiser will be chaired by Nancy Peterson of Rocky Mountain Prestress. “2018 was so much fun, we decided to do the casino theme again and really step up our game in 2019,” says Peterson. “We hope to have some amazing raffle prizes and keep everyone engaged for the whole night.”

PCI joins concrete industry fly-in to Washington, D.C.

April 24–25, 2018, PCI members and staff participated in the 2018 Cement and Concrete Industry Fly-In to Washington, D.C. As part of the North American Concrete Alliance (NACA), PCI joined the Portland Cement Association, the National Ready Mixed Concrete Association, the National Precast Concrete Association, and other concrete industry groups to meet with members of Congress on issues of importance to the industry.

PCI also took part in the Transportation Construction Coalition fly-in on May 15, 2018. The fly-in was cohosted by the Associated General Contractors and the American Road and Transportation Builders Association. During that event, PCI joined partners in the Highway Materials Group for a lunch meeting and briefing about highway and infrastructure funding.

2018–2019 MERTZ BRIDGE RESEARCH FELLOWSHIP CALL FOR APPLICATIONS

>> A \$35,000 award for the 2018–2019 academic year will be offered under the Dennis R. Mertz Bridge Research Fellowship program is offering. is the fellowship is intended primarily to support master’s degree-level research related to precast/prestressed concrete in bridge applications.

In particular, the fellowship is intended for research that improves the state of the art of precast/prestressed concrete bridge design, ma-

terials, and/or construction and has potential for market impact as a result of the research.

Applications are due August 20, 2018. The PCI Research and Development Council will meet in October 2018 to decide on the awards. Results will be available by October 31, 2018.

Complete information is available at https://www.pci.org/PCI_Docs/Design_Resources/Research_and_Development/Mertz%20fellowship%20rules.pdf.

BUILDING A BRIDGE TO THE PCI FOUNDATION FUTURE



Marty McIntyre
PCI Foundation
Executive Director

When the PCI Foundation first started providing curriculum development grants in 2007, the thought was only to reach the architectural schools where we had nearly zero representation of our industry. Twelve years later, we are seeing the architecture programs flourish, yet also seeing ways to improve how prestressed concrete is taught in all construction schools.

Some of our best programs have been those that allow the integration of complementary programs: architecture, engineering, and construction management.

The first school to focus solely on engineering was the University of North Florida in Jacksonville in 2009. Professor Adel ElSafty used the PCI Foundation grant to build a successful program, all while he became a tenured professor, was named the PCI 2015 Educator of the Year, and was a Fulbright U.S. Scholar. This summer, ElSafty will have 20 students take part in his prestressed concrete program. We also are lucky to count ElSafty as a member of the PCI Foundation Board of Trustees.

But what about bridges? Although feedback from the industry told us that there was room for improvement in the way precast/prestressed concrete is taught in schools of engineering, we wanted to know how we can help ensure that schools that already have a jam-packed schedule and strict requirements also get the benefit of up-

to-date prestressed concrete curriculum and how we could extend our work to that market.

We have found that what it really takes is some creativity on the part of the professor, as well as the ability to work with the local department of transportation, consultants, and the prestressed concrete industry.

In May, the PCI Foundation trustees approved their first bridge-focused proposal from California State University, Sacramento, in its schools of engineering and construction management.

Following are some differences we see in bridge programs compared with our original architectural-type studios:

- The school can work with the customer (the department of transportation) as part of the program.
- Consulting firms may get involved and contribute their expertise.
- There are opportunities to partner with construction management and contractors, as well as engineering schools.
- Local financial support is crucial. These programs and people will stay put much more so than students in our other programs, so the benefit is primarily local.

We are excited about our new bridge program and several others that are in the works. The key to getting them started and making them succeed will be the support of local partners, both in terms of time and effort with the schools and financial contributions to the PCI Foundation. If either part is missing, the program cannot succeed.

MARIO J. BERTOLINI LEADERSHIP AND INNOVATION AWARD CALL FOR NOMINATIONS

To honor the legacy of Mario J. Bertolini, an icon of the precast/prestressed concrete industry, PCI established the Mario J. Bertolini Leadership and Innovation Award. Bertolini was president of a major precast concrete manufacturer for many years and chairman of PCI in 1989. The award will be presented next at the 2019 PCI Committee Days and Membership Conference, September 25-28, 2019, in Rosemont, Ill. Nominations are being accepted through April 1, 2019. Nomina-

tions for this award should include a letter identifying the specific characteristics and qualifications of the candidate, including examples that meet the award criteria.

The official nomination form must be completed and included with this letter. A nomination form is available at https://www.pci.org/Submission_Center. For more information, contact Arelys Schaedler, PCI's executive assistant, at aschaedler@pci.org.

PCI announces 2018/2019

Daniel P. Jenny Research

Fellowship recipients

The PCI Research and Development Council continues to support a strong fellowship program with the announcement of five Daniel P. Jenny Research Fellowship awards for the 2018/2019 academic year. The program connects professors and students with industry experts to advance research in precast concrete. It is a unique experience, where both industry and academics benefit from the interaction. The council especially thanks all of the producers who support universities proposing research ideas. The following students were awarded fellowships.

Establishing a Minimum Length of Pile Confinement Reinforcing for Areas of Low, Moderate, and High Seismicity: Jonathan Eric Pinto

University: The Citadel Military College of South Carolina in Charleston

Faculty advisor: Timothy Mays

Supporting producers: Concrete Technology Corp. and Standard Concrete Products

Additional support: S&ME Inc., Precast Systems Engineering, and Pile Driving Contractors Association of South Carolina



Jonathan Eric Pinto

In his application, Pinto wrote, "I have always been very interested in precast concrete given its excellent performance on actual jobs and the quality control that comes naturally with every project."

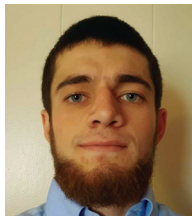
Life Cycle Assessment of Precast Parking Structures to Enhance Durability and Structural Performance: Cole Mertz

University: Ohio State University in Columbus

Faculty advisor: Halil Sezen

Supporting producers: Prestress Services Industries, Sidley Precast Group, and Coreslab Structures (Indianapolis)

Additional support: CampusParc



Cole Mertz

In his application, Mertz wrote, "The possibility that the research I do could have an impact in not just the design and repair of a handful of parking garages but in that of garages all over the country is a truly incredible thought."

Implementing Virtual Reality Technology on Early Career Training in Precast Prestressed Concrete Industry: Sayali Joshi

University: Mississippi State University in Starkville

Faculty advisors: Junfeng Ma and Wenmeng Tian

Supporting producer: Tindall Corp.

In her application, Joshi wrote, "A proper training can be given to the employees, which will give them real life experience of different scenarios of everyday work along with the consequences of avoiding safety requirements."



Sayali Joshi

Ductile High-Strength Steel Coiled Strips as Confinement Reinforcement for the Accelerated Construction of Precast Structures: Anne O'Donnell

University: University of Notre Dame in Notre Dame, Ind.

Faculty advisor: Ashley Thrall

Supporting producers: StresCore, Coreslab Structures (Indianapolis), Kerkstra Precast

In her application, O'Donnell wrote, "One of the most exciting aspects of the proposed project is the opportunity it provides to collaborate with three precast producers which will also enable me to build a professional network with the precast concrete industry."



Anne O'Donnell

Anchoring to Lightweight Concrete: Strength Reduction for Post-Installed Anchors: Ting-Wei Wang

University: Purdue University

Faculty advisor: Christopher Williams

Supporting producer: Coreslab Structures (Indianapolis)

Additional support: Stalite Structural Lightweight Aggregate, Trinity Lightweight, DeWalt, Hilti, ITW, Simpson Strong-Tie

In his student statement, Wang wrote, "I realized that using precast concrete offers many benefits compared to cast-in-place concrete, such as improved quality control, shorter construction time, and lower construction costs."



Ting-Wei Wang

Fourth annual PCI Foundation Barbecue Competition to begin in August

The PCI Foundation will be celebrating the fourth year of its successful barbecue competition in 2018 with the expansion of the program to three months. Events may be held in August, September, or October this year.

To enter, PCI members host individual barbecue fundraisers for the PCI Foundation and are encouraged to include employees, local VIPs, suppliers, industry friends, and, of course, students.

“We have found that the barbecues not only allow plants to celebrate the work of the PCI Foundation, they are also a great way to help the employees feel like they are part of a larger industry,” says Marty McIntyre, PCI Foundation executive director. “Besides being a great way to boost employee morale, it can also be a fun way to bring students, local politicians, or family into your plant. The really successful fundraisers do it in partnership with their suppliers, who also get a chance to meet the employees in a more relaxed atmosphere.”

How the funds are raised depends on the plant. For instance, some sell table spaces to suppliers, plates of food to employees, raffle tickets, or chances to dunk the plant manager in a tank. All donations are tax deductible to the company or entity making the donation, so a supplier can make a donation in honor of a plant and still claim the tax deduction.

Precast concrete industry plants and suppliers across the United States and Canada can team up to sponsor a lunch or dinner barbecue for employees and raise money for the PCI Foundation.

To enter the competition, email or call McIntyre at martymci@pci-foundation.org or (708) 386-3715. A \$25 entry fee allows the PCI Foundation to send posters and signs. All final reports are due by December 15, 2018.

GCP Applied Technologies will be sponsoring the PCI Foundation Barbecue Competition for the second year. The winner will be presented with a trophy at the 2019 PCI Convention in Louisville, Ky.



PCI to require standard CAR form for certified plants

In response to changes in International Accreditation Service ISO 9001:2015 requirements, PCI will require PCI-certified plants to complete their corrective action response (CAR) using a standard PCI-issued CAR form starting July 1, 2018.

The purpose for using this new form is to standardize the format for all plant nonconformance responses, facilitate the documentation of the root-cause analysis of each nonconformance, and provide guidance on the overall postaudit process. In addition, using this form will help plants comply with the recent changes to the quality system manual requirements.

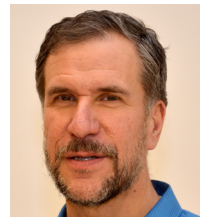
Plant auditors will discuss the use of the new CAR form during the closing meeting of all plant quality audits conducted after July 1, and PCI staff members will include the CAR form and instructions when distributing audit reports to the plants.

The CAR forms, the associated instructions, and the corrective action response process are available in the Members Only section of PCI.org under the Quality Assurance Resources page. For more information, contact Denise Malcolm, PCI's certification program specialist, at dmalcolm@pci.org or (312) 583-6774 or Mike Kesselmayer, PCI's quality programs managing director, at mkesselmayer@pci.org or (312) 583-6770.

PCI names Bagsarian editorial content manager

Tom Bagsarian, who joined PCI as a media specialist on April 2, 2018, has been named editorial content manager. In this role, Bagsarian will help manage *Ascent's* editorial and production processes and work to build PCI's media relations program with trade publications and media outlets that are more business and consumer facing to grow the precast concrete industry.

Bagsarian most recently worked for the Hanley Wood media group on *Concrete Construction*, *The Concrete Producer*, *Concrete Surfaces*, and *Public Works* magazines, among others. He has also been employed as a reporter at several Midwest newspapers. Bagsarian received a bachelor's degree from Kent State University in Kent, Ohio.



Tom Bagsarian

PCI Foundation, PCI sponsor first Project Precast student design competition

The PCI Foundation and PCI are teaming up to host a new design competition called Project Precast at the 2019 PCI Convention February 27–March 1, 2019, in Louisville, Ky. Designed for students and recent graduates of PCI Foundation–sponsored education programs, the contest is a cross between *Project Runway* and *Shark Tank*. At the end of the program, each team will own its design solution and will compete for a cash prize of \$3000. A people’s choice award will also be presented.

“We wanted to do something that captured the entrepreneurial spirit we see in students in so many of our programs,” says PCI Foundation chairman Dean Gwin of Gate Precast. “And we also wanted to do something off the beaten path from a typical design competition. This competition will get 15 of the best and brightest students who have been through our programs to the PCI Convention and help us learn more about them. We also think it will be a great way to capture their imagination by showing how creative you can be with precast.”

Up to five teams with three members each will compete to present an integrated and creative solution to a precast concrete problem at the PCI Convention. Teams will consist of one subject expert each in the areas of architecture, engineering, and construction. Each team will work with a PCI mentor, who will help guide them through the process. The team sponsors, in addition to working with the team, will help choose the design challenge and will take part in a league draft in late November 2018, where they will be able to choose their team members.

Students, like these Georgia Institute of Technology students, and recent graduates from PCI Foundation–sponsored projects will be invited to take part in the first Project Precast design competition at the 2019 PCI Convention in Louisville, Ky. An important part of the competition will include students’ working on the show floor to learn as much as possible from industry suppliers and show attendees before solving a precast concrete design problem as part of the two-day competition. Courtesy of Marty McIntyre.



The design problem could be architectural, jobsite, engineering, or fabrication related. Team sponsors and the competition sponsor will select the program challenge in September during 2018 PCI Committee Days in Rosemont, Ill. The teams will not receive information about challenge until the beginning of the competition at the PCI Convention.

Each member of the winning team will take home a \$1000 check from the PCI Foundation, and the team sponsor will be awarded a traveling trophy. In addition, the team members whose project receives the people’s choice award—voted on by the audience after the initial presentation—will receive a trophy.

To find out how to have a student or recent graduate take part in the competition or sponsor a team, contact Marty McIntyre, PCI Foundation executive director, at martymci@pci-foundation.org or (708) 386-3715.

PCI Foundation funds Sacramento State precast concrete bridge program

The PCI Foundation recently approved funding a four-year curriculum development grant for a precast concrete bridge program at California State University at Sacramento (Sacramento State) to be led by Eric Matsumoto, a professor there.

To create the new curriculum, the integrated program will combine work in schools of engineering and construction management and build on the precast concrete work already being taught at the school. With this program, students can have up to four years of programming on precast concrete design and construction.

“Despite the strong forecast for growth in the California precast bridge industry, existing civil engineering and construction management curricula provide students a disconcerting lack of exposure to precast concrete,” says Matsumoto.

Recent PCI Studios in California and around the country have taken the first step in addressing this deficiency by introducing new PCI Foundation–supported university programs that are immersing students in educational experiences that demonstrate advantages and applications of architectural and structural precast concrete, primarily for building-type applications. This proposal builds on the success of the programs in architecture and engineering, with the expectation that the same momentum can be developed with new programs in the bridge sector.

The proposal for this studio was especially strong because of the all-encompassing team of partners that included not only precast concrete fabricators but also Caltrans, consulting engineering firms, contractors, specialty partners, and a bridge software company.



PCI CALENDAR

Events

For the most current information on PCI and industry events, visit <http://www.pci.org/events>.
For industry events, visit <http://www.pci.org/news/events>.

PCI Gulf South Summer Meeting Sandestin Golf and Beach Resort, Destin, Fla.	July 12-14, 2018
PCI of Illinois & Wisconsin Summer Meeting East Troy and Lake Geneva, Wis.	July 24-25, 2018
Florida Prestressed Concrete Association Summer Convention Clearwater, Fla.	August 9-12, 2018
PCI Central Summer Event Nashville, Tenn.	August 29-30, 2018
PCI Northeast Annual Meeting Old Saybrook, Conn.	September 12-13, 2018
The Tour Bloomington, Minn.	September 18-21, 2018
PCI Committee Days and Membership Conference Rosemont, Ill.	October 10-13, 2018
PCI Convention in partnership with The Precast Show Louisville, Ky.	February 27-March 2, 2019
PCI Convention in partnership with The Precast Show Fort Worth, Tex.	March 4-7, 2020
PCI Convention in partnership with The Precast Show New Orleans, La.	February 24-27, 2021

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 education manager, Sherrie Nauden, at snauden@pci.org or (312) 360-3215. Registration forms are available at <http://www.pci.org/schools>.

Level I/II	August 22-24, 2018 August 27-29, 2018 December 3-5, 2018	Chicago, Ill. Orlando, Fla. Nashville, Tenn.
Level III	August 21-24, 2018 December 5-8, 2018	Chicago, Ill. Nashville, Tenn.
CFA	July 16-18, 2018 August 27-29, 2018 December 3-5, 2018	Nashville, Tenn. Orlando, Fla. Nashville, Tenn.
CCA	July 19, 2018 August 30, 2018 December 6, 2018	Nashville, Tenn. Orlando, Fla. Nashville, Tenn.

Compiled by K. Michelle Burgess (mburgess@pci.org)