

Jenny fellowships awarded for 2022/23 academic year

The PCI Research and Development Council has selected three recipients of the Daniel P. Jenny Research Fellowships for the 2022/23 academic year. The fellowship recipients are Kaixin Chen, Amjad Diab, and Noran Shahin. A fourth project will be announced at a later date.

The fellowship program connects students and faculty with precast concrete producers and industry experts to advance research in precast concrete, providing a valuable experience to the student, faculty, and the precast concrete industry. PCI especially thanks all producers who provide in-kind support for universities proposing research ideas.

Friction-Based Force-Limiting Connections for Jointed Precast Concrete Structures

University: University of California San Diego

Faculty advisor: Georgios Tsampras

Producer support: Clark Pacific

Additional support: Scan-Pac Manufacturing Inc.

The vision of the proposed research is to contribute to the improvement of the seismic response of precast concrete buildings by reducing the magnitude and the variability in floor accelerations and force responses. The goal of the proposed research is to develop a friction-based force-limiting connection with a reliable long-term force-displacement response to be used between horizontal diaphragm-to-wall joints in earthquake-resilient precast concrete buildings. The friction-based force-limiting connection is simple to manufacture, low cost, and non-proprietary. It will be reusable and able to withstand multiple earthquake events without damage.



Kaixin Chen

Shear Strength of UHPC Members

University: University of Texas at Austin

Faculty advisor: Anca C. Ferche

Producer support: Standard Concrete Products

Additional support: Wiss, Janney, Elstner Associates Inc.

Ultra-high performance concrete (UHPC) characteristics make it possible, in



Amjad Diab

some cases, to significantly reduce or eliminate conventional reinforcement, reduce congestion, and allow for thinner sections. The anticipated outcome and impact of the proposed research is the development of a rational shear design equation that will increase the accuracy of the current procedure developed in the PCI report. This will allow engineers to be more certain and decisive in their designs and will have a direct impact on advancing the implementation of PCI UHPC members.

Shear Behavior of PCI UHPC Members Considering Size Effects

University: University of Houston

Faculty advisor: Dimitrios Kalliontzis

Producer support: Tindall Corp.

PCI UHPC promises to revolutionize the approach to structural design with the ability of reducing or eliminating the use of shear reinforcement and applying larger prestressing forces to the members. The goal of the proposed research is to better understand the member size effects on the shear behavior of PCI UHPC members and assist in refining the shear design equations considering these effects. Understanding the size effects in PCI UHPC members will help improve the design equations to safely utilize PCI UHPC in new innovative precast concrete members.



Noran Shahin

PCI Foundation board approves funding for six precast studios

At its March meeting, the PCI Foundation Board of Trustees chose six universities to receive funding for precast studios starting in the fall of 2022. Four new studios are being established at Brigham Young University in Provo Utah, University of Massachusetts Amherst, University of Pennsylvania in Philadelphia, and partnership with the University of Hawai'i at Manoa and California Polytechnic State University in Pomona. Two other universities, North Carolina State University in Raleigh and California State University, Sacramento, were both awarded extensions of current precast studio programs.



The PCI Mid-Atlantic Young Professionals Network tours Northeast Precast's recently expanded facilities in Vineland, N.J. Courtesy of Dawn Decker.

Mid-Atlantic Young Professionals Network visit two member plants

PCI Mid-Atlantic Young Professionals Network (PCI MA YPN) met two member companies this spring. On April 5, 2022, the group visited Northeast Precast in Vineland, N.J., and on May 25, 2022, it went to Northeast Prestressed Products (NPP) in Cressona, Pa.

Northeast Precast hosted a tour of its recently expanded 225,000 ft² (20,900 m²) building. During the visit, Mark Gorgas, general manager at Northeast Precast, led a discussion about “Precast Project Delivery and Life Cycle.” Nineteen people attended from six member companies, including three members of the PCI MA Board of Directors.

The NPP visit, hosted by Dennis Fink, president of NPP hosted the group with 12 people in attendance. The group enjoyed outdoor recreational activities as well as a tour of one of our region’s transportation production facilities.

PCI MA YPN was formed to create networking and relationship building opportunities with producer and associate members.

2023 PCI CONVENTION CALL FOR PAPERS

>> PCI invites abstracts for technical papers, topics, or sessions to be presented at the 2023 PCI Convention at the Precast Show, February 21-25, 2023, in Columbus, Ohio. The call for papers offers the exchange of ideas and information on precast concrete design, fabrication, and construction. The call for presentations provides an

opportunity to discuss topics of interest to the precast concrete industry and present innovative solutions using precast concrete. For more information, see pci.org/PCI/News-Events/Call_for_Papers. Email technical@pci.org with questions or to submit abstracts no later than August 1, 2022.

2022/23 BIG BEAM CONTEST CALL FOR ENTRIES

>> The PCI Student Education Committee is inviting entries from students to participate in the Engineering Student Design (Big Beam) Competition for the 2022/23 academic year. Each student team must work with a PCI producer member to build a precast, prestressed concrete beam that is 20 ft (6 m) long. The beams will be tested and prizes awarded for best performance in the stated

areas. Students must discuss both the structural design and the concrete mixture proportions for the beam. For more information, visit <https://www.pci.org/BigBeam>. All intending to submit a report must submit an application online at <http://www.pci.org/bigbeamapp>. Final reports are due to PCI by July 15, 2022.

REACHING AN ROI MILESTONE AND MEASURING PCI FOUNDATION SUCCESS

>> This year, the PCI Foundation hit a milestone when we accepted our 40th grant proposal. We accepted six new grant applications from schools of architecture, engineering, and construction management for precast studios. We continue to fund these programs because of the successful outcomes seen time and again from the students and professors and the feedback we have heard from the precast concrete partners working on the front lines with the schools.



PCI Foundation
Chair Greg Force

How do you measure the success of a program like the precast studios? In many ways, the professors, students, and partners involved in the program tell the story of our success in the tales they share. The information about projects designed, partnerships begun, and careers made through connections stemming from the studios is a testament to what's been achieved to this point.

But after 20 years, there are other ways to measure our success. We have worked with 69 professors who have taught 600 semesters of precast concrete classes. At some schools, there are add-ons to the precast concrete programs as precast concrete is introduced into materials and structures classes that are prerequisites for the

precast concrete courses, so even more students are receiving at least a few weeks of precast concrete education that was previously absent from the architecture and engineering programs of the schools we have worked with.

I have experienced the excitement of working with students myself by being involved with several precast studios in our region. The relationships, both personally and as a company, we've developed with Carlos Barrios and Brandon Ross at Clemson University and Greg Lucier and Dana Gullum at North Carolina State University have enriched our association with those two universities in a large way. They also have given us access to a number of potential candidates to hire into our organization.

By adding four new schools and continuing programs at three others, the PCI Foundation is helping to ensure that we will continue to form relationships with schools in an effective manner and meet the educational needs of today's students. I invite you to get involved with one of our current programs or seek out a school in your area that should be teaching precast concrete. For a full list of PCI Foundation programs, check out the PCI Foundation website and look for our "Yearbook," which lists information about all the schools and programs.

2023 MARIO J. BERTOLINI LEADERSHIP AND INNOVATION AWARD CALL FOR NOMINATIONS

>> To honor the legacy of Mario J. Bertolini, an icon of the precast 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 2023 PCI Convention at the

Precast Show, February 21–25, 2023, in Columbus, Ohio. Nominations are being accepted through August 11, 2022. The criteria for this award and the nomination form are available at https://www.pci.org/Submission_Center. For more information, contact Philip McConnell, PCI's office assistant, at pmccconnell@pci.org.

2023 PCI FELLOWS CALL FOR NOMINATIONS

>> The PCI Fellows recognition is awarded to individuals who embrace the values of the institute, who have provided continuous outstanding contributions to the U.S. precast concrete industry, and who have demonstrated exceptional service to PCI. Service to the industry may be considered in the areas of education, research, design, and/or production. PCI is accepting nominations for

PCI Fellows, to be awarded during the 2023 PCI Convention at the Precast Show, February 21–25, 2023, in Columbus, Ohio. Nominations are being accepted through August 11, 2022. The criteria for this award and the nomination form are available online at https://www.pci.org/Submission_Center. For more information, contact Philip McConnell, PCI's office assistant, at pmccconnell@pci.org.

2024 LEADERSHIP PCI CALL FOR NOMINATIONS

>> PCI's flagship leadership program, established on the occasion of PCI's 50th anniversary, is opening the nomination period for the next Leadership PCI class. Each year a class of outstanding individuals is selected from candidate nominations submitted by PCI members. Each new class begins at the PCI Convention, during which class members take part in program initiation, committee meetings, and other convention activities. In the subsequent year, class members are committed to a program of development activities, culminating in a graduation ceremony at the subsequent convention.

The next class starts February 21-25, 2023, at the 2023 PCI Convention at the Precast Show in Columbus, Ohio, and graduates at the 2024 PCI Convention. In between there are manda-

tory in-person and virtual meetings. Any PCI member can submit a candidate for Leadership PCI by completing and submitting an application, available at pci.org/lpci. Applications are due by August 15, 2022, and both a sponsor and participant application must be submitted to be considered for the program.

The program fee is \$2500 per participant. By submitting a nomination form, the sponsor agrees to be billed the program fee, should their candidate be accepted into the program, along with any travel and hotel costs for in-person events. The program fee is due before the 2023 PCI Convention. For more information about the LPCI program, contact Christopher Hurst, PCI's membership project manager, at churst@pci.org.

PCI Foundation's Project Precast competition earns high grades

Project Precast, now in its fourth year, asked the 19 students who participated in the design competition to grade the 2022 event.

A total of 10 questions were asked, ranging from the assigned design project to the mentors, hotel, and communica-

tions and whether they would recommend this competition to their fellow students.

Overall, participants gave Project Precast 2022 an A, and 100% said they would recommend that their fellow students apply to be involved in Project Precast 2023.

In 2022, a sixth team, new sponsors, video training session, and subject matter expert were added to the competition elements. The presentation room attendance overflowed for the Project Precast this year, prompting the PCI Foundation Board of Directors voted to increase the size of each team from three to four students in 2023.

Nineteen students from universities across the United States competed on six sponsored teams during Project Precast 2022, held at the PCI Convention at the Precast Show in Kansas City in March. Courtesy of Bill Brymer.



2023 PCI MEDAL OF HONOR CALL FOR NOMINATIONS

>> The PCI Medal of Honor award was established to honor a person who has made extraordinary contributions to PCI and the precast concrete industry. The nominees for the Medal of Honor shall have made a highly significant contribution to the precast concrete structures industry and shall have demonstrated a sincere continuing interest in the institute. The award

will be presented at the 2023 PCI Convention at the Precast Show, February 21-25, 2023, in Columbus, Ohio. Visit https://www.pci.org/Submission_Center for more information and nomination criteria. Nominations are being accepted through by August 11, 2022, and should be sent to Philip McConnell, PCI's office assistant, at pmcconnell@pci.org.

2023 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 precast concrete projects today.

The 2023 PCI Design Awards submission site is now open. Visit https://www.pci.org/PCI/About/Awards/PCI_Design_Awards/ for complete information, 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 awards 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 10, 2022, is the submission deadline, and winners will be notified in November. All winning projects will be showcased at the 2023 PCI Convention at the Precast Show, February 21-25, 2023, in Columbus, Ohio, and will be included in a supplement to *PCI Journal* and *Aspire* and the spring issue of *Ascent*. For more information, contact PCIDesignAwards@pci.org.

PCI'S CALENDAR

>> **Events**
PCI event details are subject to change. For the most current information, visit <https://www.pci.org/events>.

PCI of Illinois & Wisconsin Summer Event Grand Geneva Resort and Spa, Lake Geneva, Wis.	July 12-13, 2022
PCI Gulf South 2022 Summer Meeting The Golden Nugget, Lake Charles, La.	July 14-16, 2022
Florida Prestressed Concrete Association 2022 Summer Meeting Sawgrass Marriott Golf Resort and Spa, Ponte Vedra Beach, Fla.	July 28-31, 2022
PCI Mid-Atlantic Summer Membership Meeting Williamsburg Lodge, Williamsburg, Va.	August 4-5, 2022
PCI Central Region 2022 Summer Event Florence, Ind.	August 23-24, 2022
2022 PCI Committee Days Conference Loews Chicago O'Hare Hotel, Rosemont, Ill.	September 20-24, 2022
PCI of Illinois & Wisconsin Fall Event Milwaukee Brewers Stadium, Milwaukee, Wis.	September 27, 2022
PCI Northeast Annual Meeting The Williams Inn, Williamstown, Mass.	October 4-5, 2022
2023 PCI Convention at the Precast Show Greater Columbus Convention Center, Columbus, Ohio	February 21-25, 2023
2024 PCI Committee Days Conference Nashville, Tenn.	September 22-26, 2024

PCI personnel training and certification schools

Quality Control School event details are subject to change. If you have any questions about the Quality Control School schedule or need help completing a registration form, please contact PCI's continuing education senior manager, Sherrie Nauden, at snauden@pci.org or (312) 360-3215. Registration forms are available at https://www.pci.org/qc_schools.

Levels I and II	June 21-22, 2022 July 18-21, 2022 August 8-10, 2022 October 10-12, 2022 December 12-14, 2022	Chicago, Ill. online Denver, Colo. Orlando, Fla. Nashville, Tenn.
Level III	June 20-23, 2022 August 9-12, 2022 October 10-13, 2022 December 12-15, 2022	Chicago, Ill. Denver, Colo. Orlando, Fla. Nashville, Tenn.

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



**It's An Art Installation,
a 3-mile Bike/Walking Path and
an Illuminated Twin-Span Bridge
Crossing the Hudson River.**

And, It Required Intricate Forms.

Project: Gov. Mario M. Cuomo Bridge
(formerly Tappan Zee Bridge)

Client: Unistress Corporation

Our Role: Hamilton Form created the
forms for the deck panels.



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