



ANNUAL REPORT 2021



BUILDING THE FUTURE

Jessica Gonzalez is currently a graduate student at the University of Texas at San Antonio, San Antonio, TX, USA. She is conducting research that is part of a larger national effort aimed at quantifying changes in the seismic collapse risk of concrete structures associated with switching from conventional reinforcing bars to niobium-based reinforcing bars. She is looking forward to becoming a licensed structural engineer to help her community by considering the balance of safety, economy, and sustainability requirements.

Her main goal is to inspire young minority women to conquer their dreams.

Jessica is the 2021-2022 recipient of the ACI Foundation Scholarship, and is one of the many students that have benefited from the ACI Foundation Scholarship & Fellowship Programs.

Your generosity allows us to continue to fund our programs to build a stronger concrete industry to meet the challenges of today and into the future.

**DONATE
TODAY!**





FROM OUR EXECUTIVE DIRECTOR

Dear Friends,

Your financial support and the support of our volunteers, ACI leadership, and industry partners has helped us enhance our role in building the future of the concrete industry. Thank you for your support!

We began 2021 with plans to implement our new 5-year strategic plan. Our plan focuses on five themes: financial strength, industry visibility, alignment, research & technology, and future leaders. We are fortunate to have strong leadership in our trustees, focused guidance from our councils in our mission-centric work, and hardworking and dedicated staff to launch our plans. We are proud of the foundational steps we have taken in 2021 and look forward to more in 2022. You can read more about these highlights in our report.

- We established long-term support of ACI Foundation operations so that 100% of community donations are applied to programs and mission activities.
- We increased our capacity to connect and engage with our community through new dedicated marketing staff, expanding awareness of our brand and new tagline “Building the Future.”
- We strengthened and simplified ACI Foundation’s approach to technology and innovation, and created a stronger connection to, support of, and alignment with ACI’s expanding focus on technology and innovation.
- We saw incredible financial support from ACI chapters, industry corporations, and individuals boosting mainly our student Fellowship and Scholarship Programs by creating more awards to encourage and engage our future leaders.
- We held two virtual Technology Forums.
- We funded eight research projects, increasing our suite of active research projects in 2021 to 27.
- Two research projects concluded:
 - Structural Response and Buckling Behavior of Slender UHPC Columns, Mohamed Moustafa, University of Nevada - Reno; and
 - Development of a Standard Critical Chloride Threshold Test Method, Ceki Halmen, University of Missouri - Kansas City.

We are lucky to have had many opportunities to connect with our community—our donors, volunteers, partners, ACI committees, and more—and we are working to build stronger and more fruitful relationships that support our common goal: Building the Future!

Please feel free to reach out to me with questions or suggestions. I welcome all feedback that can help us reach our goals. Please connect with us on social media.

My best to you and yours,

**DONATE
TODAY!**



MISSION

To make strategic investments in ideas, research, and people to create the future of the concrete industry.

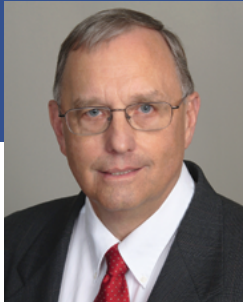
VISION

A future where everyone has the knowledge needed to use concrete effectively to meet the demands of a changing world.

IMPACT

ACI Foundation supports a wide range of research and educational initiatives that contribute to keeping the concrete industry at the forefront of technological advances in material composition, design, and construction. We engage with industry partners, invest in students and research, share knowledge, and provide programs for professional development and personal growth.

BOARD OF TRUSTEES



Michael Schneider
Chair
Baker Concrete Construction,
Inc.



Ann Masek
Secretary
ACI Foundation



Donna Halstead
Treasurer
American Concrete Institute



Joseph Bracci
Texas A&M University



Ronald G. Brug
American Concrete Institute



Jeffrey Coleman
Coleman & Erickson LLC



Robert Frosch
Purdue University



Antonio Nanni
University of Miami



Charles Nmai
Master Builders Solutions US
LLC



Michael Paul
Larsen & Landis



William Rushing
Waldemar S Nelson & Co., Inc.

INVESTMENT AND SUPPORT

“Your donation wasn’t just an addition to someone’s bank account or a lifesaver for someone’s student loans, it was an investment in their career, in their future.”

– Erin Stewartson, University of Maryland, 2021-2022 Awardee, ACI Foundation Concrete Materials Fellowship



Beyond advancing concrete knowledge, research supports emerging and talented researchers who can contribute to ACI’s resources and help shape our industry.

By cultivating programs focused on students, research, and technology advancement, ACI Foundation contributes to keeping the concrete industry at the forefront of material composition, design, and construction innovation.



SIMPLIFY TO STRENGTHEN

Creation of the Concrete Innovation Council

An outcome of ACI Foundation strategic planning, the Strategic Development Council (SDC) was restructured into a new council, the Concrete Innovation Council (CIC). The simplified objective and structure keeps the ACI Foundation aligned with ACI's expanding focus on new technology and innovation. The objective of the CIC is to identify technologies and innovations that are aligned with ACI and industry strategies and help implement their use when appropriate.

The CIC will identify innovations through various paths:

- hosting annual Technology Forums;
- sponsoring stakeholder workshops;
- conducting surveys; and
- expanding communications with ACI technical committees, ACI chapters, and the concrete industry at large.

At the request of the ACI Foundation Trustees, a group of 11 volunteers serve on the CIC. Ex officio positions are held by ACI's newly created Director of Innovative Concrete Technology as well as the Executive Directors of ACI's Centers of Excellence. Along with staff, these volunteers will identify, review, analyze, and prioritize technology and innovation that are aligned with ACI and industry strategies, and are worthy of support. CIC members will also provide funding recommendations for research, business cases, risk analysis, market surveys, validation studies, or authorship of technical guides to the ACI Foundation Trustees as appropriate.

IMPACT



22 students awarded scholarships for concrete and engineering education



Four brand new student awards created, allowing more educational opportunities for students within the community



Eight new and cutting-edge research projects granted funding, aiding in the advancement of the concrete industry



38 veterans supported through rebates for ACI certification

EDUCATION

2021-2022 Fellowship Recipients

ACI Foundation Student Fellowships are offered to high-potential students in concrete-related studies who are endorsed by an ACI member. The purpose of the Student Fellowship Program is to identify, attract, and develop outstanding professionals for productive careers in the concrete field. Learn more about ACI Foundation Fellowship and Scholarship Programs by visiting our website: <https://www.acifoundation.org/scholarships.aspx>.



ACI Foundation
Concrete Materials
Fellowship
Erin Stewartson



ACI Foundation
Concrete Practitioner
Fellowship
William Snitzer



ACI Foundation
Future Concrete
Industry Leader
Fellowship
Luke Greenwood



ACI Foundation
Middle East & North
Africa Fellowship
Sarah Al Adgham



ACI Presidents'
Fellowship
Joseph Klatt



Barbara S. and
W. Calvin McCall
Carolinas Fellowship
Melissa McAlexander



Charles Pankow
Foundation
Student Fellowship
Mohamud Abdimuhsin



Daniel W. Falconer
Memorial Fellowship
Michael Morano



Darrell F. Elliott
Louisiana Fellowship
Walter Cevallos



Don Marks Memorial
Fellowship
Matthew Allen



Elmer Baker Fellowship
Nicholas Moorman



Richard D. Stehly
Memorial Fellowship
Lauren Schissler



Tribute to the Founders
Fellowship
Stephen Roswurm

2021-2022 Scholarship Recipients

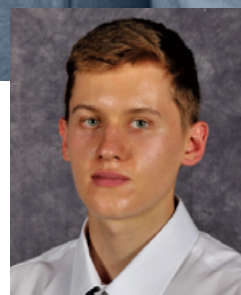
Funded exclusively through generous donations, ACI Foundation helps offset college costs by offering a wide variety of college graduate and undergraduate scholarships. Recipients are awarded a \$5,000 educational stipend for tuition, residence, books, and materials. In the 2021-2022 cycle, nine students were awarded \$45,000.



ACI Foundation Scholarship
Jessica Gonzalez



ACI Foundation Scholarship
Noran Shahin



Bertold E. Weinberg
Scholarship
Thomas Szewczyk



Katharine & Bryant Mather
Scholarship
Debadri Som



Richard D. Stehly
Memorial Scholarship
Laura Moore



Roger S. Johnston
Memorial Scholarship
Divya Maheshwari



Schwing America Scholarship
Faraj Shahrstan



Stewart C. Watson
Memorial Scholarship
Ariel Aranda



W. Gene Corley Scholarship
Andrew Young



RESEARCH

Research is a critical component to advancing our industry. ACI Foundation, through its Concrete Research Council, seeks to make the greatest impact possible. Beyond advancing concrete knowledge, research also supports emerging, talented researchers who can help shape our industry.

2021 Funded Research Projects

Chloride Desorption Isotherms of Cementitious Systems Exposed to Low-pH Environments

PI: Mahmoud Shakouri, University of Nebraska Kearney

Core Compressive Strength and Elastic Modulus Measurements of High-Strength Concrete

PI: Matthew Sherman and Co-PI: Brett Holland, Simpson Gumpertz & Heger, Inc.

Development of FRP Retrofit Guidelines for Deficient Reinforced Concrete Horizontal Lateral Force-Resisting Systems

PI: Eric Jacques and Co-PI: Matthew Eatherto, Virginia Polytechnic Institute and State University

Performance and Repair of Ordinary Structural Walls Subjected to Wind and Seismic Loading Protocols

PI: John W. Wallace, University of California

Shear Behavior of Macro-Synthetic Fiber-Reinforced Concrete

PI: Travis Thonstad and Co-PI: Paolo M. Calvi, University of Washington

Standard Critical Chloride Threshold Test Variability due to Material Sources

PI: Ceki Halmen, University of Missouri

Stress-Strain Analysis of BCSA Cement for Structural Applications

PI: Cameron D. Murray, University of Arkansas

Transverse Reinforcement Requirements for UHPC Columns: Assessment of Existing ACI Provisions and New Developments

PI: Mohamed Moustafa, University of Nevada, Reno

Learn more about the completed research projects funded through the support of our donors:



TECHNOLOGY & KNOWLEDGE SHARING

2021 Technology Forums Highlights

2021 Technology Forums were offered virtually over the course of 3 days in February and August. Attendees were offered a wide range of knowledge related to research, innovations, and new technologies through 19 presentations and 10 technology showcases.

Highlights included:

- Recommendations for horizontal shear provisions in concrete repair.
- Benefits of recycled glass pozzolans used in the award-winning Darwin Bridges: the world's first bridges to incorporate glass powder concrete.
- Australia's load-transfer construction method for improved productivity.
- Wyoming's integrated test center for testing carbon capture technology under real-world conditions.
- A case study on constructability economics.
- Updates on concrete industry efforts on carbon.

ACI also announced exciting new developments, such as ACI 318 PLUS, which provides users with digital interactive access to the ACI 318-19 Building Code Requirements for Structural Concrete and Commentary, as well as NEx: An ACI Center of Excellence for Nonmetallic Building Materials.



Darwin Bridges, Montreal, QC, Canada, the 2021 1st place winner in the Infrastructure category of the ACI Excellence in Concrete Construction awards

ACI Foundation's Concrete Innovation Council facilitates the visioning and prioritization of key challenges facing the concrete industry. It assists ACI with the timely adoption of new technologies, best practices, and provides a framework for the development of programs for acceleration of technology acceptance.

A SPECIAL THANK YOU

Visionary (+\$15,000)

ACI Georgia Chapter
ACI Ontario Chapter
Baker Concrete Construction Inc.
CMEC Holdings, Inc.
International Joints and Bearings Research Council

Jeff W and Ayanna Coleman
Master Builders Solutions USA, LLC
Ron Burg and Jill Humphrey
Tony and Cathy Fiorato
William Maloney Estate

Innovator (\$10,000 - \$14,999)

Cary Kopczynski

Benefactor (\$5,000 - \$9,999)

ACI Nebraska Chapter
ACI San Antonio Chapter

ACI Washington Chapter
J Francis Young

Scholar (\$1,000 - \$4,999)

ACI New England Chapter
ACI Northern California and
Western Nevada Chapter
ACI Pittsburgh Area Chapter
ACI Rocky Mountain Chapter
Adam C Brown
Alan V Dausman
Charles K Nmai
Donald and Marian Meinheit

Jae Hong Kim
James R Harris
Jon I Mullarky
Kamal H Khayat
Ken Vallens
Kimberly Kayler
Michael and Paula Paul
Michael and Barbara Schneider
Michael E Kreger

Michael L Tholen
National Christian Foundation
Southwest
Neel Khosa
Randall W Poston
Rex C Donahey
Scott M Anderson
Vellore S Gopalarathnam
W Jason Weiss

Advocate (\$500 - \$999)

ACI Central Texas Chapter
ACI Intermountain Chapter
ACI Kansas Chapter
ACI San Diego International Chapter
Ann M Masek
Bill and Sheila Rushing
Dan M Schwartz
David W Johnston
Emmanuel K Attiogbe
James E Cook
Jane Johnston
Joseph Bracci
Katherine Kuder
Khaled Awad

Lawrence J Totten
LeRoy A Lutz
Matthew R Sherman
Nancy Gavlin
Paul Zia
Procon Inc.
PWE, Inc.
Rodney J Chiodo
Scott M Anderson
Stephen S Szoke
Trey Hamilton
William J Wilhelm
Yixin Shao

TO OUR DONORS

Friend (\$25 - \$499)

Aaron P Hastie	Francis Brezny	Kurt Sauer	Ray Zelinski
Abdulaziz I Al-Mana	G Terry Harris	Laura J Powers	Ricardo A Herrera
Adolfo B Matamoros	Gabriel Ojo	Lawrence F Levy	Richard A Henige
Alan J Schweickhardt	George R Wargo	Leon Grant	Richard J Amodeo
Alexander Rochell	Gilson R Lomboy	Lori A Purdom	Richard L Donovan
Alvaro Ruiz Empananza	Giordano Jose Loureiro	Louis J Sovak	Robert C Sinn
Andrew W Taylor	Gregory A Johnson	Luis A Romero	Robert J Freil
Andrew Zickler	Hal Amick	Lutfu Kaynar	Robert J Frosch
Anne M Ellis	Heather Brown	Maria G Juenger	Robert M Cords
Antonio Ferreira	Herman L Graves	Marie E Derby	Robert M Howell
Antonio Nanni	Homa Ghaemi	Mario Berges	Robert P Behm
Art R MacDougall	Hong Kim	Marisa Connors	Robert Watkins
Avanti C Shroff	James A Farny	Mark T White	Roderick A Murray
Ayhan Irfanoglu	James Adrian Van Wyk	Matthew J Niermann	S Ali Mirza
Badri K Prasad	James R Fowler	Melissa Camarillo	Scott D B Alexander
Billy Liao	James S Pierce	Melissa Oriel	Sergio M Alcocer
Brewster D Martin	James J Lynch	Michael A Russillo	Shiraz D Tayabji
Carlos E Rodriguez-Perez	Jay M Fitzgerald	Michael C Bley	Sriram Kalaga
Carlos L Hernandez	Jay P Shapiro	Michael F Pisarik	Sriram Kalaga
Carol L Tasillo	Jhugroo Hemaduth	Michael Howard	Steven B Jaskot
Charles D Dean	Joe B Barela	Michael J DeBlasio	Steven Stelzer
Chris Darnell	John C Hukey	Michael J Paul	Teck L Chua
Craig E Barnes	John Conn	Michael L Leming	Terrance G Reynolds
Daniel Knadler	John R Hayes	Michael S Stenko	Thomas J Kolber
Daniel T Biddle	John W Nehasil	Michael Trabold	Thomas P Binkowski
Dario Angelo Maria	John W Johnston	Michael M Sprinkel	Thomas P Pardue
Coronelli	John J Myers	Mohamad Nagi	Timothy E Bradberry
David C Gray	Jose Arnaldo Diaz	Nakhle Sakr	Timothy K Jaquess
David G Kittridge	Jose R Janela	Nancy B Walker	Tonya Beesley
David Lankard	Joseph Lim	Nathan Tregger	Travis Thonstad
David R Lankard	Joseph P Buongiorno	Nicholas J Carino	Tricia G Ladely
Dennis M Wittry	Josh J Massa	Nilufer Ozyurt Zihnioglu	Uday Chaudhari
Dilip S Thodge	Juan A Fernandez Barquin	Paul F Sullivan	Uiyeon Shim
Don G Weempe	Justin S Pechar	Paul J Tikalsky	W Carl Taylor
Donald F Meinheit	Karl Hees	Peter Barlow	Walter H Flood IV
Donna G Halstead	Kathryn Amelio	Peter J Carrato	Walter J Kaniecki
Douglas Hahn	Keith A Tosolt	Peter Stynoski	William C Sherman
Dudley Joseph Primeaux II	Ken Elkins	Philios Angelides	William F Band
Earl Carl Howard	Ken Vallens	Philip B Vaughan	William G Cox
Edmund L Baum	Kenneth D Hansen	R Scott Pingrey	William R Phillips
Edward Mu	Kenneth E Fricke	Rafael C Discipulo	Ziad A Al-Terkawi
Eric S Peterson	Kenneth J Tiss	Rajan Sen	Ziduan Joshua Shang
Ernesto Diaz-Ramirez	Kerry Sutton	Raul H Santa Maria	

OUR VOLUNTEERS

Scholarship Council	Concrete Research Council	Concrete Innovation Council	Development Committee
Scott Anderson Tonya Beesley Anahid Behrouzi Heather Brown Neil Hawkins Cecil Jones J Scott Keim Amy Numbers Debrethann Orsak Anton Schindler Alice Stark Kejin Wang	Emmanuel K Attiogbe Claude Bedard Richard Bohan Joseph Bracci Jared Brewe Michael Brown John Busel Jonathan Dongell Anne Ellis Chris Forster Benjamin Graybeal Danielle Kleinhans Hai S Lew Colin Lobo Paul Mlakar Vilas Mujumdar Sulapha Peethamparan Aleksandra Radlinska Joseph Sanders Michael Schneider Michael Sprinkel Michael Stenko Dennis Wittry	Oscar Antommattei Claude Bedard Mahmut Ekenel Patrick Frawley Brian Green G Terry Harris Lesley Suz Chung Ko Carl Larosche Brad Malmsten John Myers Eric Peterson	Joseph Bracci Melissa Camarillo Jeffrey Coleman Anthony DeCarlo Jr Alvaro Ruiz Emparanza Neil Hawkins Michael Paul Michael J Schneider

HOW TO GET INVOLVED

Help Build the Future

As an ACI Foundation supporter, you are making a difference in the lives of future designers, builders, and engineers by fostering our scholarship and fellowship programs and advancing industry change, impactful research, and new technologies.



Make a donation by mail or online



Planned giving



Corporate donations



Launch a Facebook fundraiser



Mentor a student



Attend a Technology Forum



Speak at a Technology Forum



Join a Committee



YES, I WOULD LIKE TO SUPPORT THE WORK OF ACI FOUNDATION

Please return completed form to the attention of Kari Martin by mailing to the ACI Foundation. For questions, please contact +1.248.848.3144.

GIFT AMOUNT: \$50 \$100 \$300 \$1000 Other: \$ _____

I'd like my gift to be recurring: monthly quarterly yearly My company will match—*please attach a matching gift form.*

I'd like my gift to be designated to:

ACIF General Fund Concrete Research Fund Scholarship Fund Innovation & Technology Fund Sustaining Fund

Please use the following name(s) in all acknowledgments: _____

I/we wish to have our gift remain anonymous.

Please contact me to learn how to add ACI Foundation in my estate planning.

Check Enclosed (payable to ACI Foundation)

Charge my: Visa MC AmEx Discover

Name: _____

Name on Card: _____

Address: _____

Account Number: _____

City: _____ State: _____ Zip: _____

Exp. Date: _____ CVV Code: _____

Phone: _____

Signature: _____

Email: _____

To give a gift online, visit our website: [acifoundation.org](https://www.acifoundation.org)

ANNUAL2021



www.acifoundation.org



ACI Foundation
38800 Country Club Drive
Farmington Hills, MI 48331 USA

transforming
encouraging
Building the Future
innovating
collaborating
supporting
progressing
advancing
together



DONATE

