



ANNUAL REPORT 2023

 **aci**® Foundation 

Building the Future



FROM OUR EXECUTIVE DIRECTOR AND BOARD OF TRUSTEES CHAIR

Thank you! Your continued financial support, encouragement, insight, advocacy, and trust helped shape our 2023 into a year where we could build on past successes and plan for more growth, refinement, and expansion.

We remained committed to our mission, centered on supporting future industry leaders and propelling research and technology forward. Together we provided funding to people and projects that created these outcomes for our community:

- Design guidance for effective construction and enriching the community
- Contributions to sustainability through repair and reuse, reconfiguring existing buildings for resilient performance
- Updates to codes that contribute to safety
- Improvements to our infrastructure systems
- Materials investigation for better performance of concrete
- Expertise building of early-career faculty who guide and teach future concrete researchers, industry practitioners, and leaders
- Research experience for graduate research assistants, enhancing their education and broadening their knowledge
- Ways to help implement new technologies and innovation
- A mentoring and ACI convention environment that supports students and young members' professional growth
- A platform to stay involved in ACI

Looking forward to 2024, the ACI Foundation will celebrate 35 years as a trusted resource for progress, funding, and collaboration. We look forward to embracing new approaches and reaching the wider construction community.

Together, we continue to positively impact ACI and the concrete industry. Thank you to all who contribute to our successes!

All my best, always!
Ann Masek, Executive Director

Jeffrey Coleman, Board of Trustees Chair

2023 FINANCIAL SUMMARY

Revenue

Contribution	\$2,010,597
Other Program Revenue	\$37,998
Interest	\$334,961

TOTAL REVENUE \$2,383,556

Expenses

Total Program Support	\$1,558,505
Total Fundraising Support	\$142,734
Total Administrative Support	\$98,502

TOTAL EXPENSES \$1,799,741

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 to encourage innovation and new technology.



BUILDING THE FUTURE

Sherryen Mutoka is currently pursuing her PhD in civil and structural engineering at the University of Notre Dame. Sherryen is currently working in the Kinetic Structures Laboratory at the

University of Notre Dame, where her research looks at accelerated fabrication of civil infrastructure in which steel and concrete are the primary materials. She is investigating various approaches to be used in reinforcing three-dimensional-printed concrete walls by conducting full-scale experiments along with developing numerical models of the walls.

Once Sherryen graduates, she says she's excited to explore opportunities in the innovative structural design field.

Sherryen is the 2023-2024 recipient of the ACI Foundation Concrete Materials Fellowship and is one of the many students who 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.



SUPPORT



33 students awarded scholarships for concrete and engineering education



Seven brand-new student awards created for more educational opportunities for students within the community



13 new and cutting-edge research projects were granted funds to aid in the advancement of the concrete industry



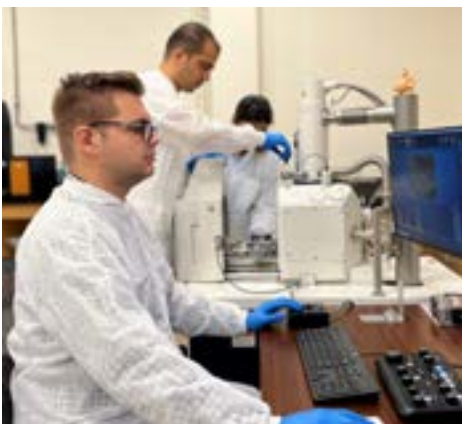
83 veterans supported through rebates for ACI certification

RESEARCH

Research is a critical component to bringing progress to our industry. Beyond advancing concrete knowledge, ACI Foundation research also supports emerging, talented researchers who can help shape our industry.

2023 Funded Research Projects

- **Alternative End-Specimen Conditions to Characterize Compressive Strength of Ultra-High-Performance Concretes**
PI: Kinsey Skillen, Texas A&M University
- **Behavior of Slab-Column Connections under Wind Demand**
PI: Christopher Motter, Washington State University
- **Direct Tension Test Results and In-Situ Response in Reinforced UHPC Beams: Relationship and Design Implications**
PI: Sherif El-Tawil, University of Michigan
- **Evaluating Residual Strength of Corrosion-Damaged Reinforced Concrete Members**
PI: Anca-Cristina Ferche, The University of Texas at Austin
Co-PI: Serhan Guner, The University of Toledo
- **Nano-Modified Calcined Clay-Based Cement Concrete: A High-Modulus Concrete with Low Carbon Footprint**
PI: Panagiotis Danoglidis, The University of Texas at Arlington
- **Novel Concrete Containments for Nuclear Reactors: Delamination Testing of Curved Wall Sections**
PI: Christopher Jones, Kansas State University
Co-PI: Thomas Kang, Seoul National University
- **Proposal to Investigate ICF Wall Construction Meeting the Requirements of NFPA 285 – Phase II**
PI: Shamim Rashid-Sumar, National Ready Mixed Concrete Association
Co-PI: Douglas Bennion, Quad-Lock
- **Strut-and-Tie Design of Disturbed Regions Utilizing Internal Fiber-Reinforced Polymer Reinforcement**
PI: Rudolf Seracino, North Carolina State University
Co-PI: Giorgio T. Proestos, North Carolina State University
- **Sustainable and Safe Reinforced Concrete Retaining Walls**
PI: Luis Fargier-Gabaldón, University of Notre Dame
- **The Role of Testing Conditions and Concrete Durability Issues in Chloride Binding and Desorption of Cementitious Systems**
PI: Mahmoud Shakouri, Colorado State University
- **Rheological Behavior of Fresh Ultra-High-Performance Concrete (UHPC) Enhanced by Nano-Additives and Data-Driven Approaches**
PI: Chengcheng Tao, Purdue University
Co-PI: Kamal Khayat, Missouri University of Science and Technology
- **Microstructural Characterization of Iron Sulfide Mineral Oxidation in Aggregates Used in Concretes**
PI: Alexander S. Brand, Virginia Tech
- **Tests of Two Exterior Beam-Column Joints with Headed Bars for Evaluation of Breakout Strength**
PI: Gustavo Parra-Montesinos, University of Wisconsin–Madison



Scan the QR code to learn more about the completed Research Projects funded through the support of our donors



ACKNOWLEDGMENT OF SUPPORT FOR SUPPLEMENTARY PROGRAMS

ACI Personal Awards

Supporting the formal recognition by ACI of notable individuals within our industry.

■ NEW! Michael Thomas Concrete Durability Award

Sponsors: Matthew Adams, Michael Ahern, Eric Giannini, Doug Hooton, Jason Ideker, Maria Juenger, Kimberly Kurtis, Robert Lewis, Vic Perry, Kyle Stanish, Paul Tikalsky, Jason Weiss, Michelle Wilson, Slag Cement Association (SCA), ACI Atlantic Chapter, American Coal Ash Association, Cement Association of Canada (CAC), CarbonCure Technologies Inc., Concrete Canada, GEMTEC Consulting Engineers and Scientists Limited, National Ready Mixed Concrete Association (NRMCA), Pivot Engineers, Portland Cement Association (PCA), Institute of Concrete Technology (ICT), and University of New Brunswick (UNB).

ACI 123 Student Researchers

Supporting recognition of excellence in concrete research presentations at ACI conventions with monetary awards.

■ ACI 123 Oral Presentation Award

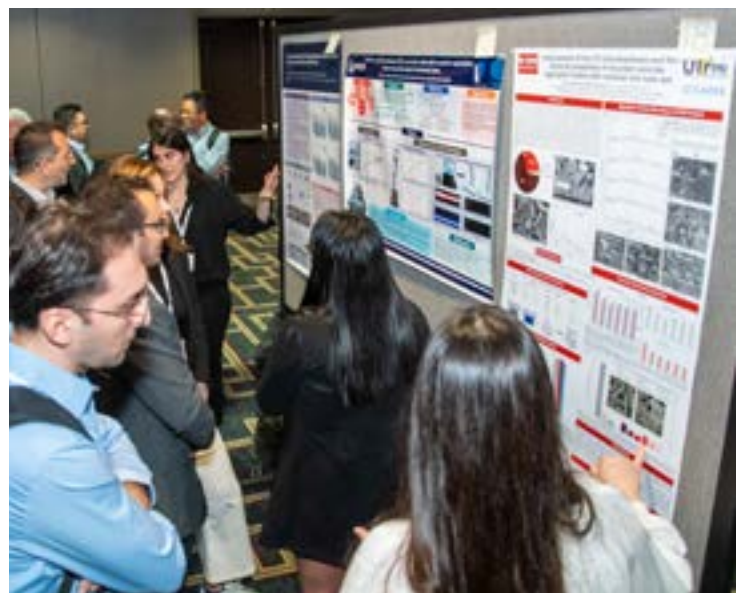
Donor: Giatec Scientific, Inc.

Student winners: 1st place–Kyle Maeger;
2nd place–J. Ann Albright; 3rd place–Niloofer Parastegari

■ ACI 123 Poster Session Award

Donor: Pivot Engineers

Student winners: 1st place–Kittipong Thiamchaiboonthawee and Qiyao He; 3rd place–Jonah R. Smith



TECHNOLOGY & KNOWLEDGE SHARING

2023 Technology Forum Highlights

The ACI Foundation's Concrete Innovation Council (CIC) gathered once again with participants and presenters to discuss technology and innovation at the 2023 Technology Forum. The successful event took place August 29-31, 2023, at The Benson Portland, Curio Collection by Hilton, in Portland, OR.

The 2023 Technology Forum included 15 presentations that highlighted new technologies, advances in research, and new test standards. NEU: An ACI Center of Excellence for Carbon Neutral Concrete sponsored the group lunch, which was followed by several carbon-neutral topics.

The event concluded with a debate that discussed new technologies for determining concrete strength and how such methodologies can find a path to be used in acceptance criteria for concrete, including accommodating in-place measurements evaluated using machine learning algorithms. Participants discussed a few currently available new technologies for in-place strength testing. The panelists debated on how the industry could develop more rapid and reliable acceptance criteria based on those methods.

2023-2024 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**
Sherryen Mutoka, University of Notre Dame
- **ACI Foundation Concrete Practitioner Fellowship**
Avery Londo, Montana Technological University
- **ACI Foundation Future Concrete Industry Leader Fellowship**
Jenna Hays, Northern Arizona University
- **ACI Foundation Fellowship**
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Dana Tawil, University of Ottawa
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Sergio Godinez, University of California – San Diego
- **Don Marks Memorial Fellowship**
Timothy Kohany, Manhattan College
- **JoAnne K. and Cecil L. Jones Carolinas Fellowship**
Samuel Valmassoi, North Carolina State University
- **Nicholas F. Maloof, Jr. GA Chapter ACI Fellowship**
Carlos Franco Mayorga Gallegos, University of California, San Diego
- **Robert F. Mast Memorial Fellowship**
Jonathan Broyles, Penn State University
- **S.P. Shah Fellowship**
Marina García López-Arias, Purdue University
- **Tribute to the Founders Fellowship**
Anabel Merejildo, University of Puerto Rico

2023-2024 SCHOLARSHIP RECIPIENTS

Funded through generous donations, ACI Foundation helps offset college costs by offering a wide variety of college graduate and undergraduate scholarships and fellowships. Recipients are awarded a \$5,000 educational stipend for tuition, residence, books, and materials. In the 2023-2024 cycle, 14 students were awarded \$70,000.



- **ACI Foundation Scholarship**
Sandy Chen, University of Toronto
- **ACI Foundation Scholarship**
Timothy Mueller, University of Florida
- **ACI Foundation Scholarship**
Tijani Mohammed, Texas State University



- **ACI Foundation Scholarship**
Kate Weiksner, University of Florida
- **Bernard Erlin Memorial Scholarship**
Moustafa Mansour, University of British Columbia
- **Bertold E. Weinberg Scholarship**
Madeleine Murphree, University of Florida
- **Katharine & Bryant Mather Scholarship**
Micah Stark, Texas A&M University



- **Master Builders Solutions Concrete Materials Scholarship**
Nithya Nair Vijayakumaran Nair GeethaRani, The University of Texas at Arlington
- **Nick Bada – ACI Ontario Chapter Graduate Scholarship**
Jeremy Dodd, Western University
- **Richard D. Stehly Memorial Scholarship**
Ariel Majano, New Jersey Institute of Technology
- **Roger S. Johnston Memorial Scholarship**
William Snitzer, Arizona State University



- **Schwing America Scholarship**
Meraj Rubayat Kamal, University of British Columbia
- **Stewart C. Watson Memorial Scholarship**
Cameron Hicks, Kansas State University
- **W. Gene Corley Memorial Scholarship**
Bo Rider, Cornell University



A SPECIAL THANK YOU

Special thanks to ACI—you are a true partner and benefactor to our concrete community! Together, we are able to accomplish so much more for ACI and the industry.

Your mission-directed donations more than match the community donations below, and by providing full operations support for the ACI Foundation, **100% of mission-directed donations from the community go directly to the beneficiaries—students, research, and technology.**

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Advancing Organizational Excellence (AOE)

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ANNUAL2023



www.acifoundation.org



ACI Foundation
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MISSION

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

VISION

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

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