From the Executive Director

Dear Friends,

When we reflect on 2019, we are struck by the scope of our impact. Looking back over the past months, I can say with great confidence that it has been another year full of advancement. Some of it came from the momentum started in 2018, while other aspects have resulted from a strong strategic focus from staff and our dedicated volunteers and donors. I can proudly say because of you, we are positioned for a thriving future where we will continue to grow and provide major opportunities for students, contribute to top research projects throughout the world and help advance innovation in the industry.

Our Board of Trustees, members of our research, scholarship, and strategic development councils, development committee and staff are the heart and essence of what we do and how we make a difference. ACI Foundation's 2019 program accomplishments show through because of the hard work of our community.

In 2019 the ACI Foundation funded 6 essential research projects, distributed fellowship and scholarship awards to 18 of the best students in the industry to help pay for their schooling which also gave them access to ACI members and mentors through attending ACI Concrete Conventions. Not only is the ACI Foundation impacting research and education, but we committed over $100,000 towards initiatives that serve new technology and innovation in the concrete industry.

A few program highlights include:
• Became a major co-sponsor to the 2019 Professors Workshop – held at ACI Headquarters
• Opened a brand-new veteran’s rebate for ACI Certifications program
• Secured 100% of ACI Board of Directors and ACIF Trustees contributions to the Foundation
• Mailed our second annual appeal that raised over $40,000
• Procured a new undergraduate scholarship for students in civil engineering or construction management
• Secured renewals of four fellowships and one scholarship
• Conducted our first ever Trustee orientation and Council Chair training
• Held a highly successful inaugural donor appreciation event at the spring ACI Convention

We invite you to keep up to date on that work by staying connected with us year-round. Visit our website, read Knowledge to Practice in Concrete International, check out our e-newsletters and follow us on Facebook, Twitter and LinkedIn. These tools provide the latest news about our efforts, as well as inspiring stories about our awardees and this past year has been one of commitment, engagement, and forward movement. I am grateful to the ACI Foundation staff, our Trustees and our Councils for all that we have accomplished this year. Together we have established an incredibly strong footing for progress and growth.

Thank you for serving our community.

All my best,

Ann Masek
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Thank you,

Michael J. Schneider
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Senior Vice President
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Over the last couple years, Advancing Organizational Excellence (AOE) has donated $200,000 to the ACI Foundation and $50K alone in 2019! AOE’s unique experts provide consulting services to a long list of associations and organizations in the concrete industry. Since we invest our profits back into the markets we serve, supporting the ACIF simply makes sense. AOE is dedicated to helping the ACIF grow and thrive.

Our donations to the ACIF allow AOE to further our impact, creating a stronger industry for all.

–Kimberly Kayler,
Advancing Organizational Excellence (AOE)
**Graduate and Undergraduate Fellowships**

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. Please visit [https://www.acifoundation.org/scholarships.aspx](https://www.acifoundation.org/scholarships.aspx) for more details.

**2019-2020 ACI Foundation Fellowship Recipients:**

**ACI Presidents’ Fellowship**
- Alvaro Ruiz Emparanza, University of Miami

**Baker Student Fellowship**
- Aaron Elliott, Pittsburg State University

**Don Marks Memorial Fellowship**
- Ivy Thibodeaux, University of Louisiana - Lafayette

**Richard D. Stehly Memorial Fellowship**
- Joseph DiBucci, Pennsylvania College of Technology

**Elmer Baker Fellowship**
- Edvard Bruun, Princeton University

**Daniel W. Falconer Memorial Fellowship**
- Ross Newsome, University of North Carolina - Charlotte

**Tribute to the Founders Fellowship**
- Hope Hall, Oklahoma State University

**ACI Middle East Fellowship**
- Nancy Kachouh, United Arab Emirates University

**Graduate and Undergraduate Scholarships**

Funded primarily through generous donations, the ACI Foundation administers these scholarships, which are offered to high-potential graduate students in the concrete-related studies. The ACI Richard D. Stehly Memorial Scholarship is awarded to an undergraduate student.

**2019-2020 ACI Foundation Scholarship Recipients:**

**ACI Scholarship**
- Muhammad Faizan Qureshi, University of Toronto

**W. Gene Corley Scholarship**
- Joshua Tomczak, University of Minnesota - Duluth

**F. Bertold E. Weinberg Scholarship**
- Anthony Becerril, Purdue University

**ACI Presidents’ Fellowship**
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**Elmer Baker Fellowship**
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Serving the industry by bringing high-potential students into the realm of concrete.
Grant Funding in 2019

The ACI Foundation has been contributing financially to research projects since its inception in 1989. The grant funding process for research proposals includes a thorough technical review and endorsement by an ACI technical committee. Because ACI technical committees touch every facet of concrete construction, the ACI Foundation can fund a broad variety of projects – enhancing how we construct buildings, bridges, roads, and the rest of the built infrastructure.

Project: Effective Characterizations of Recycled Concrete Aggregate (RCA) for Concrete Applications
ACI Committee Support: ACI 555, Concrete with Recycled Materials
Principal Investigator: Jiong Hu – University of Nebraska-Lincoln; and Tara Cavalline – University of North Carolina at Charlotte
Other Funders: University of Nebraska-Lincoln and University of North Carolina at Charlotte

Project: Embodied Carbon in Construction Calculator (EC3) Tool
ACI Committee Support: ACI 130, Sustainability of Concrete
Principal Investigator: Kathrina Simonen – University of Washington
Other Funders: 30+ collaborators, including Microsoft Corporation; BASF Corporation; Walter P Moore and Associates, Inc; and the Charles Pankow Foundation

Project: Seismic Behavior of Precast Columns with High-Strength Steel Coiled Strip Reinforcement
ACI Committee Support: ACI 550, Precast Concrete Structures – Joint ACI-ASCE
Principal Investigator: Ashley Thrall – University of Notre Dame
Other Funders: University of Notre Dame

Project: Deconstruction Monitoring of a Cast-in-Place Segmental Concrete Box Girder Bridge
ACI Committee Support: ACI 342, Evaluation of Concrete Bridges and Bridge Elements
Principal Investigator: Matthew Yarnold – Texas A&M University
Other Funders: Texas A&M University

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ACI Foundation believes in collaboration to boost impact and progress in the industry. We co-funded these projects, which work was completed in 2019. Research grants can:

- help to sponsor students and young researchers in their development while producing industry knowledge,
- inform ACI committee work and documents,
- lay the groundwork for potential code change proposals,
- provide needed data to close the technical gap for use of a new technology in the industry.

Information on all ACI Foundation-sponsored research, including final reports, can be found at www.acifoundation.org/research/researchprojects.aspx.

Goals that help guide SDC’s vision—SDC Initiatives in 2019

**Improve the Durability of Concrete**

**Research**
- Literature Review of Concrete Durability & Service Life Requirements in Global Codes and Standards
- Interface Bond: Development of Appropriate Horizontal Shear Provisions for Concrete Repair
- Durability of GFRP Bars Extracted from Bridges with 15 to 20 Years of Service Life

**Presentations**
- Quantifying Concrete Resilience

**Improve the Design & Construction Process**

**Presentations**
- Hybrid Sliding-Rocking Columns for Seismic Resilience & Accelerated Construction
- Strengthening Bridges and Existing Concrete Structure Using Titanium

**Improve Concrete Contractor Productivity & Project Quality**

**Technology Showcases**
- TyBot – An Autonomous Rebar Tying Robot

**The SDC strives to:**

**Provide an objective voice that supports innovation and provides solutions to industry-wide issues**

**Support programs that improve the quality and potential competitiveness of concrete in design and building, and as a building material**

**Assist the concrete community in the timely adoption of innovative technologies, best practices and solutions for industry-wide issues or initiatives**

**SDC Initiatives in 2019**

**Improve the Adoption of Innovation**

**Co-Funded Research**
- Evaluation of Composite Coupled Core Walls for Low-Seismic Force and Wind Load Applications
- Performance-Based Design of Concrete Buildings for Wind Loads
- Support of High-Strength Reinforcement Research
- Foundation Mats with High-Strength Reinforcement
- Development of Large High-Strength Headed Reinforcing
- Normal and High-Strength Continuously Wound Ties

**Industry Workshop**
- Implementation of New Technologies and Innovations

**Presentations**
- Field Experience & Lessons Learned in Bending High-Strength Reinforcement

**Technology Showcases**
- The Power of Virtual Reality for the Concrete Industry
- The EC3 Tool – Making Embodied Carbon Data Relevant, Credible and Timely
SDC Technology Forums

We foster innovation by hosting Technology Forums twice a year. These two and a half day events are attended by industry leaders and subject matter experts from across many industry segments to discuss and concur on strategic directions needed to move our industry forward and learn about new technologies.

Visit www.acifoundation.org/technology/forums to view recent Forum agendas and future forum information.

Technology Forum 45, February 12-14, 2019, La Jolla, California
- 7 Technology Showcases
- 10 Technical Presentations
- Panel Presentations Performance-Based Concrete Specifications & Embodied Carbon
- Workshop on the Implementation of New Technologies & Innovations

Technology Forum 46, August 27-29, 2019, Pittsburgh, Pennsylvania
- 6 Technology Showcases
- 8 Technical Presentations
- Panel Presentations
- Non-Metallic Reinforcement
- 2 Breakout Sessions Non-metallic & Non-ferrous Technologies & Artificial Intelligence

SDC Member Organizations

- American Concrete Institute
- American Shotcrete Association
- American Society of Concrete Contractors
- Baker Concrete Construction Inc
- Barton Malow Company
- BASF Admixtures Inc
- BergerABAM
- Beton Consulting Engineers LLC
- Burns Concrete
- CarbonCure Technologies
- Ceco Concrete Construction LLC
- Charles Pankow Foundation
- ChemCognition LLC
- Combined Creek Consulting
- Concrete Preservation Institute
- Concrete Reinforcing Steel Institute
- Contach Services Inc.
- CTLGroup
- Ellis Global Group
- The Euclid Chemical Company
- Expanded Shale, Clay and Slate Institute
- Florida Department of Transportation
- GCP Applied Technologies
- ICC Evaluation Service LLC
- International Concrete Repair Institute
- James Toscas Associates
- Michigan Technological University
- Middle Tennessee State University
- Missouri University of Science & Technology
- MJZ Consulting
- National Institute of Standards & Technology
- NAVFAC EXWL
- New Jersey Institute of Technology
- Nucor Steel Birmingham
- Pertconsult International
- Port Authority of NY & NJ
- Portland Cement Association
- Precast/Prestressed Concrete Institute
- Purdue University
- R-E-D Industrial Products
- Sika Corporation
- SIMCO Technologies Inc
- Simpson Strong-Tie Concrete Repair Division
- Specialty Products Group
- STRUCTURAL TECHNOLOGIES
- Texas Transportation Institute, Texas A&M University
- Thornton Tomasetti Inc
- Tourney Consulting Group LLC
- University of Kansas Infrastructure Research Institute
- University of Miami
- University of Sherbrooke
- US Air Force Civil Engineer Support Agency USAF CES
- US Army Corp of Engineers
- US Bureau of Reclamation
- Vector Consultants
- Virginia Transportation Research Council
- Walker Consultants
- Walter P Moore & Associates
- Webcor Builders
- Wind Tower Technologies LLC
- WJE Associates Inc
- World of Concrete - Informa

"The Strategic Development Council is unique in the ACI community. We are not a technical, educational or certification committee. Rather we are a forward-looking collection of influencers in the concrete industry, who collectively provide a vision and direction for advancement of our concrete industry"

Charles Hanskat, Chair of SDC and Executive Director of the American Shotcrete Association
Supporting ACI’s Core Pursuits

CMEC Veterans Rebate for ACI Concrete Certification Courses

The ACI Foundation is proud to announce a new program that administers rebates to U.S. military veterans who obtain ACI Certification. The program is funded by a $50,000 donation from CMEC Holdings, Inc. (CMEC). The rebate program is available to veterans who have been honorably discharged from service and have obtained certification in any of ACI’s 26 programs through any of ACI’s 130+ Certification Sponsoring Groups on or after June 1, 2018.

CMEC approached the ACI Foundation with the funding and a plan that not only provides recognition and thanks to veterans for their service, but also provides an incentive for them to seek employment in the concrete construction industry. Each rebate is $250 and may be claimed only for initial (first time) ACI certification. Veterans who obtain ACI certification in multiple programs may apply separately for each initial ACI certification.

For full eligibility requirements and application instructions, visit www.concrete.org/certification/veteranrebate.

Professors’ Workshop

In conjunction with the Portland Cement Association and the PCA Education Foundation, the ACI Foundation co-sponsored the annual Professors’ Workshop in July. For the first time, the workshop was held at ACI Headquarters in Farmington Hills, Michigan. Designed for concrete industry educators, the workshop followed a format similar to that used in previous years, with plenary sessions for topics of general interest and three separate, specific tracks covering concrete structures (buildings and bridges), materials, and pavements. Networking opportunities allowed faculty from diverse programs to share information about their programs and courses, as well as meeting representatives from concrete industry sponsors.

2019 ACI Foundation Awardees

The Robert E. Philleo Award, presented by the CRC for outstanding achievements in the field of concrete materials, was presented to David Darwin, ACI Honorary Member, University of Kansas. Darwin was recognized for his lifelong efforts in concrete material research and bridge construction practices implemented in the United States and around the world.

The Arthur J. Boase Award, also presented by the CRC for outstanding achievements in the field of structural concrete, was presented to Long T. Phan, FACI, National Institute of Standards and Technology. Phan was recognized for his research on the response of high-strength/high-performance concrete structures to extreme loads, the effort of alkali-silica reaction (ASR) on reinforced concrete material properties and structural capacities; and committee work to transfer the research results into design practice.

The Jean-Claude Roumain Innovation in Concrete Award, presented by the SDC for innovation in the field of concrete, was presented to Lawrence L. Sutter. Sutter was recognized for his leadership in concrete materials education and research, which has advanced the knowledge of deicer interaction, use of fly ash and alternative cements, and the nature of the air-void system to overall improve the sustainability and durability of concrete.
ACI Foundation Donation Form

Promoting progress, innovation and collaboration in the concrete industry through strategic investments in research, scholarships, and ideas.

Name: ________________________________________________________
Company: _____________________________________________________
Address: ______________________________________________________
City: _____________________________  State/Province: _____________
Country: _________________________Postal Code: ___________________
E-mail: ________________________________________________________
Phone: ________________________________________________________

I’m interested in learning more about the ACI Foundation

Please use the following name(s) in all acknowledgements:

Name(s): _______________________________________________________

☐ I (we) wish to have our gift remain anonymous.

_____________________________________________________________________

Signature Date

Please make checks, corporate matches, or other gifts payable to:

ACI Foundation
38800 Country Club Dr.
Farmington Hills, MI 48331

Donation Information

I (we) will donate a total of: $ _______________________________________

Allocation: ☐ Scholarship Fund ☐ Research Fund ☐ General Fund
☐ Technology and Innovation Fund ☐ CMEC ☐ other

If other, please describe: __________________________________________

I (we) will make this contribution by: ☐ cash ☐ check ☐ credit card ☐ other

If other, please describe: __________________________________________

Credit card type | Exp. date: ________________________________________
Credit card number | CVV: __________________________________________
Authorized signature: ____________________________________________

Gift will be matched by (company/family/foundation):____________________
☐ form enclosed ☐ form will be forwarded

Please return completed form to the attention of Jennifer DeWall by mailing to ACI Headquarters or by emailing jennifer.dewall@acifoundation.org. For questions, please contact +1.248.848.3757.

Advancing the world through innovative concrete solutions.