



# NATIONAL ACADEMY OF ENGINEERING

The National Academies of Sciences, Engineering, and Medicine

C. D. Mote, Jr.  
*President*

May 10, 2017

Dear Colleague:

The National Academy of Engineering's mission to advance the well-being of the nation and to advise on engineering issues is critically important during this time of rapid technological innovation, growing global competitiveness, and persistent challenges to quality of life. Your philanthropic support is appreciated greatly and is needed for the NAE to promote engineering education, support the business voice in advice to government, and prepare the future engineers who will tackle the world's persistent challenges. Please join me in making a gift to the NAE Independent Fund.

The greatest engineering achievements of the 20<sup>th</sup> century, like electrification and refrigeration, automobiles and airplanes, interstate highways and space flight, were primarily about the creation of things. The engineering focus of this century is moving toward creating solutions to problems of people and society, large-scale engineering system problems like sustainability, security, and access to clean water. Consequently, among the NAE's most dynamic initiatives supported by your philanthropy is the Grand Challenges for Engineering program. The 14 Grand Challenges are the goals whose solution ensures the vision "continuation of life on the planet, making our world more sustainable, safe, healthy, and joyful." The Grand Challenges have become a magnetic call to action that engages universities and high schools, youth and professionals, and international communities too—because all people everywhere see their needs in them.

Addressing the Grand Challenges requires their solutions through research and development, but also requires ensuring the *engineering talent* in the 21<sup>st</sup> century workforce is prepared for grand challenges like problems. The NAE Grand Challenges Scholars Program (GCSP) is a supplemental education model designed to prepare the workforce to take on such global problems. The brilliance of the GCSP is that it focuses entirely on program outcomes, namely the five competencies for students to master and not on a specified program curriculum. Participating universities decide which students to admit to their program, how they will incorporate the five competencies into their student experience and which of their students merit a certificate recognizing them for successfully completing the Grand Challenges Scholars Program.

The Grand Challenges Scholars Program has thus far been operating in more than 40 US universities and in 12 countries around the world, and an equal number are currently under review for joining the program. The goal is to establish programs in at least 150 U.S. universities and colleges with engineering programs and to engage engineering education globally in this development. Because more than half of the GCSP students are female and/or members of underrepresented minority groups, a more diverse engineering workforce is simultaneously created. Your philanthropic support will help grow this unique, innovative and critically important program.

NAE Chairman Gordon R. England and I are also grateful to the NAE members and sections who have responded to the Chairman's Challenge to establish matching gift challenges supporting NAE.

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These matching funds are excellent demonstrations of the value NAE members assign to these academy initiatives and are also a successful method of leveraging the support of others for what interests you. Everybody wins.

Private support from thoughtful individuals like you is the driving force that allows the NAE to provide its programming and services. Please be assured that your contributions and participation truly make a difference here. Thank you very much for considering these important opportunities.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "C. D. Mote, Jr.", with a stylized, cursive script.

C. D. Mote, Jr.

P.S. The registrants for the 3<sup>rd</sup> Global Grand Challenges Summit scheduled for July 18-20, 2017, in Washington, D.C. are beginning to fill the available places. To register go to [www.ggcs2017.org](http://www.ggcs2017.org), where you can also find information about this exciting international event, the largest in NAE history. The opportunity to register has been restricted to ensure preferential space for academy members, but will open to the public on May 15. We expect a sell-out. I hope to see you there.