

Virginia Polytechnic Institute and State University (Virginia Tech)  
College of Engineering

March 23, 2015

President of the United States  
The White House  
1600 Pennsylvania Avenue NW  
Washington, DC 20500

Dear Mr. President,

The College of Engineering at Virginia Tech has recently joined in the Grand Challenge Scholars Program. We embrace the program objective of graduating engineers who have a depth of experience in: (1) hands-on projects; (2) interdisciplinary studies; (3) entrepreneurship; (4) global awareness; and (5) service learning. Our college, which prides itself in its “hands-on, mind-on” approach to engineering education is well positioned to meet the needs of the nation for well-trained engineers. In 2014 we produced 1,500 Bachelor of Science graduates.

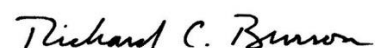
Our college has a rich history of addressing many of the Grand Challenges. As one example, for nearly twenty years the Virginia Tech Center for Power Electronic Systems has developed electronic hardware and power systems that make solar energy more economical. Led by NAE member Dushan Boroyevich, the center is deploying a “Smart Intergrid” in Arlington, Virginia. A standard alternating current distribution system will be replaced with a direct current distribution system that offers substantially improved energy storage. This is a key feature for any system based on solar energy.

In the area of entrepreneurship, our college is a part of the I-Corps node in the District of Columbia. On this National Science Foundation funded project, we are working with our partners to advance the commercialization of our research discoveries. Through our “NuSpark” facility, we also supply free space and programming assistance to selected teams of undergraduates with promising ideas for commercialization.

In the area of global engagement, Virginia Tech has built with the University of Nottingham in England, a comprehensive partnership with nearly 30 scholars across the two universities working together on joint research, proposal development and student mentoring. The partnership is enhanced by our Rolls-Royce University Technology Center on advanced engine diagnostics.

These are just a few of the examples of Virginia Tech’s ability to participate vigorously in the Grand Challenge Scholars Program.

Sincerely,



Richard C. Benson  
Dean of Engineering  
Torgersen Chair