Due to my love of robotics, I currently compete at the university level in the VEX Robotics Competition. I also volunteer at local high school robotics competitions and mentor the team from my old high school. I see this as an excellent way to give back to the program that inspired me to pursue engineering and that gave me a community I could belong to while in high school. The team I mentor, the Campo Verde High School Lemon Bots, recently were Tournament Finalists (the runner-up to Tournament Champions) at the VEX Robotics Arizona State Championship. Due to their success, the team qualified for the VEX Robotics World Championship, which is being held in Louisville, Kentucky on April 25-28. I will be travelling to the world championship with the team, where I will continue to mentor them as they face-off against the best team in the world. In addition to supporting the Lemon Bots, I will also volunteer as a field official at the world championship. The competition brings together hundreds of teams and putting on the event is a tremendous undertaking that requires the work of hundreds of experienced volunteers. Since I have been involved in VEX Robotics for six years, I am uniquely experienced to assist in presenting the world championship, and I hope that I can make it a great experience for all of the current competitors just as it has been for me in past years. I am applying for funding to help offset the costs of a hotel, airfare, a rental car, and meals.

The VEX Robotics World Championship is relevant to the Grand Challenge theme of education because the competition’s goal is to use robotics in order to enhance the education of students of all ages. The world championship is especially relevant because it brings together over 1000 teams from dozens of countries, offering a global experience. VEX and the Robotics Education and Competition Foundation (RECF) who present the world championship seek to use robotics as a new tool to inspire younger students to pursue a degree in STEM-related fields by showing these students how science, technology, engineering, and mathematics is able to be applied in interesting and interactive ways. Robotics is also used as a tool to enhance the educations of older students by teaching them important problem solving, documentation, teamwork, and time-management skills in addition to providing applications for math and science concepts. It is especially interesting how they have had tremendous success inspiring students through robotics. This new tool is becoming increasingly popular as educators find that robots are able to engage students who were otherwise uninterested in learning skills related to engineering.

Attending the VEX Robotics World Championship will allow me to network with students and professionals who are interested in the use of robotics as an educational tool, and (since the world championship brings together students from all grade levels) it will provide an opportunity to see first-hand how this powerful tool is being used at all levels of education. The teams participating in the VEX Robotics World Championship are the best teams from around the world coming from countries such as the United States, Canada, Columbia, the United Kingdom, Spain, China, Singapore, Australia, and New Zealand who qualified to compete at the world championship by winning a state, regional, or national championship. As a mentor and volunteer at the world championship, I will be working alongside students and adults with a variety of unique backgrounds, but who all share a love and passion for robotics. Thus, the world championship has a unique global component that is not readily found in other competitions and similar events. This environment spawns many unique conversations about building and programming methods as well as discussions about how robotics has impacted our lives and those of others. In addition to communicating with students, competing at the VEX Robotics World Championship will also allow me to network with professionals in engineering fields. Engineers from around the world attend the world championship in order to volunteer and talk with teams. Many of these engineers are also interested in learning how robotics has inspired young people, while others are mentors of teams and offer a unique perspective of robotics’ usefulness in gaining real-world experience while in school. Attending worlds will allow me to engage in these conversations, learn about new developments, and offer my own insights that I’ve gained through robotics. Conversing with students and engineers from around the world at the VEX Robotics World Championship will be an unforgettable experience that will give me a global perspective into the role of competitive robotics in education.