

Statement of Purpose

Shankar Kulumani

From a young age the belief that an education is most valuable when it is used to serve ones community has been instilled in me. My belief was further reinforced by my experiences as a commissioned officer in the US Air Force. This conviction and a natural aptitude for science and mathematics convinced me astronautical engineering is the most fitting career for me. It is my goal to earn a PhD in Aerospace Engineering. Achieving this high level of scholarly work is not simply a culmination of this goal but rather a first step of a lifetime of service. A doctorate in this field would allow me to teach, conduct world-class research, mentor and develop a new generation of students, and finally make significant contributions to the technical development of our nation and the state of human knowledge. These goals have been fueled my collective experiences and have shaped the direction of my future interests.

My education at the Academy exposed me to the wide field of astrodynamics and I became very interested in control systems theory, dynamics, and orbit mechanics. I had several opportunities to apply this knowledge to problems beyond the textbook during the course of the senior rocket design class. However, it was only after becoming an officer and working did I receive a chance to observe the state of the art in astronautical engineering.

I further supplemented this education by pursuing a Master's degree from Purdue University. Focusing my coursework on control theory, orbit mechanics, and analytical dynamics have further cemented my desire. In addition, as a commissioned officer in the US Air Force and an Engineer at the Air Force Research Laboratory I have been exposed to the current technical challenges being faced by the nation.

I hope to further my understanding of control and dynamics and continue research in this field. My interests in these fields have led me to applying to Purdue University. As a full time member of the Air Force a quality distance learning program in this field was very important

to me. Purdue University allows me to continue my education and pursue my dreams while still working full time for the Air Force. I believe that the Aeronautics and Astronautics Department at Purdue University is the ideal place to complete my graduate degree. The expert faculty and highly regarded program make Purdue University a excellent opportunity to continue my studies. I can directly apply the information learned in my graduate studies to the current issues on operational systems for the Air Force. I plan applying the knowledge from this graduate degree to further advance current space systems in the Air Force. After my career in the Air Force I hope to pursue a doctoral degree and become a professor or work for the private industry. The combination of a world class education and applicable experience in a space related field would prove useful to a professor.