Statement of Purpose

David Vasquez

I am writing in regards to my interest in pursuing my PhD in Radiation Health Physics at Oregon State University. I gained my master's degree in Radiation Health Physics and am excited to be applying to come back for my doctorate degree. My reasons for pursuing further graduate education is to become a tenure track professor at a leading research university. Since gaining my master's degree I gained my MBA and am currently working as a Software Engineer at Cambia Health Solutions. I am passionate about innovation and computer science and hope to bring elements of these into my research.

I gained my master's degree working with Professor Hamby. Since then I have maintained a close relationship with Professor Hamby working with him on a number of projects since graduating. My research involved working to design digital radiation detection software and was funded through a Nuclear Regulatory Commission Grant. I also worked with him to co-author a distance education grant that we were awarded. During graduate school I worked as a Teaching Assistant for both NSE 236 and NSE 536. I also worked as an Instructor for the Diagnostic Imaging Program at LBCC teaching Radiation Biology and Radiation Production and Characteristics. I was responsible for designing all course material for both classes to fit American Society of Radiologic Technologists standards. My other teaching experience includes working as an Instructor in the College of Business.

Since graduating I have gained a lot of work and personal experience that I think would help me be successful in the Department. I worked for two years as a Programmer Analyst in the Office of Student Life at Oregon State University. A major portion of my job was working with and analyzing data to generate reports for university leadership. The data analysis skills I gained in this role would be directly applicable to academic research. I also recently completed both Statistics 511 and 512. Currently, I am working as a Software Engineer at Cambia Health Solutions. My role here has exposed me to working on large code bases in an agile development environment. We also utilize a test-driven design strategy that has helped expand my ability to think more deeply about solving complex problems.

I am excited about the opportunity of bringing my previous work and research experience to the work currently going on in the Department. I feel my passion for health physics, nuclear energy, software and innovation would fit right in with the Department. Some of the research that stands out includes the work being conducted in the Radiation Detection Group by Professor Farsoni and the work being done in the Radiation Detection Technologies and Applications Group led by Professor Yang. I am particularly interested in developing detector technology related to Nuclear Security and Nonproliferation. I feel that my background designing digital radiation equipment would be useful in either of these research groups. Some of the other areas that stand out to me is the research conducted by Professor Higley and Professor Palmer. I am also interested in nuclear energy and would like to explore the possibility of pursuing a minor in Nuclear Engineering. I am not sure if this would become a foundational area of my research but feel it could open opportunities during graduate school and afterwards. For instance, I may be able to bring detection related or computational skills to the research engaged in by researchers like Professor Palmer and his work with computational methods.