Statement of Interest
David Vasquez

I am excited to be writing about my interest in pursuing graduate study in the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University. My long term goal is to become a tenure track professor engaged in research and instruction. Upon finishing my master's degree my goal is to immediately move into a PhD program. Currently, I am working as a Software Engineer and gained my master's degree in Radiation Health Physics where I was engaged in research as part of a Nuclear Regulatory Commission Grant. I have also worked as an Instructor at both Oregon State University and Linn Benton Community College.

I am interested in bringing my experience in physics and computational research methodology to the College. My master's thesis in the College of Engineering involved developing algorithms to model the behavior of radiogenic isotopes. I worked in a laboratory setting to gather the data needed and then utilized existing research and my own research to develop new software. My professional work experience at both OSU and Cambia Health involved working with and analyzing large data sets. In all of these positions I have utilized a range of statistical methods and recently completed both Stats 511 and Stats 512 at OSU.

There is a lot of research I find fascinating in the College of Earth, Ocean, and Atmospheric Sciences and this is what drew me to pursue my graduate education here. I am particularly drawn to paleoclimate research, arctic based research, geophysics and physical oceanography. My hope is that I can leverage my background and engage in research that has a computational and statistical focus. For instance, I am interested in developing climate modeling tools that might bring in aspects of artificial intelligence or machine learning. I currently have a lot of relationships in the College of Electrical Engineering and Computer Science including working for three years as a senior capstone project sponsor that I hope might be useful.

One of the disciplines that really stands out to me is the Physical Oceanography discipline. I reached out and spoke with a number of faculty including Professor O'Neill and am really drawn to the field. I feel my background and future research goals align well with research conducted by the Ocean Mixing Group and also the Coastal Ocean Modeling and Data Assimilation Group. I also would love to be involved with some of the innovative research methods used like ROSS. The other discipline that stands out to me is the Geology and Geophysics discipline. I am particularly interested in the paleoclimate research being conducted in the Ice Core and Quaternary Geochemistry Lab by professors like Ed Brook. I am also interested in the work being conducted in the Keck Collaboratory for Plasma Spectrometry. In that lab I was particularly interested in the research conducted by Julie Pett-Ridge and Alyssa Shiel.

I have a lot of goals that I hope to accomplish while seeking my master's degree including defining my research, working towards publishing and being involved in grant writing. I realize my background is rather unique but hope these skills could be useful as I gain a deeper understanding in the College. During my first master's degree I went from limited knowledge to developing software, completing a thesis, working as a Teaching Assistant and Instructor and co-authoring a grant. I hope to be able to accomplish even more then this if selected as a student to start this Fall of 2019. I also hope to get involved in the College, make friends and enjoy my time as a graduate student.