

Monday, November 28<sup>th</sup>, 2016

To Whom It May Concern:

This letter is in response to a request for a written assessment for Professor Paul Yoo. Dr. Yoo was my undergraduate thesis supervisor and lecturer during an undergraduate course.

Dr. Yoo exhibits a clear promise of future intellectual and professional development. He supervised my thesis project on computer modeling electrical nerve stimulation of the saphenous nerve. He held weekly lab meetings where two students presented their progress thus far, giving the students a chance to practice presentation skills and learn about the various projects in the lab. During our lab meetings he continually talked about newly published studies and what medical devices were on the market that were related to the field of electrical nerve stimulation. He also created new projects for new students in the lab to span the different areas of the electrical nerve stimulation research including: recording the nerve response after stimulation in a rat, response of the bladder after nerve stimulation in a rat, modeling a human leg on COMSOL to determine the appropriate parameters of an electrode to optimize nerve stimulation and testing the physiological response to electrical nerve stimulation frequency and amplitude range on human subjects. These encompass many ways to study nerve stimulation which employed human and animal trials, biomedical engineering, electrical engineering, large data analysis and computational modeling. He found a way to link these multi-disciplinary projects during our lab meetings to give us a bigger, overall picture of nerve stimulation to address overactive bladder, a common disorder among Canadians. Furthermore, he attended many conferences along with his students, encouraging them to present their results to further his and his students' professional and academic development. He also worked with each student to write papers for academic journals presenting their results and provided constructive feedback for them during the lab meetings. He always made himself available for his students when we required guidance on the project and provided valuable insight, yet allowed us to approach the answer ourselves.

Additionally, he taught me Physiological Control Systems, an Engineering Science Biomed course. During the course he delivered clear, thorough lectures and exposed us to Simulink, via an assignment. The assignment required us to model any control system in the body using Simulink. This was a great experience because it exposed the class to a very common control systems software, and this gave us a taste of how control systems are modeled in academic labs and industry. He also presented a paper that modeled obstructive sleep apnea during a few lectures. This was unique as the class was new to the field of biomedical engineering and Dr. Yoo elegantly introduced us to reading and analyzing literature in biomedical engineering. He explained the background, methods and results which analyzed obstructive sleep apnea using control systems, and linked the paper to many other control systems topics that we covered in class so that we would have better context for those topics.

Through these examples, Dr. Yoo demonstrates excellence in research and teaching.

Sincerely,

Arushri Swarup  
EngSci Biomed + PEY 1T5

*Arushri Swarup* 28-NOV-2016