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The University of Texas at Austin
Electrical and Computer Engineering
Cockrell School of Engineering

Austin, 04/14/2022

Subject: Reference Letter for Mr. Allan Frederick

It is my pleasure to recommend Allan Frederick's application to your Graduate Program.

Please, let me briefly introduce myself. I am a Tenured Full Professor at The University of Texas at Austin, holding the Carol Cockrell Curran Endowed Chair at the Department of Electrical and Computer Engineering of the Cockrell School of Engineering. I am also a Full Professor at the Department of Neurology at Dell Medical School. Previously, I have been a research scientist at the Joint Research Centre of the European Commission in Ispra (Italy) and a senior researcher at the Idiap Research Institute in Martigny (Switzerland). I have also been a visiting scholar at the Universities of Berkeley and Stanford as well as at the International Computer Science Institute in Berkeley. Most recently, I was the Defitech Foundation Chair in Brain-Machine Interface at the École Polytechnique Fédérale de Lausanne in Switzerland (EPFL), where I helped to establish the Center for Neuroprosthetics. I have made several seminal contributions to the field of brain-computer interfaces (BCI), especially based on electroencephalogram (EEG) signals. I have received several recognitions for these achievements, notably the IEEE-SMC Nobert Wiener Award in 2011, elevation to IEEE Fellow in 2017, and elected Fellow of the International Academy of Medical and Biological Engineering in 2020. My work focuses on the fundamentals of BCI and the design of neuroprosthetics and brain-controlled robots. I am prioritizing the translation of BCI to end-users suffering from motor and cognitive disabilities, but also investigating new interaction modalities for able-bodied people. I have been Vice-President (2017-2019), President (2019-2021), and am now the Past-President of the International BCI Society.

Allan took my upper-level undergraduate course (cross-listed as a graduate level course) "Neural Engineering" in the Spring 2021 semester, where he performed well. In the Fall 2021 has followed my graduate-level "Brain-Computer Interaction" course in which he ranked at the top of the class. In both courses, he has demonstrated a strong scientific background and technical knowledge during class discussions, projects, and homework assignments. These assignments have included open-ended analyses of biologically recorded data such as electroencephalography, single neuron spiking activity and electromyography. Allan has shown great critical thinking, sound analytical skills, and very good communication skills during class presentations, discussions, and project reports. He has made an excellent progress in identifying appropriate engineering techniques to address open issues in neural engineering and analysis of brain signals, as well as connecting disparate sources of information. He is curious and does not hesitate to explore new approaches to open problems.

During the two courses, and one-to-one meetings, Allan has shown a strong passion, curiosity and determination to pursue graduate studies in the field of neural engineering / brain-computer interfaces, in particular to restore

lost functions to people with disabilities. Apart from my courses, he is also doing his Senior Design project on neural engineering. I consider him to be extremely well prepared to succeed in his quest.

To conclude, I strongly support Allan Frederick's application to your Graduate Program as he has largely demonstrated his aptitude for graduate research and coursework.

Yours sincerely,

José del R. Millán, Ph.D.