

3 October 2022

Method of Delivery: e-mail (paper mail available upon request).

RE: Letter of Collaboration between Dr. Nike Dattani and Dr. Susi Lehtola

Collaborator Details (Nike Dattani):

- Director, and Faculty Member at HPQC Labs, Waterloo, Canada

Purpose and objectives of the cooperation:

- (1) To investigate the energy efficiency of quantum computing and to compare quantum computation to classical computation for the modeling of atoms and molecules.
- (2) To publish results in high-impact journals.

Practical implementation of the cooperation:

- HPQC Labs has an abundance of supercomputer and quantum computer resources available including 1000+ TB of disk space, 800+ years of CPU time, 4 years of GPU time, and \$10,000 of credit for QPU time on the IonQ processor. Members of Dr. Lehtola's group in Finland could be given access to these resources, whereas Dr. Dattani and his group members would benefit from research visits to Helsinki during which they can draw upon Dr. Lehtola's expertise and learn how to use computational software developed and to-be-developed in Helsinki in order to perform calculations that are currently out-of-reach.

With best regards,

Nike Dattani
Waterloo, Canada

