Theme: Quantum Computing

- Sub theme: Quantum Algorithm, Noisy Intermediate-Scale Quantum(NISQ) Algorithm, Quantum Advantage, Quantum Simulation, Quantum Chemistry, Quantum Machine Learning, Quantum Approximate Optimization Algorithm(QAOA)

With the rapid development of quantum computing technology, several applications have been proposed, including quantum simulation, chemical reaction simulation, optimization problem solving, and quantum neural network. In addition, quantum computing technology has the potential to innovate the semiconductor field, such as material simulation and process improvement, by utilizing the principles of quantum mechanics.

We are looking for new quantum algorithm to show quantum advantage on a scale of Noisy Intermediate-Scale Quantum (NISQ) 100 to 200 qubits.

It is not limited to quantum algorithm applicable to the semiconductor field, and research fields such as quantum machine learning and Quantum Approximate Optimization Algorithm (QAOA) can also be submitted.

We are highly interested in (but not limited to) the following list of topics:

- · Noisy Intermediate-Scale Quantum (NISQ) Algorithm
- · Quantum Simulation
- · Quantum Chemistry
- · Quantum Machine Learning
- · Quantum Approximate Optimization Algorithm (QAOA)

※ The participants are also encouraged to propose new ideas outside the topics listed above.
※ Funding: Up to USD 150,000 per year