

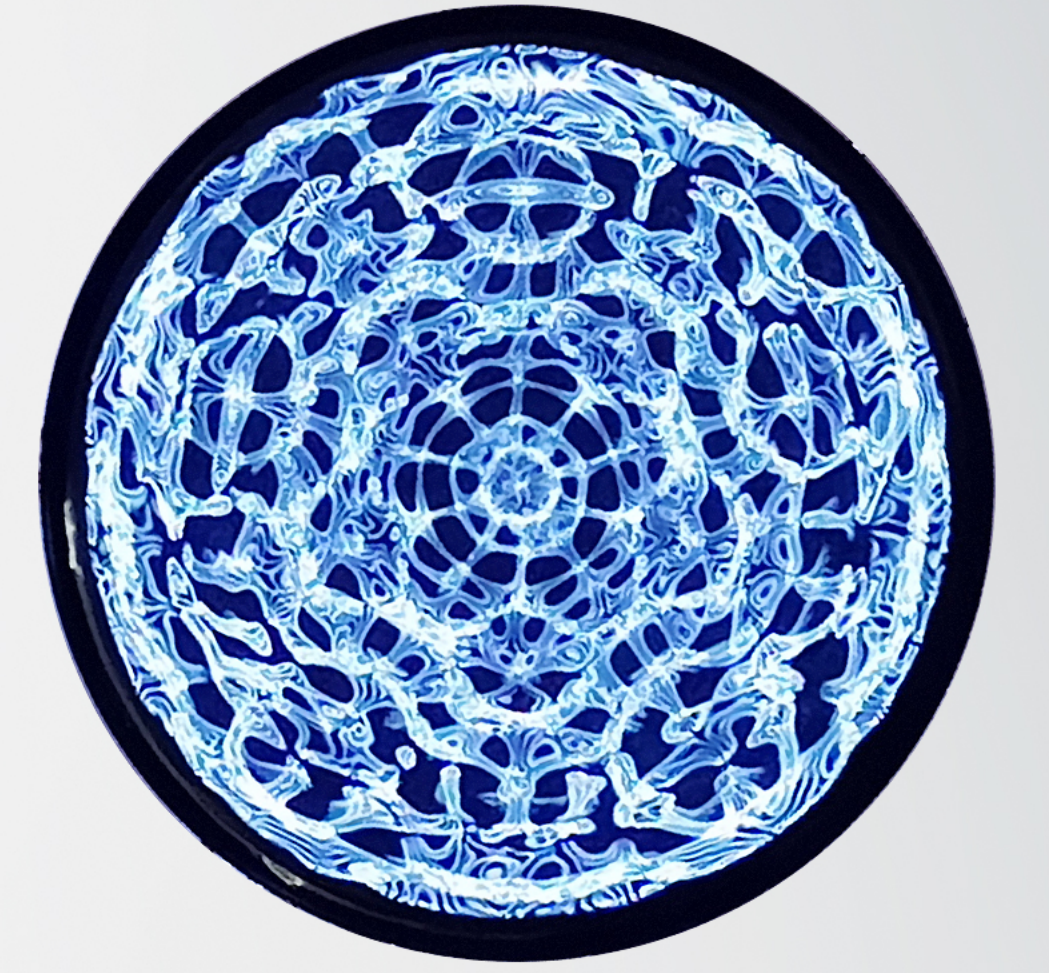
INTRODUCING BASIC ASPECTS OF QUANTUM PHYSICS THROUGH CYMATICS

THE RISE OF QUANTUM COMPUTING

The market of quantum computing is growing rapidly due to the rising demand of high-performance computing. By combining quantum theory and computer science, quantum computing shows great promise for future application in fields like algorithms, cryptography, machine learning and quantum simulation. Several prominent companies like Alphabet (Google), IBM, and IonQ are well on their way in developing functional quantum computing.

APPROACH THROUGH CYMATICS

Cymatics is the study of visual wave phenomena, often a vibrating plate or liquid, acting as a medium that allows wave-like behavior. The wave-like characteristic found in both quantum physics and cymatics was the primary factor to investigate how cymatics could be used to introduce basic aspects of quantum physics to young future scientists through a science museum exhibit design.



32,7 Hz



12,0 Hz

EIGENMODES AND QUANTUM QUBITS

The visual pattern depicted above are photos of vibrating water. These modes of vibration in water are called eigenmodes. The exhibit design uses these eigenmodes to simulate how quantum physicists work with their delicate and sensitive quantum systems. They resemble the sensitivity of the quantum bits called qubits that these physicists work with.

“Creating an intuitive understanding of quantum principles and wave behavior through interacting with cymatics”