

Dr. Ashutosh Kumar is a Senior Quantum Scientist at **QuEra Computing Inc.** (Boston, MA), where he designs algorithms that harness QuEra's neutral-atom quantum processors to solve classically intractable problems in chemistry and materials science.

Dr. Kumar earned an Integrated M.Sc. in Chemistry from **IIT Kharagpur** and a Ph.D. in Theoretical Quantum Chemistry at **Virginia Tech**, working with Prof. Daniel Crawford on reducing the computational complexity of coupled-cluster methods for calculating molecular response properties. He then pursued post-doctoral research with Prof. Edward Valeev (Virginia Tech) and at **Los Alamos National Laboratory**, developing quantum algorithms and numerical schemes for near-term quantum hardware.

Before joining QuEra, Dr. Kumar served as a Quantum Algorithm Developer at **Photonic Inc.** (Vancouver, Canada), advancing photonic-based quantum computing solutions. Across academia and industry, his work spans efficient electronic-structure methods, hardware-aware quantum algorithms, and benchmarking tools that bridge today's devices with tomorrow's fault-tolerant quantum computers.