

**Northwestern Quantum Week
Quantum Innovation Symposium**

April 22, 2026 | Northwestern University

Caitlin Carnahan

Caitlin Carnahan is the Vice President for Quantum Software at Infleqtion, where she leads the Quantum Software portfolio, connecting cutting-edge quantum research with government and industry needs. She earned her Ph.D. in Physics from Carnegie Mellon University, focusing on spin-mediated transport in topologically non-trivial systems, and holds an M.S. in Computer Science. Prior to Infleqtion, Caitlin was a Principal Scientist at Physical Sciences Inc., developing computational and machine learning solutions for sensing and data fusion. She also served as a faculty member in the Computer Science department at Florida State University, teaching programming language design and computer architecture courses. Her career reflects a deep expertise in both physics and computer science, with a consistent focus on applying advanced computation to complex scientific challenges.

From Atoms to Applications: Full-Stack Quantum for Real-World Impact

Abstract: Real-world quantum impact depends on a full-stack approach that connects advances at the atomic level to scalable platforms, software, and applications that matter outside the lab. In this talk, Dr. Caitlin Carnahan will highlight how Infleqtion is building across that stack: from neutral-atom quantum hardware to the software, controls, and system architecture needed to turn quantum science into usable capability. Drawing on progress in quantum computing, quantum precision sensing, and atomic clocks, Caitlin Carnahan will show how a shared technical foundation can support multiple quantum solutions while bringing the entire field closer to practical value. Framed for a broad community of researchers, engineers, and innovators, the talk will also explore how full-stack quantum development can accelerate use-case discovery in health sciences, energy, materials, and other domains where better sensing, timing, and computation can translate into meaningful outcomes.