

Women in Quantum seminar series presents: **Dr. Judith Olson (HRL)**



## **Ramsey Interferometry in Quantum Computing, & How to succeed in industry with a STEM PhD**

**Wednesday, May 28th in PAB 4-330**

Careers in physics take a variety of unique paths forward, but most face the same core challenges and rely on the same core skills. This talk focuses on the non-technical skills needed to succeed in the years before and during most physics careers, including in academic, national lab, industrial, and business environments, while giving a sense of how careers in these environments compare and contrast. Skills areas discussed include resiliency, collaboration, professionalism, communication, networking, strategic planning, and self-awareness, as well as how these skills evolve while navigating life as a physicist throughout various career stages. A focus is placed on the benefits opportunities of industry careers. The talk will open with a brief overview of Judith's background and journey thus far. A brief overview of Ramsey interferometry and its applications to AMO experiment and quantum computing will be included.

### **Schedule:**

**3:30 - 4 pm:** Coffee & cookies - PAB 4-330

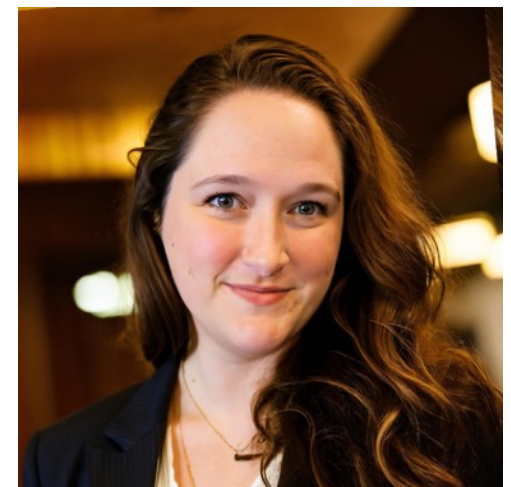
**4 - 5 pm:** Seminar - PAB 4-330

**5 - 6:30 pm:** Networking and dinner/drinks  
with Dr. Olson - 3rd floor patio of PAB

*Event kindly sponsored by*



**Dr. Olson is the Quantum Technologies Deputy at HRL.** Judith earned her physics PhD from CU Boulder while working at NIST - The National Institute of Standards and Technology - on optical atomic clocks and optical frequency references. Her postdoc at NIST explored uses and improvements to the civilian timescale for the United States. While in her postdoc, Judith was recruited to ColdQuanta, now named Infleqtion, to spearhead the organization's Atomic Clock Division. Judith's work was to design, build, and deliver microwave and optical atomic clocks to government and industry customers. Under Judith's leadership, Infleqtion commercialized optical atomic clock technologies that enabled new capabilities in positioning, timing, and communications for dual use in aerospace, defense, and data centers. As one of Infleqtion's only female executives, Judith laid the groundwork for other diverse candidates entering the organization. Judith led the push at Infleqtion to bring optical atomic clocks to full commercial and manufacturing viability while working across quantum portfolios to establish a coherent approach to emerging quantum technologies based on atoms, ions, and photonics. In her new role at HRL Laboratories, Judith continues to shape quantum strategy across research areas while also providing technical guidance and management for the quantum computing teams.



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