



**8:00am Arrival at Point Vicente Rm. / Pick up badges**

**8:25am Opening remarks: Lars Schreiber**

**Session 1 (Chair: Susan Coppersmith)**

- 8:30am Keynote presentation: Lieven Vandersypen, "Spin qubit shuttling in perspective"
- 9:15am Zongye Wang, "Non-adiabaticity of electron pick-up process by surface acoustic wave for qubit transport"
- 9:40am Ryo Nagai, "Digital-Controlled Conveyor-Belt Spin Shuttling for Scalable Silicon quantum computer"

**10:05am Coffee break**

**Session 2 (Chair: Xuedong Hu)**

- 10:25am Maximillian Rimbach-Russ, "Quantum operations of moving spin qubits"
- 10:50am Mats Volmer, "Reduction of the impact of the local valley splitting on the coherence of conveyor-belt spin shuttling in 28Si/SiGe"
- 11:15am Andrii Sokolov, "Static and Dynamic Simulations of Shuttling for FDX-22 and SiGe quantum devices"

**11:40am Lunch**

**1:00pm Sponsor Presentations**

- Arque Systems and ML4Q
- Quantum Machines
- Qblox

**Session 3 (Chair: Guido Burkard)**

- 1:20pm Keynote presentation: Simon Benjamin, "Snakes, Loops and Pipelines: Leveraging shuttling for efficient silicon FT QEC "
- 2:05pm Nicklas Meineke, "Spin Qubit Leapfrogging: Shuttling electrons on top of another"
- 2:30pm Raphaël Prentki, "Multiscale simulations of atomistic-disorder-induced valley-leakage error during electron shuttling"

**2:55pm Coffee break**

**Session 4 (Chair: Maximillian Rimbach-Russ)**

- 3:15pm Brennan Undseth, "Don't miss the bus: operating a sparse silicon quantum processor"
- 3:40pm Christian Binder, "Impact of Device Imperfections on Charge Transport and Valley Excitations During Electron Shuttling in Si/SiO<sub>2</sub>"
- 4:05pm Stefano Bosco, "Spin-orbit-enabled universal two-qubit gate set on moving spins"

**4:30pm Closing remarks: Mark Friesen**