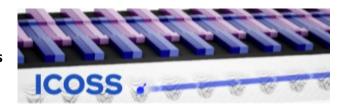
### 8:00am Arrival at Point Vicente Rm. / Pick up badges

# 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

- Argue Systems and ML4Q
- Quantum Machines
- Qblox

### Session 3 (Chair: Guido Burkard)

- 1:20pm <u>Keynote presentation</u>: 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/SiO2"
- 4:05pm Stefano Bosco, "Spin-orbit-enabled universal two-qubit gate set on moving spins"

## 4:30pm Closing remarks: Mark Friesen