

## **SFB Meeting December 17<sup>th</sup> - 18<sup>th</sup>**

### **Posters**

**Ben Ames, Experimentalphysik Innsbruck**

*Charge mitigation of a tapered optical nanofiber*

**Gabriel Araneda, Experimentalphysik Innsbruck**

*Creation and detection of entangled ions using photons*

**Thomas Astner, Atominstitut Wien**

*Coherent coupling of distant nitrogen-vacancy ensembles via a superconducting quantum bus*

**Fritz Diorico, Atominstitut Wien**

*Tba*

**Manuel Erhard, IQOQI Wien**

*Experimental Creation and Verification of Multi-Partite High-Dimensional Entanglement*

**Dario Fioretto und Konstantin Friebe, Experimentalphysik Innsbruck**

*Upcoming projects in Cavity QED setup in Innsbruck*

**Martin Hebenstreit, Theoretische Physik Innsbruck**

*The maximally entangled set of tripartite qutrit states & examples of pure state transformations which are possible via separable operations but not via LOCC*

**Daniel Heinrich, Experimentalphysik Innsbruck**

*Ultra Fast Phase Gates with Trapped Ions*

**Ying Hu, IQOQI Innsbruck**

*Shaking Majoranas*

**Sebastian Krämer, Theoretische Physik Innsbruck**

*Optimized geometries for future generation optical lattice clocks*

**Mario Krenn, Fakultät für Physik Wien**

*Twisted photon entanglement through turbulent air across Vienna*

**Marian Kreyer und Alexander Werlberger, Experimentalphysik Innsbruck**

*Fermi-Fermi-Mixtures of Dysprosium and Potassium*

**Kirill Lakhmanskiy und Dominic Schärfl, Experimentalphysik Innsbruck**

*Cryogenic surface ion traps*

**Marc-Antoine Lemonde, Atominstitut Wien**

*Enhanced nonlinear interactions in quantum optomechanics via mechanical amplification*

**Mira Maiwöger, Atominstitut Wien**

*Towards multiple phase measurements of a single pair of Bose-Einstein condensates*

**Esteban Martinez, Experimentalphysik Innsbruck**

*Quantum Simulation of a Wilson lattice gauge theory*

**Alexey Melnikov, Theoretische Physik Innsbruck**

*Coherent controlization using transmon qubits*

**Davide Orsucci, Theoretische Physik Innsbruck**

*Estimation of coherent errors from stabilizer measurements*

**Stefan Ostermann, Theoretische Physik Innsbruck**

*Dynamical crystallisation of light and matter*

**Hendrik Poulsen-Nautrup, Theoretische Physik Innsbruck**

*Symmetry-protected topologically ordered states for universal quantum computation*

**Tomas Ramos, IQOQI Innsbruck**

*Beyond Markov with Chiral Waveguides of Rydberg atoms and Ions*

**Christian Romen, Theoretische Physik Innsbruck**

*Chiral Mott Insulators in frustrated Bose-Hubbard models*

**David Sauerwein, Theoretische Physik Innsbruck**

*The source and accessible entanglement of few-body systems*

**Andreas Schindewolf, Experimentalphysik Innsbruck**

*Towards the production of RbCs ground-state molecules from degenerate gases in an optical lattice*

**Jonas Schmöle, Fakultät für Physik Wien**

*A micromechanical proof-of-principle experiment for measuring the gravitational force of milligram masses*

**Christian Schneider, IQOQI Innsbruck**

*Detecting the motion of a micromechanical oscillator using a SQUID*

**Michael Schuler, Theoretische Physik Innsbruck**

*Tba*

**Klemens Schüppert, Experimentalphysik Innsbruck**

*Towards strong coupling in an ion-trap fiber-cavity apparatus*

**Katharina Schwaiger, Theoretische Physik Innsbruck**

*Operational Multipartite Entanglement Measures*

**Sarah Skoff, Atominstitut Wien**

*Interfacing single molecules with nanofibers*

**Valentin Torggler, Theoretische Physik Innsbruck**

*Multi-frequency self-organisation in optical lattices in cavities*

**Elisa Will, Atominstitut Wien**

*Strong interaction between single atoms and chiral photons*