# 6th TUX Workshop on Quantum Gravity

**February 19 – 23, 2018**  
Tux, Austria  
Program, Feb 20

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| 13:30-14:10 | **Jorge Pullin**  
Mandelstam's "Quantization of the Gravitational Field" revisited | **Christophe Goeller**  
Holographic dualities in 3D quantum gravity based on the Ponzano-Regge model | **Jose Zapata**  
Gauge from holography                                                      | **Ilkka Makinen**  
A coherent-state representation for the LQG intertwiner space           | **Patryk Drobinski**  
Continuum approach to the BF vacuum                                      |
| 14:10-14:50 | **Maciej Dunajski**  
Geometry and dynamics of vortices                                                            | **Maciej Kolanowski**  
Holographic models for 2-dimensional black holes                           | **Wolfgang Wieland**  
Quantum gravity in three dimensions, Witten spinors and the quantisation of length | **Mehdi Assanioussi**  
On the polymer quantization of Yang-Mills theories: new coherent states | **Fabio Mele**  
Quantum Fisher Information Metric, Entanglement and Spin Networks          |
| 14:50-15:20 | Coffee Break (30 min)                                                                        |                                                                           |                                                                           |                                                                           |                                                                         |
| 15:20-16:00 | **Klaus Liegener**  
Hamiltonian Renormalization                                                               | **Deepak Vaid**  
Connecting Loop Quantum Gravity and String Theory via Quantum Geometry     | **Piotr Sułkowski**  
Quantum geometry and string dualities                                        | **Konstantin Eder**  
Quantum theory of charged isolated horizons                               | **Cong Zhang**  
Some analytical results of the Hamiltonian (constraint) operator in LQG |
| 16:00-16:40 | **Andrzej Dragan**  
Massive Unruh particles cannot be observed directly                                       | **Yaser Tavakoli**  
Particle production in a cosmological quantum spacetime                     | **Simone Speziale**  
Sachs' constraint-free data in real connection variables                   | **Andrea Dapor**  
From LQG to Cosmology: a new LQC                                          | **Johannes Münch**  
Holographic signatures of resolved cosmological singularities: Numerical investigations |
| 16:40-17:10 | Coffee Break (30 min)                                                                        |                                                                           |                                                                           |                                                                           |                                                                         |
| 17:10-17:50 | **Daniel Siemssen**  
Solving the Semiclassical Einstein Equation                                                | **Jerzy Lewandowski**  
Petrov type D isolated null surfaces                                              | **General discussion**                                                  | **Guillermo Mena Marugán**  
The mass of cosmological perturbations in the hybrid and dressed metric approaches to Loop Quantum Cosmology | **Wojciech Kaminski**  
QFT in curved spacetime: new insights                                     |
| 17:50-18:30 | **Sebastian Steinhaus**  
Spectral dimension of cuboid spin foams                                                       | **Denis Dobkowski-Ryiko**  
Geometric characterization of the Kerr-de Sitter horizon                     | **18:30: Joint walk to Höllensteinhütte, starting at conference venue**   | **Tomasz Pawlowski**  
Emergent de Sitter phase of LQC                                           | **Antonia Ziplfel**  
A new perspective on the graviton propagator                                |
| 18:30-End  | **General discussion**                                                                       | **General discussion**                                                      | **Conference Dinner**  
19:15, Höllensteinhütte, Lanersbach 510 (far!)                              | **General discussion**                                                  | **General discussion**                                                  |

**Startup dinner**: Sunday, Feb 18, 18:30, in “Tuxer Grillkuchl”, Lanersbach 381.