

10th Tux Workshop on Quantum Gravity

February 13–17, 2023 – Tux (Austria) and worldwide

Organizers: Mehdi Assanioussi, Norbert Bodendorfer, Christian Fleischhack, Jerzy Lewandowski, Ilkka Mäkinen, and Hanno Sahlmann

Effective February 10, 2023

	Monday	Tuesday	Wednesday	Thursday	Friday
13:30	Madhavan Varadarajan Electric Shift mediated Quantum Dynamics for Euclidean LQG	Kristina Giesel The choice of classical reference frames in quantum gravity models	Thomas Thiemann Hypersurface deformation algebra, quantum non-degeneracy and renormalisation	Seth Major Quasi-local energy and statistical models for constantly accelerating observers in black hole spacetimes	Etera Livine Entanglement on Spin Networks
14:15	Xiangdong Zhang Realization of Dirac quantization in loop quantum gravity	Sandipan Sengupta A Phase of Gravity without Hamiltonian Constraint	Sepideh Bakhoda Asymptotically flat boundary conditions for Ashtekar variables which lead to BMS group at spatial infinity	Maciej Kolanowski Extremal black holes amplify UV physics	Ilkka Mäkinen Gauge fixing to diagonal triad in loop quantum gravity
15:00	Break				
15:30	Anupam Mazumdar Witnessing the quantum nature of gravity via matter-photon system in a laboratory	Anne-Cather. de la Hamette Quantum diffeomorphisms cannot make indefinite causal order definite	Javier Olmedo Loop quantization of Kruskal black holes: recent advances	Edward Wilson-Ewing On the fate of quantum black holes	Hongguang Liu $\bar{\mu}$ -scheme effective dynamics, mimetic gravity, and non-singular black holes
16:15	Yaser Tavakoli Polymer Quantum Effect in Gravitational Waves and its Observable Signatures	Viktoria Kabel Quantum Reference Frames at the Boundary of Spacetime	Guillermo A. Mena Marugán Loop quantization of the AOS black hole model	Michał Bobula Rainbow Oppenheimer-Snyder collapse and the entanglement entropy production	Charles Beil Spacetime geometry of spin, polarization, and wavefunction collapse
17:00	Break				
17:30	Sami Viollet Modeling quantum particles falling into a black hole: the deep interior limit	Andrzej Dragan Universality of quantum time dilation	Carlo Rovelli On the black to white transition	Cong Zhang Black hole image carrying quantum gravity information	Jan Novak Graviton as a phonon and dark energy problem
18:15	Salvatore Ribisi Testing quantum black-holes with scalar fields	Discussion	Discussion	Costantino Pacilio Inner horizon instability and the unstable cores of regular black holes	Discussion
19:00	Discussion			Discussion	