

Quantum Gravity, Cosmology & Black holes

14th to 18th March 2022

Program

***CET (Central European Time)**

Monday 14th

Session 1

Chair: The organizers

- **10.15-10.30 (15')**: **Opening remarks**

Chair: Sravan Kumar

- **10:30-11:15 (35'+10')**: **Alexei Starobinsky** [*Inflation does have hair*]
- **11:15-12:00 (35'+10')**: **Alexander Dolgov** [*Primordial black holes and anti-stars in the Milky Way*]
- **12:00-12:45 (35'+10')**: **Alberto Salvio** [*Natural-Scalaron inflation*]

Session 2

Chair: Alexey Koshelev

- **15:00-15:45 (35'+10')**: **David Wands** [*Primordial black holes from stochastic inflation*]
- **15:45-16:30 (35'+10')**: **Latham Boyle** [*A two-sheeted, CPT-symmetric universe*]
- **16:30-17:15 (35'+10')**: **Chris Ripken** [*De Sitter scattering amplitudes in the Born approximation*]
- **17:15-17:45 (25'+5')**: **Artem Starodubtsev** [*Quantization of gravitating point particle and the spectrum of quantum spacetime*]
- **17:50-18:20 (30')**: **Discussion session with all the speakers of the day**

Tuesday 15th

Session 1

Chair: Benjamin Knorr

- **10:30-11:15** (35'+10'): **Robert Brandenberger** [*Emergent Cosmology from Matrix Theory*]
- **11:15-12:00** (35'+10'): **Ivano Basile** [*Asymptotic safety and the swampland*]
- **12:00-12:45** (35'+10'): **Anupam Mazumdar** [*How to test quantum nature of gravity in a laboratory*]

Session 2

Chair: Luca Buoninfante

- **15:00-15:45** (35'+10'): **Gia Dvali** [*Black Hole = Saturon*]
- **15:45-16:30** (35'+10'): **Roberto Casadio** [*An effective quantum state for neutral and charged black holes*]
- **16:30-17:15** (35'+10'): **Xavier Calmet** [*Quantum hair from gravity*]
- **17:15-18:00** (35'+10'): **Luca Smaldone** [*Fermionic Xons and Bekenstein bound*]
- **18:05-18:35** (30'): **Discussion session with all the speakers of the day**

Wednesday 16th

Session 1

Chair: Alessia Platania

- **10:30-11:15** (35'+10'): **Masahide Yamaguchi** [*Polychronic Tunnelling: New Tunnelling Processes Experiencing Euclidean and Lorentzian Evolution Simultaneously*]
- **11:15-12:00** (35'+10'): **Carlos Herdeiro** [*The imitation game: bosonic stars, ultra-light dark matter and gravitational waves*]
- **12:00-12:45** (35'+10'): **Alexander Andrianov** [*BTZ black hole formation due to collapse of a dust shell: quantum dynamics in the neighbourhood of central singularity*]

Session 2

Chair: Francesco Di Filippo

- **15:00-15:45** (35'+10'): **Irina Aref'eva** [*Black hole explosions?*]
- **15:45-16:30** (35'+10'): **Alessia Platania** [*Sifting quantum black holes through the principle of least action*]
- **16:30-17:15** (35'+10'): **Gonzalo Olmo** [*Metric-Affine Chern-Simons Modified Gravity (a first look)*]
- **17:15-18:00** (35'+10'): **Andrea Giusti** [*Thermodynamics of scalar-tensor gravity*]
- **18:05-18:35** (30'): **Discussion session with all the speakers of the day**

Thursday 17th

Session 1

Chair: Leslaw Rachwal

- **10:30-11:15** (35'+10'): **Ilya Shapiro** [*Effective quantum gravity, cosmological constant and the Standard Model of particle physics*]
- **11:15-12:00** (35'+10'): **Manuel Asorey** [*New Aspects of Higher Derivative Theories*]
- **12:00-12:45** (35'+10'): **Anna Tokareva** [*Anomaly-free scale and conformal symmetry*]

Session 2

Chair: Ivano Basile

- **15:00-15:45** (35'+10'): **Philip Mannheim** [*How to quantize gravity and how to not quantize gravity*]
- **15:45-16:30** (35'+10'): **Fabio Scardigli** [*Generalized uncertainty principle and Asymptotic Safe Gravity*]
- **16:30-17:15** (35'+10'): **Georgios Karananas** [*Field redefinitions, perturbative unitarity and Higgs inflation*]
- **17:15-18:00** (35'+10'): **Alexander Vikman** [*Ghosts without Runaway*]
- **18:05-18:35** (30'): **Discussion session with all the speakers of the day**

Friday 18th

Session 1

Chair: Ilya Shapiro

- **10:00-10:45** (35'+10'): **Leonardo Modesto** [*Nonlocal Quantum Gravity: Theory and Implications*]
- **10:45-11:30** (35'+10'): **Leslaw Rachwal** [*Exact Beta Functions in Six-derivative Quantum Gravity*]
- **11:30-12:15** (35'+10'): **Benjamin Knorr** [*Essential couplings in quantum gravity and matter*]
- **12:15-13:00** (35'+10'): **Anish Ghoshal** [*Beyond standard particle theory with Lee-Wick and & Infinite derivatives*]
- **13:05-13:35** (30'): **Discussion session with all the speakers**

Chair: The organizers

- **13:35-13:45** (10'): **Concluding remarks**